



POSEIDON WATER

Poseidon Water | Who we are

We are a leading US developer of water infrastructure projects using public-private partnerships to deliver environmentally sensitive facilities based on state-of-the-art technologies

- **Company founded in 1995; Headquartered in Boston, MA with regional presence in California, Florida, Texas**
- **Majority owned by Brookfield Asset Management (global presence; 110 year history; \$250 billion of assets under management)**
- **Specialists in water infrastructure project development**
- **Owner and Developer of the Claude “Bud” Lewis Desalination Plant, Carlsbad CA –largest seawater desalination plant in the western hemisphere**

Poseidon - Carlsbad Case Study

- **Project Capacity:** 54 MGD SWRO Plant and a 10 mile 54-inch pipeline serving the greater San Diego region in CA (Population 3.3 million)
- **Technology:** Reverse Osmosis
- **Total Capital:** \$922 million financing closed in 2012
- **Commercial Operations Date:** December 2015
- **Status:** Plant delivered on time and on budget
- **Impact:** Suppling approximately 400,000 San Diego County Residents

Poseidon - Carlsbad Case Study

Project Accolades:

Desalination Plant of the Year for 2016

Largest U.S. Project Financing Deal of 2012

North American Infrastructure Deal of the Year 2012

North American Water Deal of the Year 2012

Global Desalination Deal of the Year 2012

2013 Deal of the Year award for the Far West Region



THE BOND BUYER



Carlsbad Desalination – Project Setting



Carlsbad Desalination – Plant Bird's Eye



Carlsbad Desalination – Plant Exterior

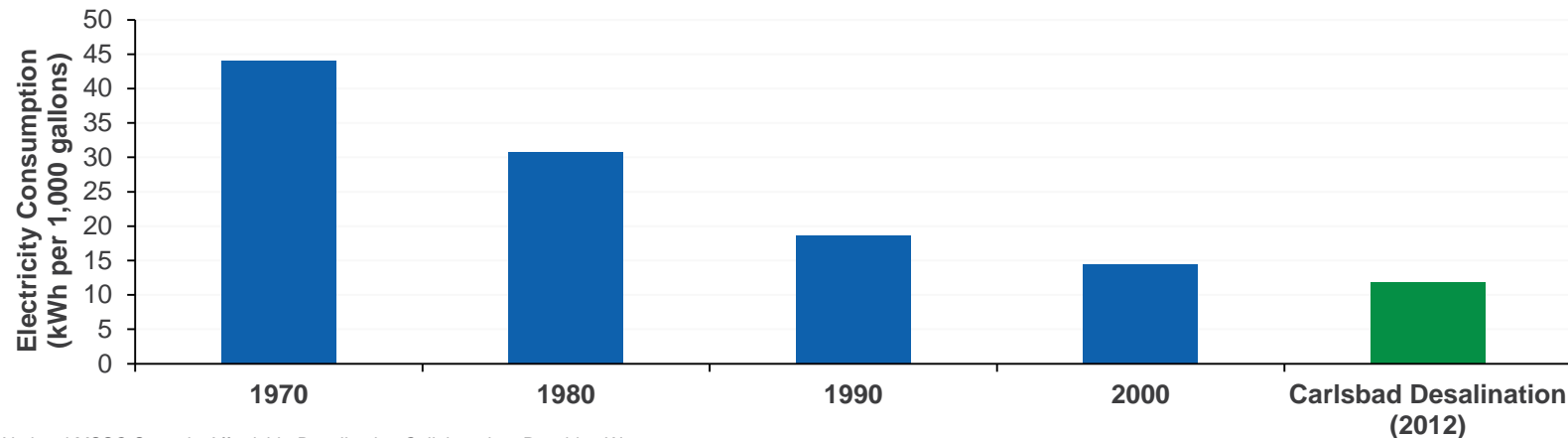


Desalination Cost Improvements

Several technological and configuration improvements have made desalination cost-effective and comparable to other alternative sources for a water utility's next increment of supply

