

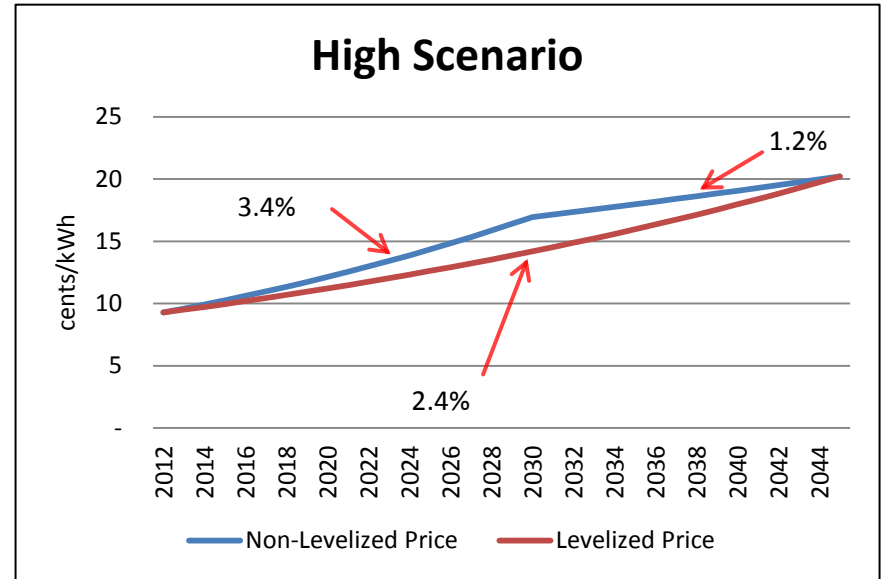
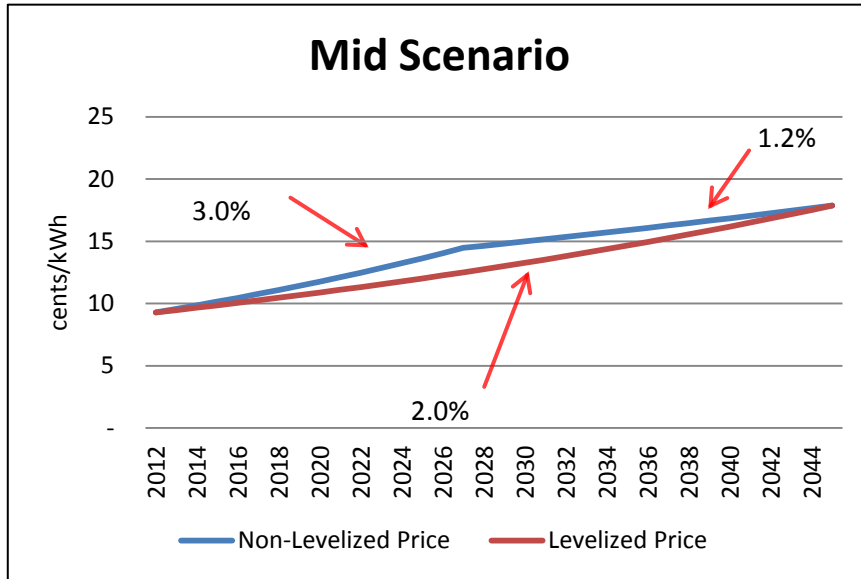
Carlsbad Desalination Project – Responses to Previous Board Member Questions



**Special Board Meeting
November 8, 2012**

ADDITIONAL SENSITIVITY ANALYSIS OF UNIT COST TO INCREASE ELECTRICITY PRICES

Projected Electricity Price – Carlsbad Desal Project



Future Electricity Price – Key Drivers

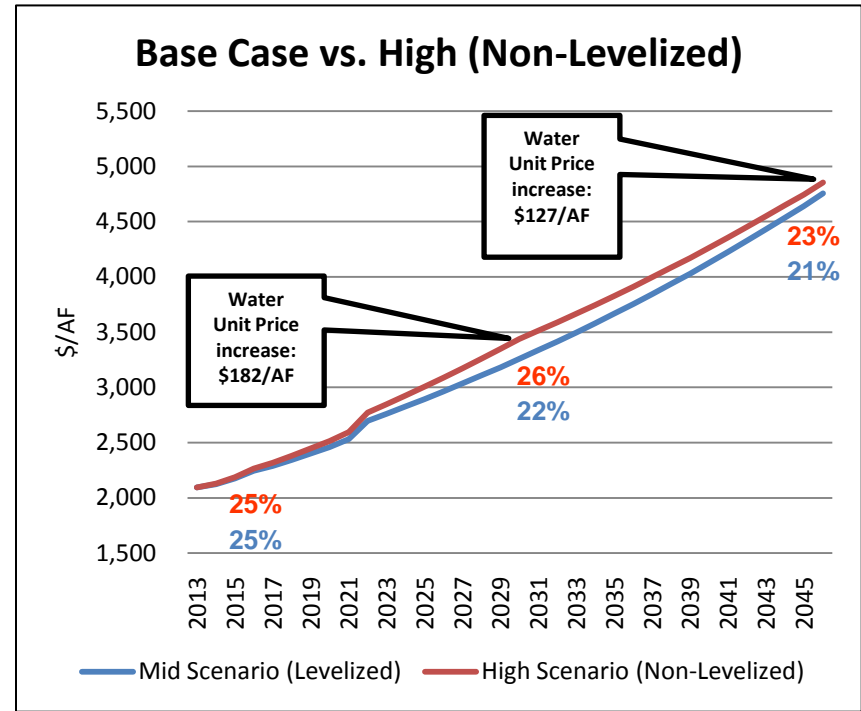
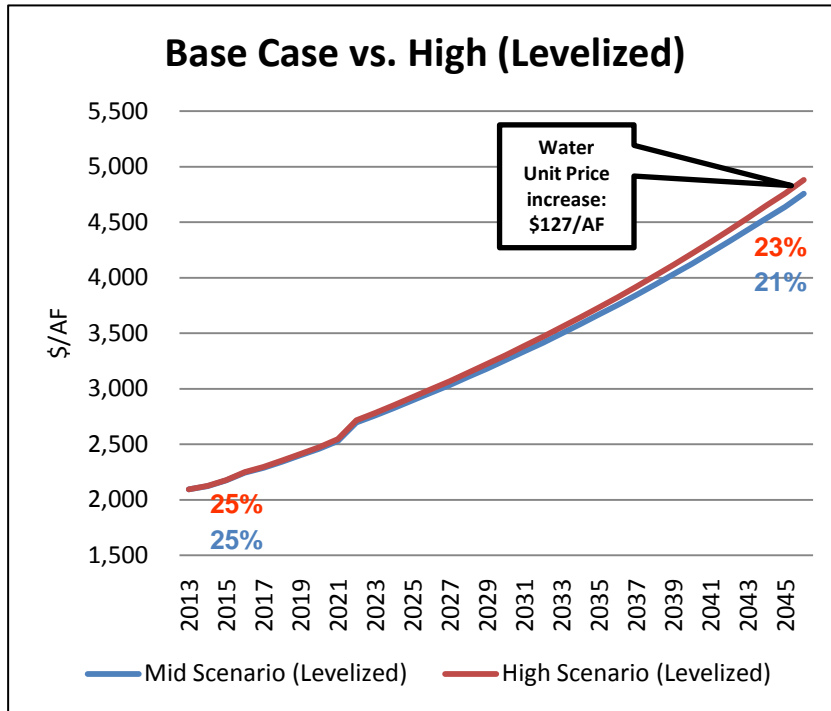
Factors driving higher growth rate