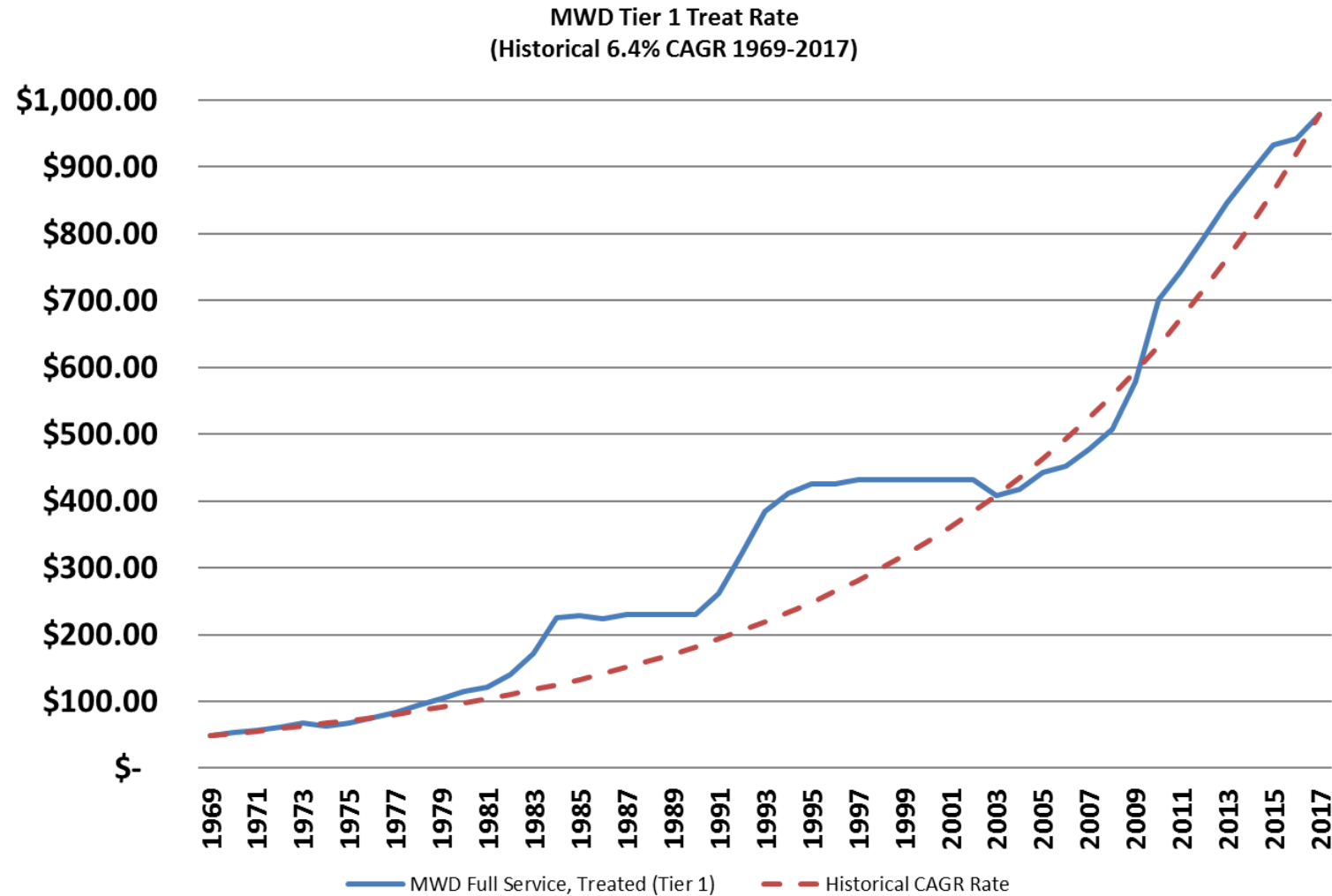
Factors Leading to Reduced Cost of SWRO

- Co-location with coastal power plants reduces capital and O&M costs
- Construction of larger size plants to harness economies of scale in terms of capital and O&M
- Advances in Reverse Osmosis membranes yield higher productivity, higher salt rejection and increased durability and membrane life
- Improved energy recovery devices and use of pressure exchangers increase energy recovery from concentrate to 96% or more
- Use of larger and higher efficiency pumps and motors for power and capital cost savings
- New RO membrane configurations minimize energy consumption and reduce system size and cost



Source: 2012 National MSSC Summit- Affordable Desalination Collaboration, Poseidon Water