- Renewable Portfolio Standard (RPS)
- AB 32
- Fleet replacement

Factors driving lower growth rate

- Natural Gas Prices
- Demand-Side Response
- Rate-Setting Process

Impact on Water Unit Price - Comparison



BOARD QUESTIONS ON UNIT PRICE/CAPITAL & OPERATING COST

QUESTIONS ON UNIT PRICE AND COST

Water Unit Price and Cost Information provided to the Board on November 5, 2012

- Detailed review of unit price cost components
 - Debt Service Charge
 - Equity Return Charge
 - Pipeline Installment Payments
 - Fixed and Variable Operating and Electricity Charges
- Reference Information
 - Explanation of bond interest rate assumptions
 - Unit price calculations at 48,000 AFY and 56,000 AFY
 - Data and calculations that tie back to WPA appendices
 - Calculations that show conversion to 2012\$
- Capital Cost Detail for Project Components

Interest Rates and Assumptions

- Debt Service charge is a direct pass through
 - No Poseidon mark-up
 - Interest rate benefit/risk assigned to Water Authority
- Current Market Interest rates for low investment grade infrastructure
 - Plant Bonds: 5.1% (Private Activity Bonds subject to AMT)(PABs)
 - Pipeline Bonds: 4.6% (Municipal Purpose Bonds exempt from AMT)
- Final interest rate will not be known until financial closing
 - Staff established 100 BP buffer from expected market rate
 - Water Unit Price analyzed at mid point 5.6% and maximum of 6.1% for the Plant Bond final maturity
 - Will seek Board Authorization to price Bonds at maximum of 6.1% for the Plant Bond final maturity

Interest Rates and Assumptions

	6.10% Bond Rate \$21,042,800¹		5.60% Bond Rate \$18,955,933¹	
First Year Debt Service				
Annual Water Deliveries	48,000 AF/year	56,000 AF/year	48,000 AF/year	56,000 AF/year
Debt Service Charge (2016\$/AF)	\$658	\$564	\$592	\$508
Debt Service Charge (2012\$/AF)	\$612	\$525	\$551	\$472

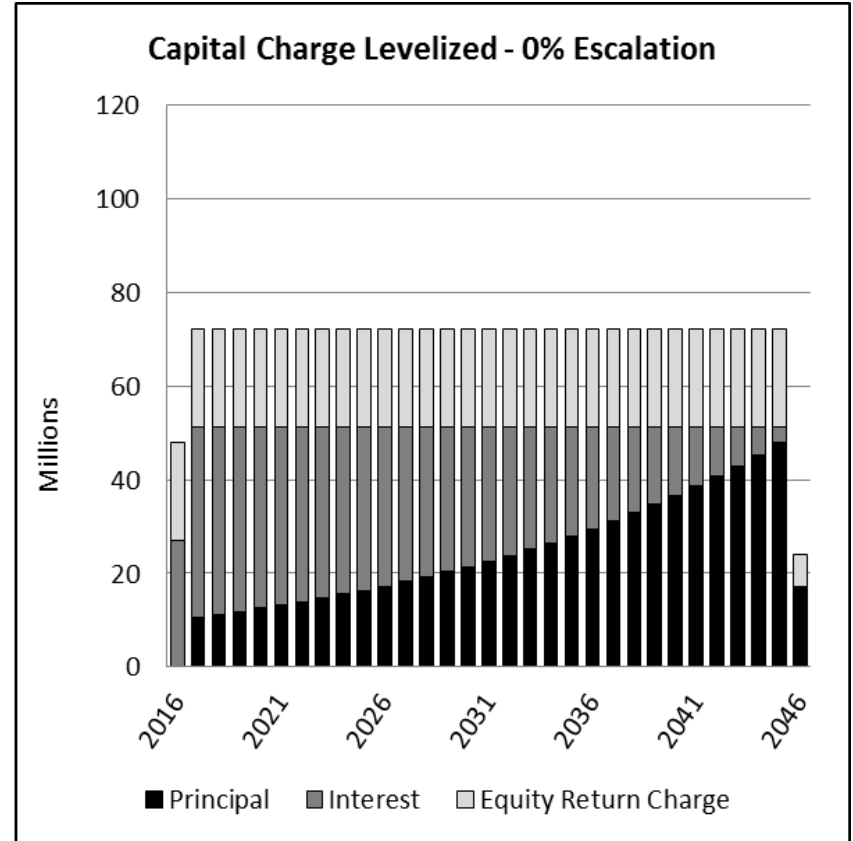
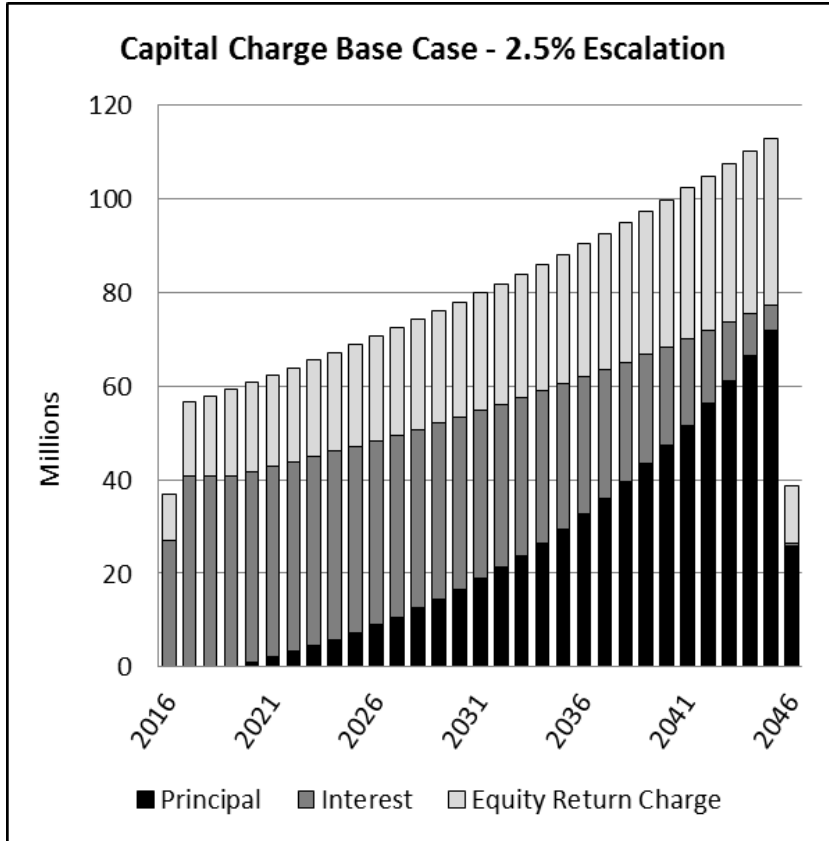
¹ First year debt service and water deliveries pro-rated to reflect partial first contract year

Escalation Rates and Assumptions

	Unit Price Component	WPA Contractual Provision	Staff Modeling Assumption
	<i>Fixed Charges:</i>		
1.	Debt Service Charge	A fixed annual “slope” of 2.5% has been used to establish this charge	2.5% Fixed Slope
2.	Equity Return Charge	A fixed annual “slope” of 2.5% has been used to establish this charge	2.5% Fixed Slope
3.	Pipeline Installment Payments	A fixed annual “slope” of 2.5% has been used to establish this charge	2.5% Fixed Slope
4.	Fixed Operating Charge	Indexed to San Diego CPI	Assumed to escalate at 2.5%
5.	Fixed Electricity Charge	Linked to SDG&E Rates	Assumed to escalate at 2.0%
	<i>Variable Charges:</i>		
6.	Variable Operating Charge	Indexed to San Diego CPI	Assumed to escalate at 2.5%
7.	Variable Electricity Charge	Linked to SDG&E Rates	Assumed to escalate at 2.0%
8.	Poseidon Management Fee	Indexed to San Diego CPI	Assumed to escalate at 2.5%



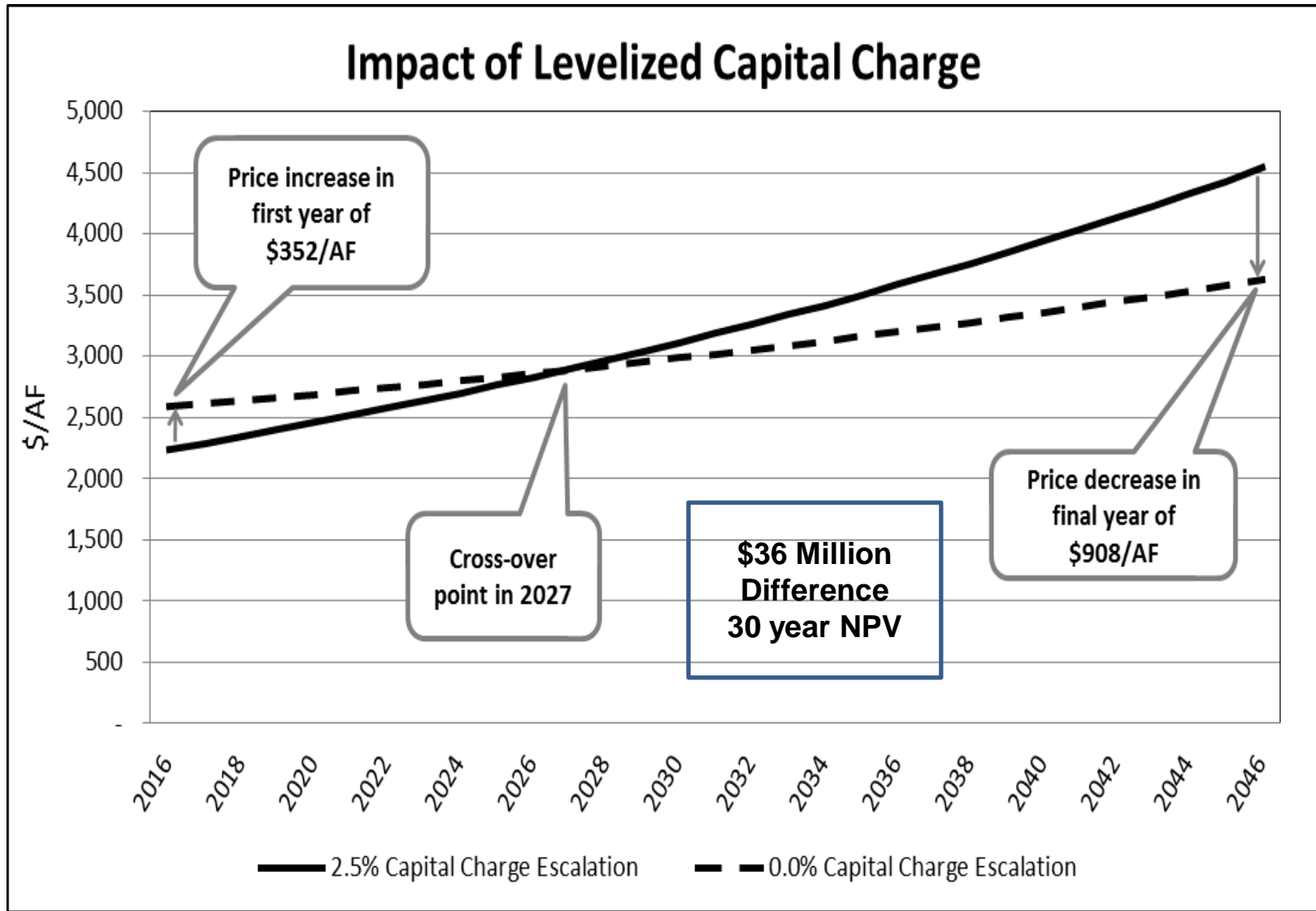
UPWARD SLOPING VS. LEVELIZED CAPITAL CHARGE



Principal **\$739 million**
Interest **\$937 million**
Equity Return **\$764 million**
Capital Payments **\$2,440 million**

Principal **\$739 million**
Interest **\$794 million**
Equity Return **\$628 million**
Capital Payments **\$2,161 million**

UPWARD SLOPING VS. LEVELIZED CAPITAL CHARGE



WHAT ARE THE NON-ELECTRICITY O&M COSTS?

Fixed Operator Compensation (2012\$) \$11,871,000

- Labor
- Maintenance
- Membrane and Filter replacement
- Operator fees, insurance, bonding

Fixed Non-Operator Costs (2012\$) \$7,326,000

- Lease payments
- Owner insurance
- Mitigation/Monitoring
- Property taxes
- Administrative Costs
- Debt fees

Variable Operating Costs (2012\$) \$4,848,000

- Chemical dosing of raw water
- Pre-treatment cleaning and disposal of solids
- Operator fee (variable component)

BOARD QUESTIONS ON CONSEQUENCES OF DELAYING THE DECISION ON THE WPA

Potential Impact of Delay of WPA Approval

Lease Extension Requirement

NRG

- Site owner
- Lease and Easement Agreement executed 2003 and amended 10 times, primarily to extend construction start deadlines.
- NRG considering other redevelopment options
- Further extensions would be required if WPA not approved in November

Potential Impact of Delay of WPA Approval

EPC Construction Contract Pricing and Contractor concerns

Kiewit-Shea Desalination

- Original bid submitted 2010
- Risk of losing key members of project management team to other projects
- Pricing commitment expires 12/31
- Reluctant to commit additional resources without WPA

Potential Impact of Delay of WPA Approval

O&M Contract Pricing and Contractor concerns

IDE

- Original bid submitted 2008
- Pricing commitment expires 12/31
- Reluctant to commit additional resources without WPA

Potential Impact of Delay of WPA Approval

Financing concerns:

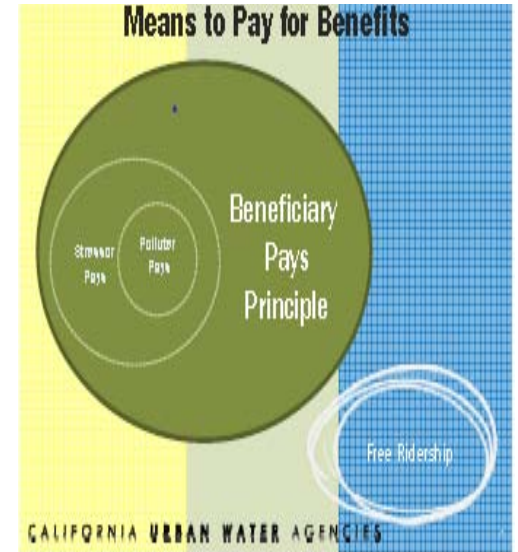
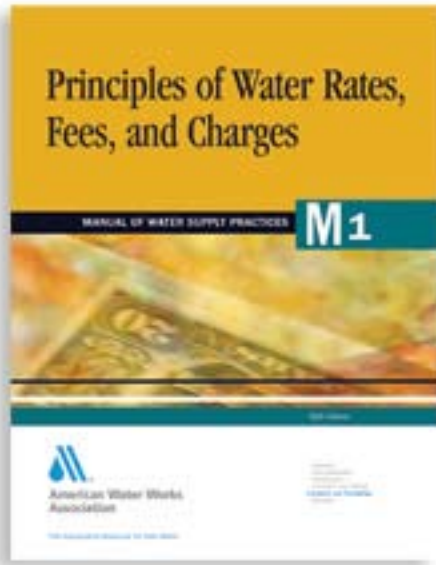
– Market Conditions

- Current market conditions are favorable for issuance of “BBB” municipal bonds
- Interest rates remain at historic lows
- Credit spreads (between AAA and BBB) are tight
- Market conditions can change abruptly, especially with regard to credit spreads