Historical MWD Curve



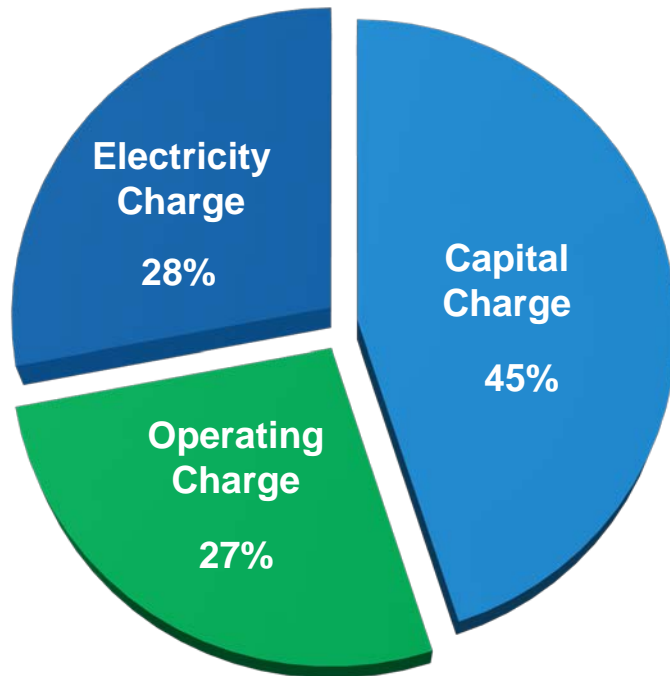
Public-Private Partnership | Benefits

- Avoids Public Agency providing upfront capital
- Allows Agency to maintain borrowing capacity
- Performance-Based Contract project gets paid only if it performs
- Provides water pricing certainty
- Most risks allocated to private sector
- Tax-exempt debt available
- Creates incentives for efficiency and innovation
- P3 designed to achieve lowest life cycle cost

Carlsbad Water Purchase Agreement

Carlsbad Cost Components

% of unit cost

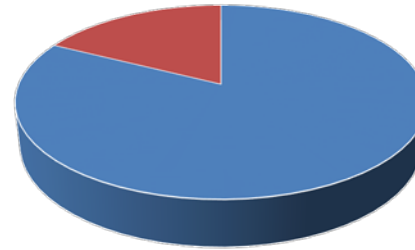


Water Purchase Agreement Terms

- **Minimum purchase commitment of 48,000 AFY and up to 56,000 AFY**
- **Long Term Contract**
 - 30 year WPA with San Diego Water Authority for 100% of Plant's output
 - Pricing is pre-established for 30 year term
- **Minimum Purchase Guarantees**
 - Water Authority agrees to purchase at least 48,000 AF/YR, subject to water quality requirements

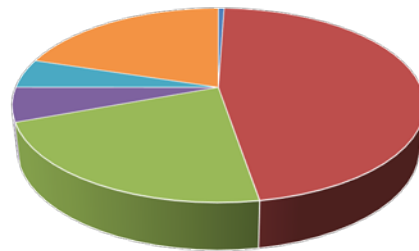
Carlsbad Cost of Water

FY 2016-17 Unit Water Price -
\$2,393.37 AF



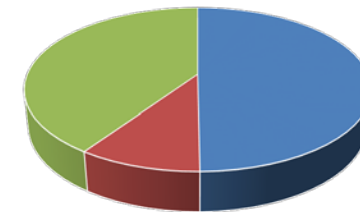
■ Plant ■ Pipeline

Plant - \$1,972.56 AF



■ Project Management ■ Capital Recovery Charge
■ Fixed Operating Charge ■ Variable Operating Charge
■ Fixed Electricity Charge ■ Variable Electricity Charge

Pipeline - \$420.81 AF



■ Debt Service
■ Fixed Electricity Charge
■ Variable Electricity Charge

The prices shown above are based on the Water Authority purchasing the annual minimum contract purchase amount of 48,000 AF. If the Water Authority purchases the maximum amount allowed under the contract (56,000 AF), the last 8,000 AF is purchased at the sum of the variable charges. All the fixed charges are allocated to the first 48,000 AF delivered in any year.

Water Unit Cost Drivers

- Site specific conditions
 - Power cost
 - Source water temperature
 - Product water quality specs
 - Use of existing infrastructure, scale of project

- Project specific conditions
 - Water distribution infrastructure requirements
 - Redundancy requirements to meet project availability needs
 - Flexibility in production and demand requirements

Carlsbad Project Benefits to the System

- **Drought-Proof:**

- Provides certainty to Water Authority, particularly during water use restrictions

- **Water Quality Improvement**

- Lower TDS of blended water has positive impact end users
- Value of the positive impact on the local water quality is \$146/AF (\$0.45/kgal)

- **Authority Bond Rating Increase**

- Water Authority saw its S&P credit rating upgraded to AAA (May 2016), resulting in lower interest rates that immediately saved over \$63 million on a net present value basis on a new \$340 million bond issuance (June 2016)
 - *"The upgrade reflects the authority's successful integration of its increased storage capacity and **desalinated water supply into its system** while weathering one of the driest periods on record in the state **without significant impact to its rates or debt burden**" - S&P Global Ratings credit analyst*