– CPCFA

- Private Activity Bond allocation by CPCFA is based on 2012 issuance
- Risks and delays may be associated with need to seek 2013 allocation

Evaluation of Rate Structure Alternatives for the Carlsbad Seawater Desalination Project



Special Board of Directors Meeting
November 8, 2012

Development Status of Rate Structure Alternatives

April 19,2012 Special Board Meeting

- Following *cost of service* rate setting principles and *Beneficiaries Pay*
 - Identified existing rate structure service categories for allocating desalination costs
 - Discussed potential modifications to rate structure to address reliability benefits

June 28th Board Meeting

- Continued discussion on modification to rate structure for reliability category

July , August September, October 2012 Board/Special Meetings

- Presented alternative structures consistent with cost of service
 - Alternatives continuously refined based on previous Board discussions
 - Reviewed existing Board policy for non-commodity charges
 - Reviewed existing practices for allocating costs to service categories
 - Provided detailed financial information for each alternative by individual member agency

November 2012

- Responding to Board and Member Agency comments provided detailed information on additional alternatives
 - Staff developed in response to comments
 - Member Agency Proposed

Approach

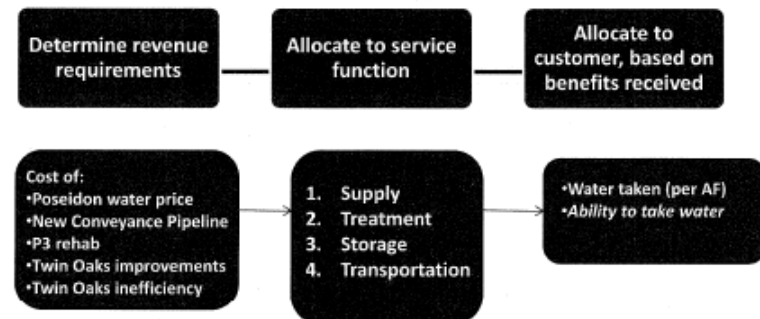
1. The rate design analyses is being conducted for the Carlsbad Desalination project with the Board providing policy direction on rate structure

- Independent review of proposed Rate Structure Service Categories and Alternative Conceptual Cost Allocations

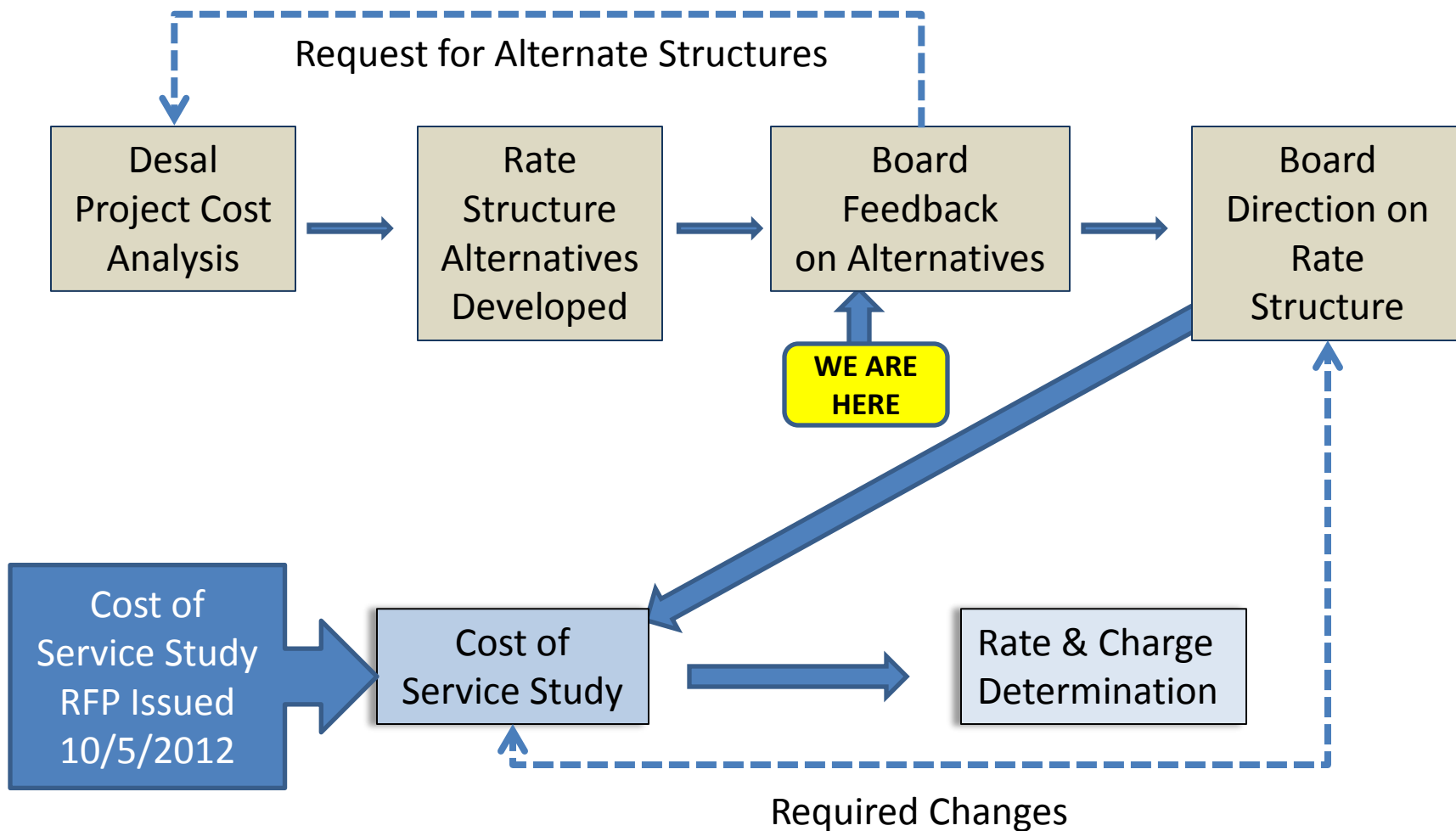
2. Cost of Service Study

- Full Cost of Service Study
 - 2014 Rates and Charges
- December 2012 – May 2013

3 Steps of Cost of Service Applied to Carlsbad Desalination



Where are we in the Process?



Description of Rate Structure Alternatives

- 1. Existing Rate Structure**
- 2. Enhanced Treatment Value**
 - TOVWTP Inefficiencies and/or Water Quality Benefits
- 3. Enhanced Supply Value**
 - Majority of project costs on supply or set supply value to existing or other identified source
- 4. Increased Fixed Charges**
 - Increase IAC or
 - Establish Stand by reliability Charge
- 5. Reduced Fixed Charges**
 - Reduce IAC for Desalination Project

Rate Projections

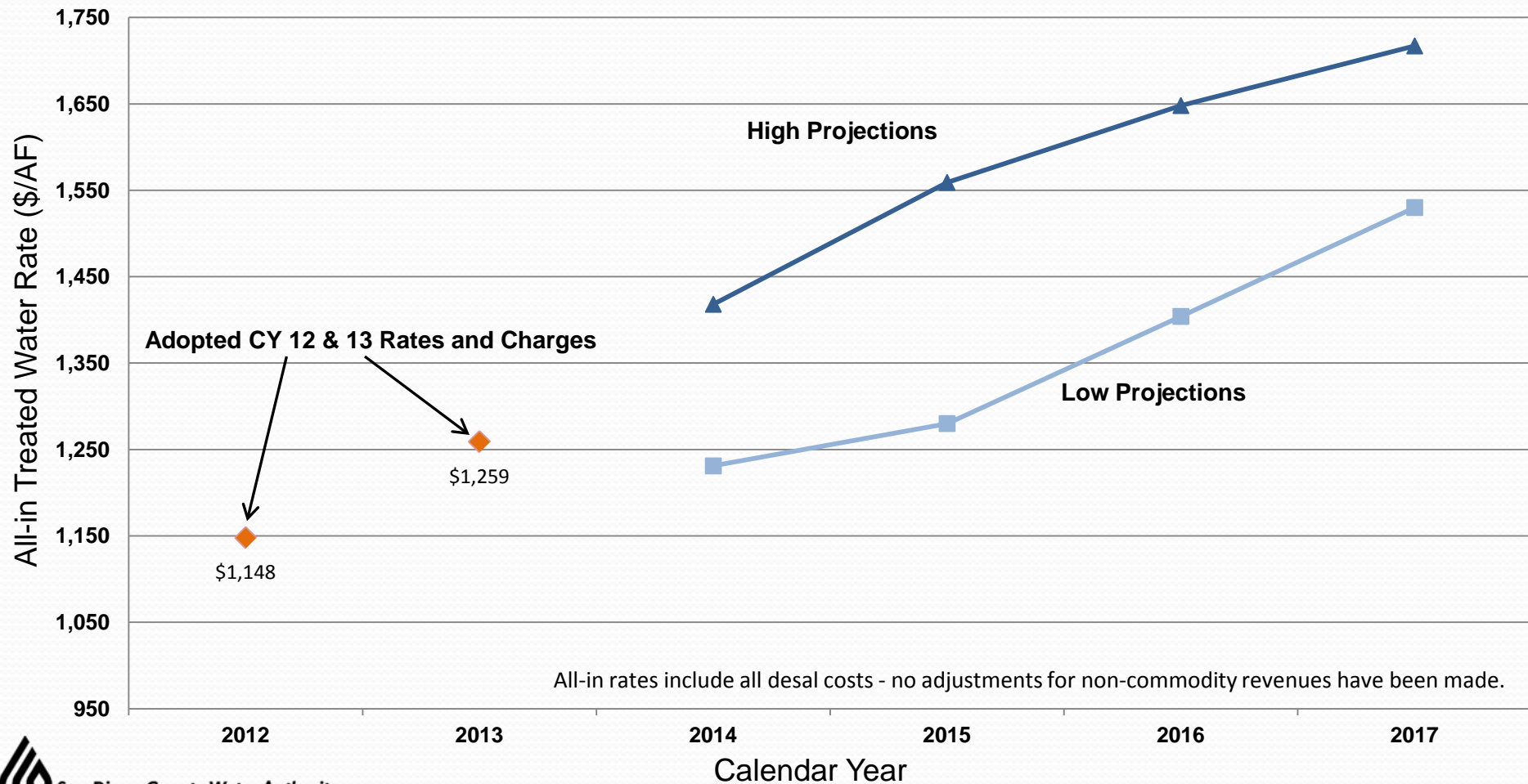
Rate Projections

- Through 2017
- Uses high and low desalination cost examples
 - Actual costs are lower
- Uses high and low assumptions on Water Authority Rates
 - Sales (Normal-Wet weather)
 - Member Agency local supplies
 - MWD Rates
 - Capacity Charge revenue

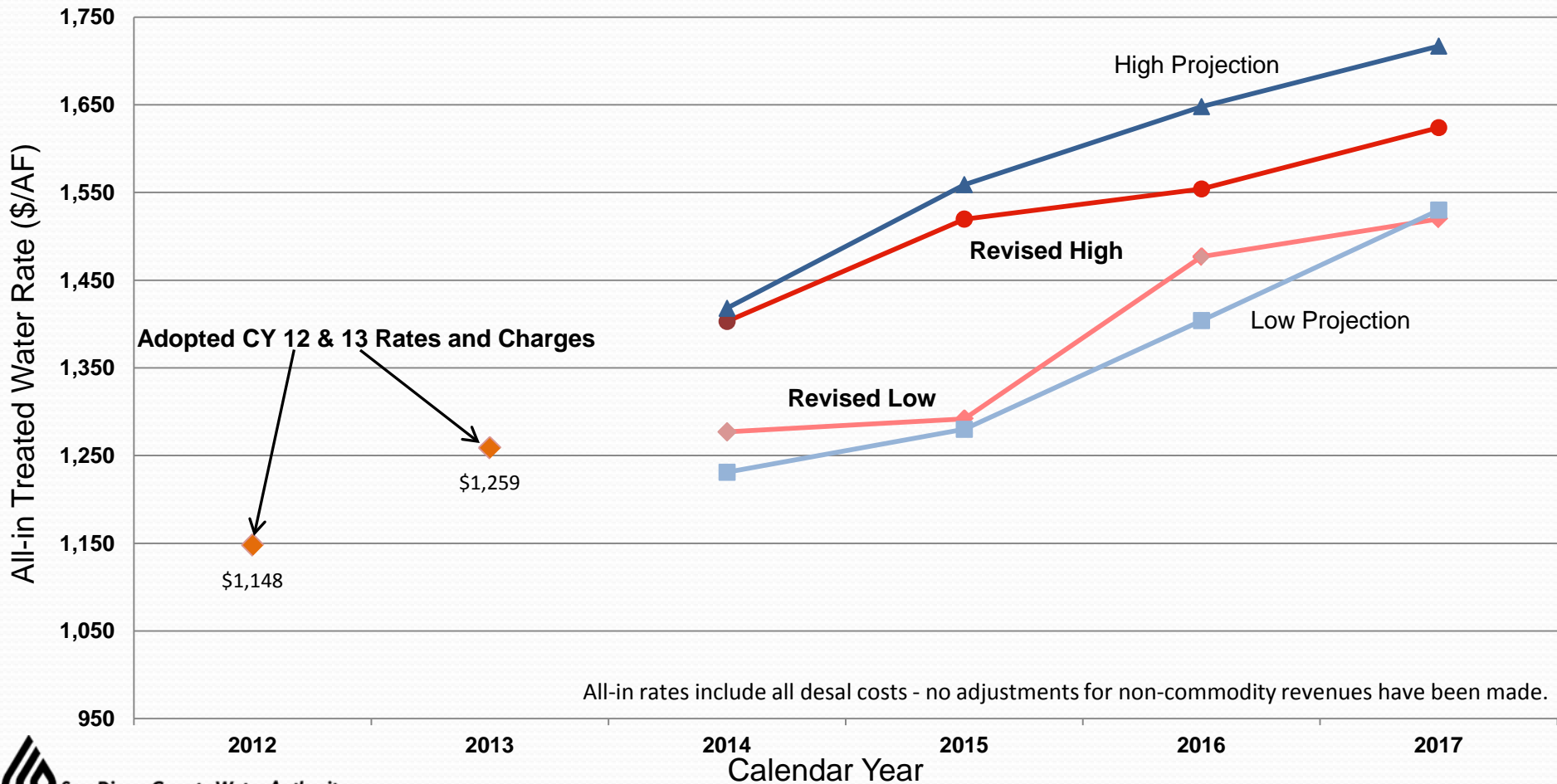
Desalination High/Low Rates

November 8, 2012
Special Board Meeting

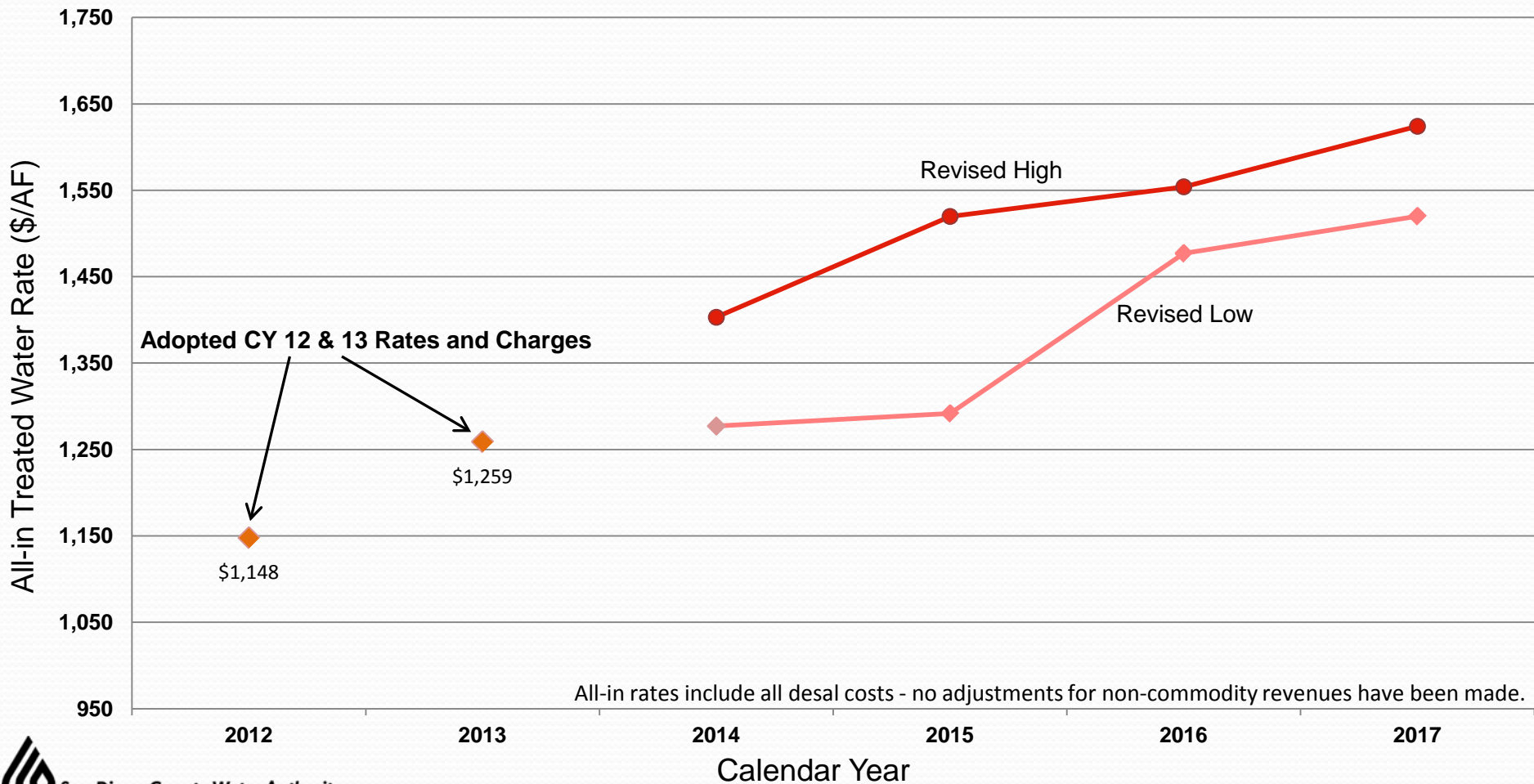
High/Low All-in Treated Water Rate Projection – February 2011



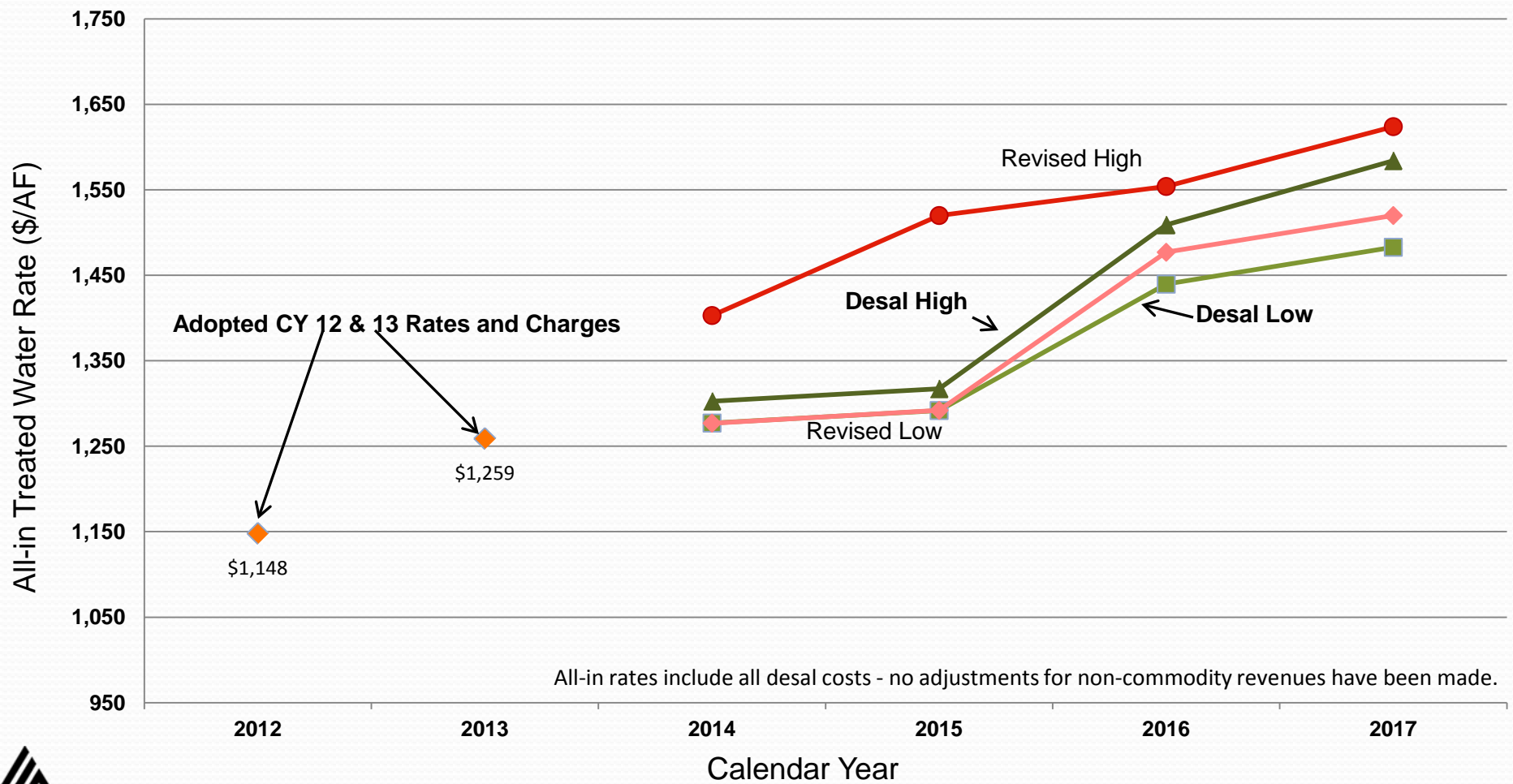
Revised Projections with No Change in Desal Assumptions



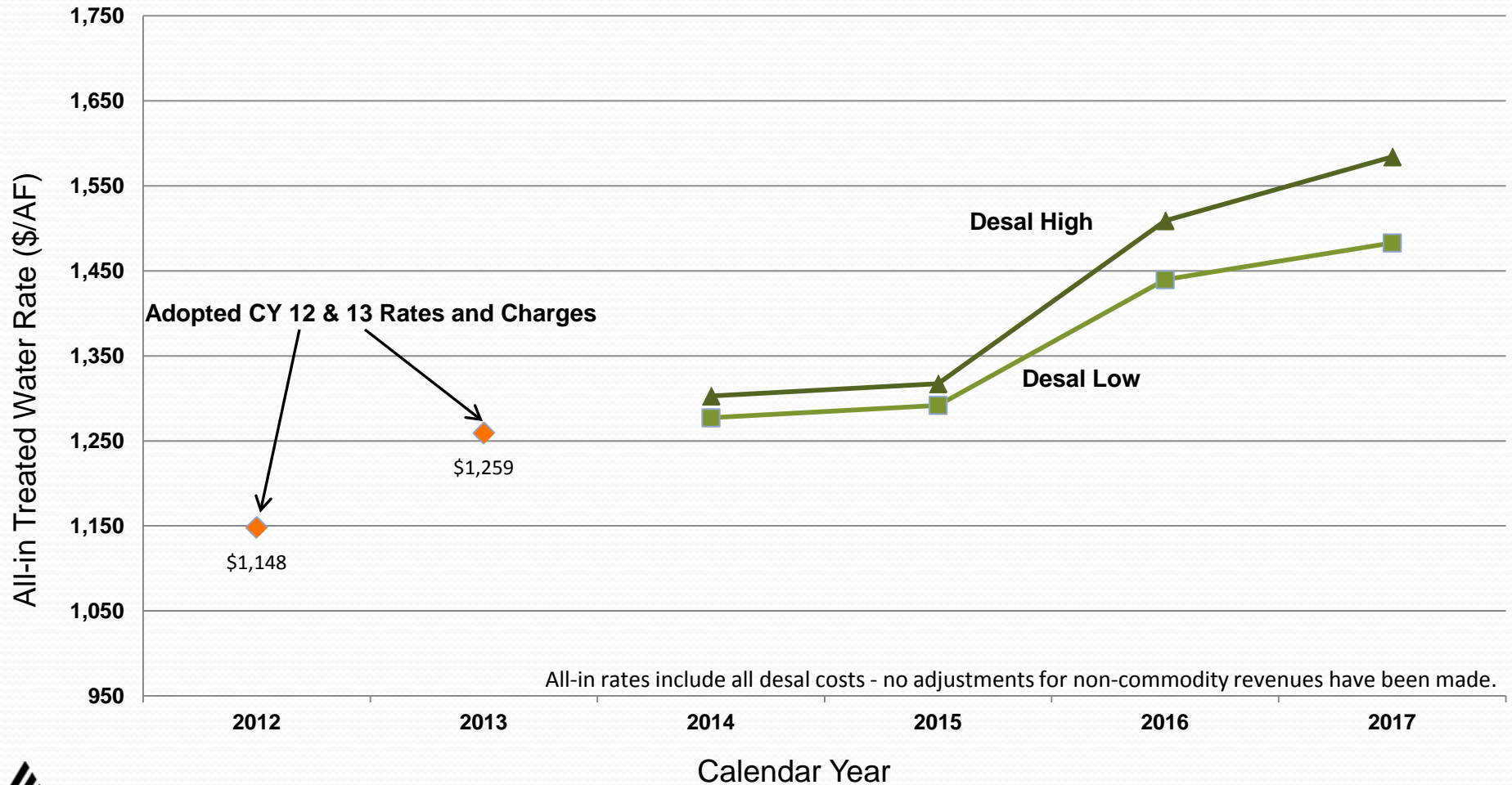
Revised Projections with No Change in Desal Assumptions



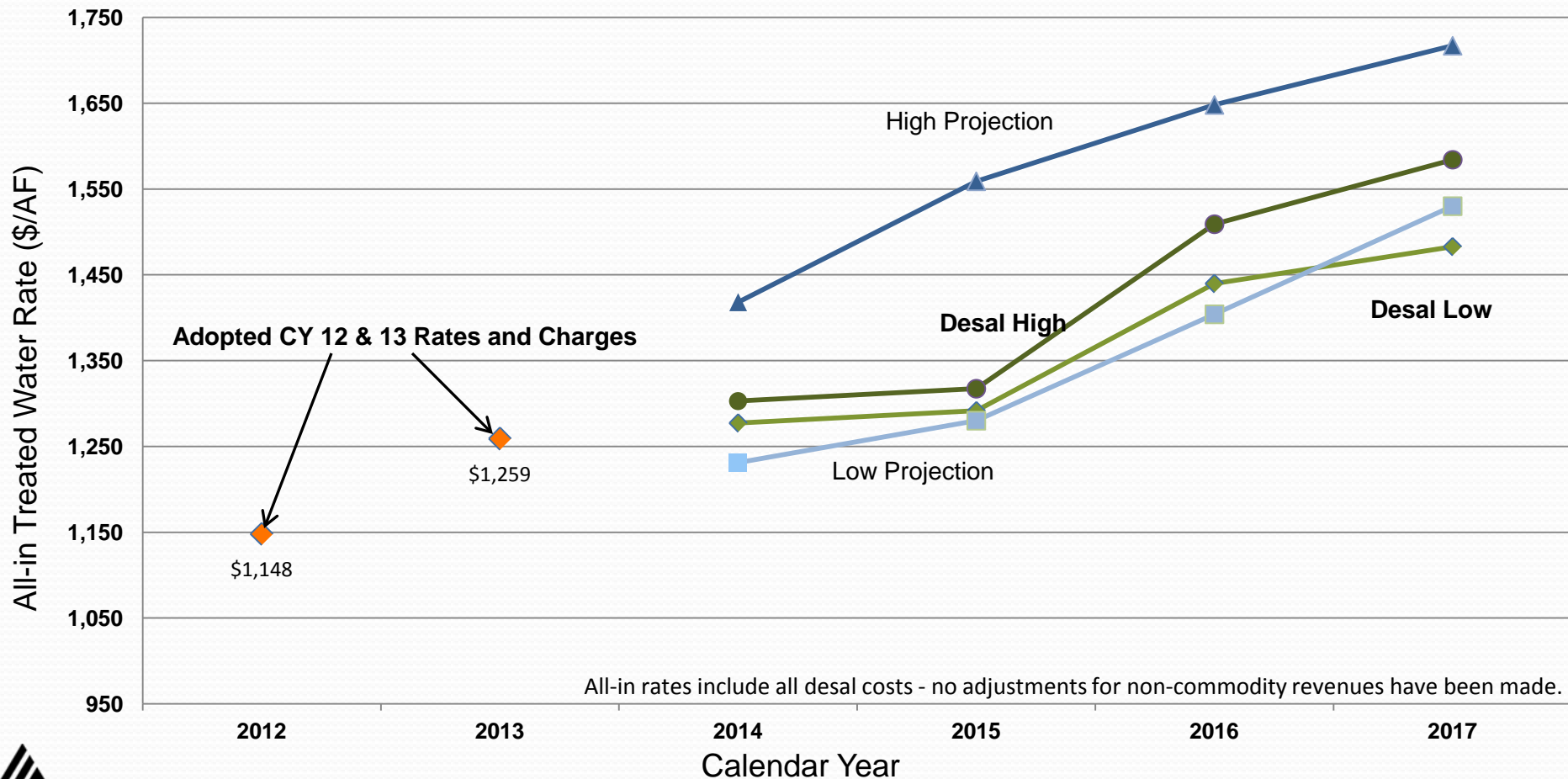
Revised Projections with New Desal Assumptions



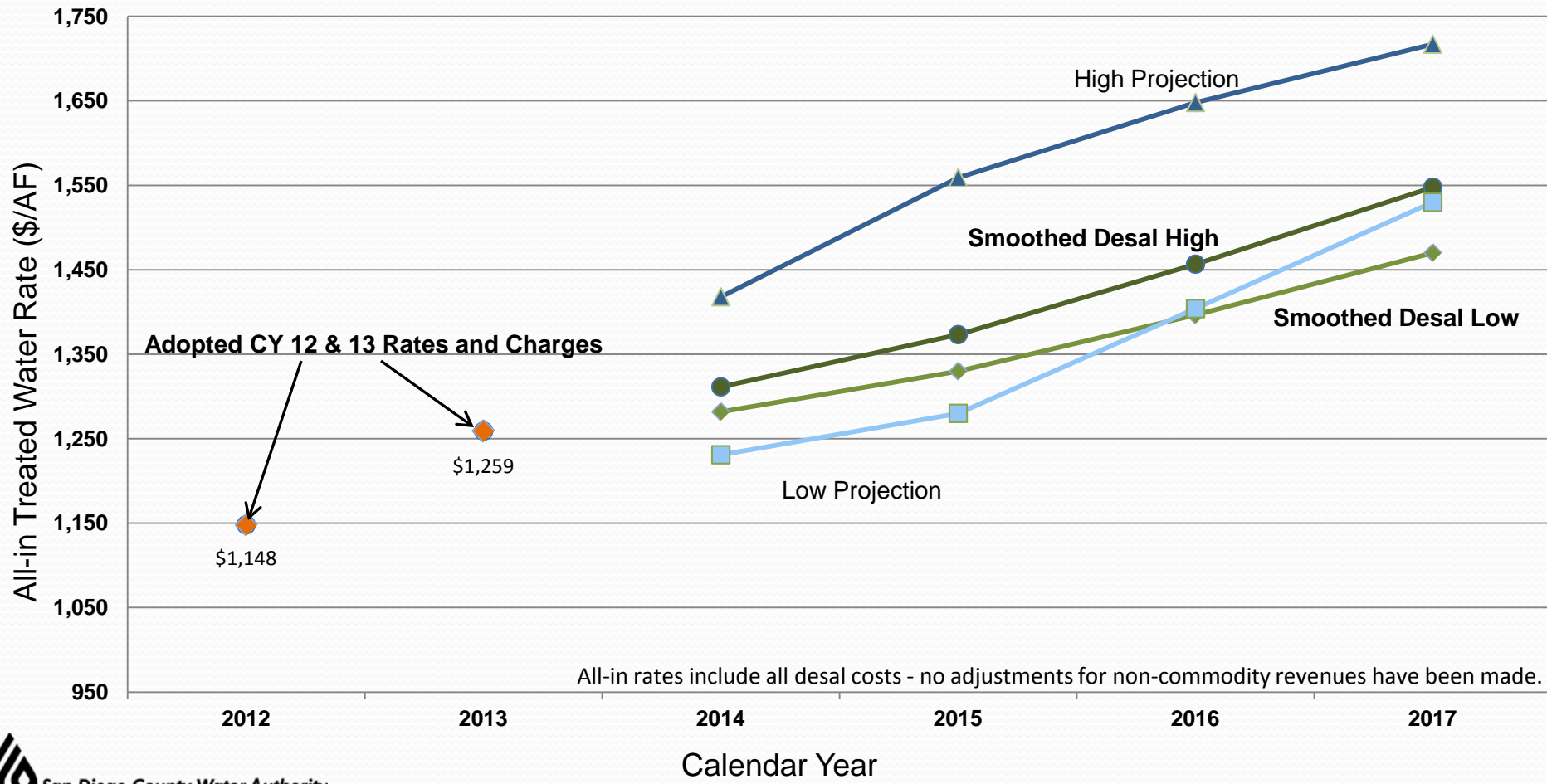
Revised Projections with New Desal Assumptions



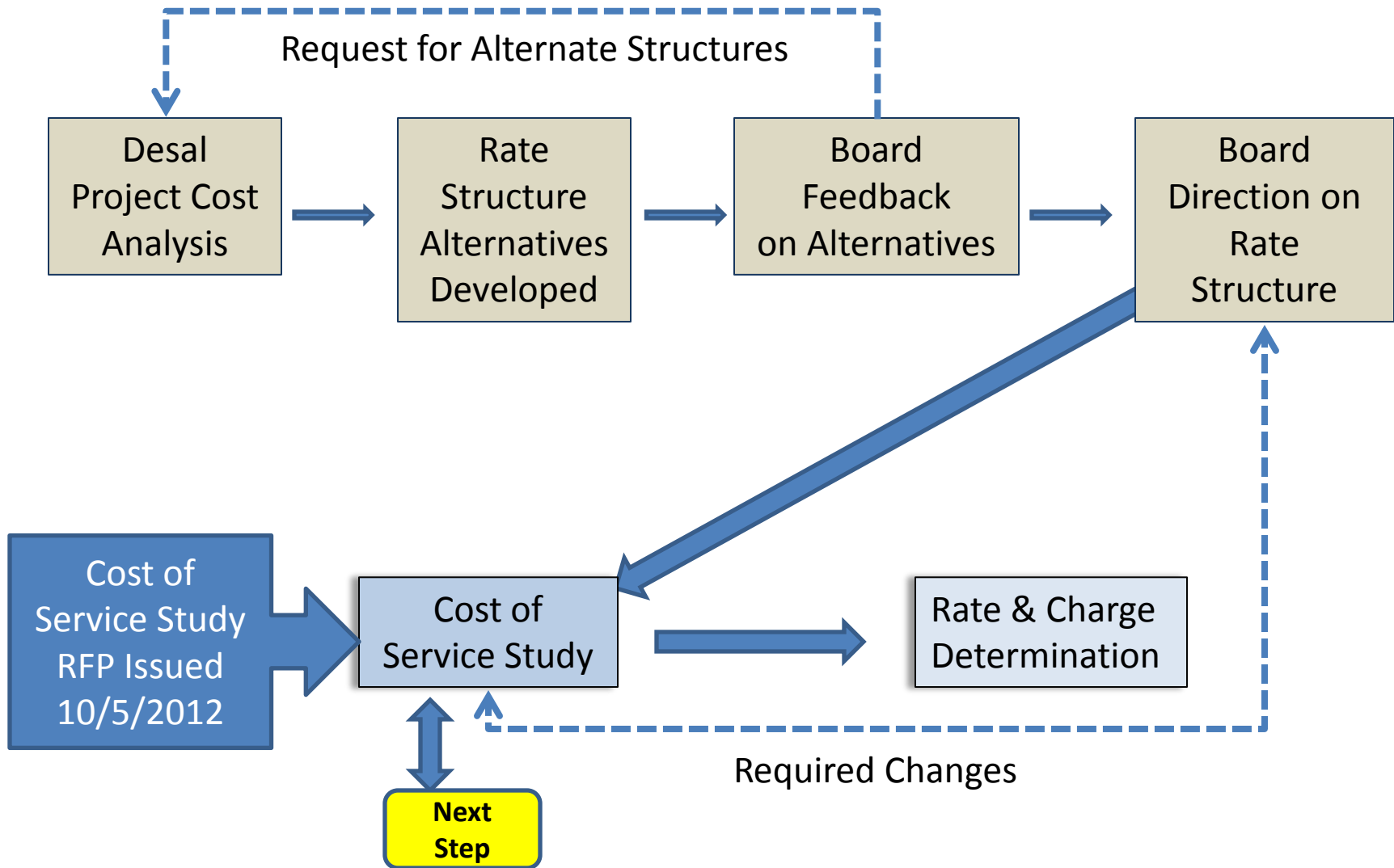
February 2011 High/Low vs. Desal High/Low



Illustrative Smoothed High/Low Rate Ramp



Next Steps In Rate Setting Process



Next Steps In Process

- **Cost Of Service Process**
 - Two Steps
 1. Analysis of 2014 Rates
 2. Allocation of Desalination
- **Cost of Service Analysis of 2014 Rates**
 - Consultant will begin work in December
 - Meet with Member Agencies to discuss scope of 2014 Study
 - Interactive process with Member Agencies January- April
 - Complete COS Study May 2013

Next Steps In Process

- **Allocation of Desalination Cost and potential fixed charge modifications to rate structure**
 - Concurrent with 2014 COS Study
 - Create a member agency workgroup for technical discussions – Winter 2013
 - Provide periodic reports to A&F Committee
 - Return to Board with workgroups technical recommendations
 - Estimate 6-9 month process- consistent with 2015 rate setting schedule