Today’s Agenda

- Introduction
- February 27th Board Feedback
- Revenue Volatility
- Beneficiaries Pay
- Inconsistent Policy Application
- Summary Data/Charts
- Task Force Recommendations to Board
Timeline

Cost of Service Study – Phase I

December 2012 | June 2013

COS Study – Phase II Desal

May 2013 | December 2013

Fiscal Sustainability Task Force

September 2013 | June 2014

CY15 Rate & Charge Development (Jan)

CY15 Rate & Charge Development (June)

CY16 Rate & Charge Development (Jan)

CY16 Rate & Charge Development (June)

Deferred items return to A&F (Nov)
Overarching Themes of FSTF Recommendations

- Rates and Charges should reflect future trends
  - Increasing fixed cost obligations for supply
  - Changing member agency purchase profiles
- Maintain Water Authority's Strong Credit Rating
  - Improve long term credit positives
  - Address potential credit negatives
- Enhance stability and predictability of water rates
  - Address revenue volatility
- Strengthen nexus between benefit received and payment
- Address issues from Cost of Service Phase 1
## FSTF Recommendations

<table>
<thead>
<tr>
<th>FSTF Recommendation</th>
<th>Overarching Theme</th>
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<tbody>
<tr>
<td><strong>1) Expand definition of fixed costs to include Carlsbad desal and QSA</strong>&lt;br&gt;• <em>Clarifies existing IAC policy applies to Desal Plant debt and Fixed Desal O&amp;M and Canal lining O&amp;M</em></td>
<td>1. Reflect Future Trends&lt;br&gt;2. Maintain Water Authority Strong Credit Rating&lt;br&gt;3. Reduce revenue volatility&lt;br&gt;4. Strengthen nexus of beneficiaries pay</td>
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## FSTF Recommendations (cont.)

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Fixed Revenue as a Percentage of Fixed Costs; Key Metric of Fiscal Sustainability

- Under current structure long term fixed cost supply obligations degrades fixed revenue to fixed cost metric
  - Potential credit negative
  - Increases revenue volatility

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Recommendations for Fixed Revenue maintain current Percentage of Fixed Costs

- Eliminates potential credit negative
- Reduces revenue volatility
- Strengthens beneficiaries pay

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<td></td>
</tr>
<tr>
<td>With Desal Debt, Desal Fixed O&amp;M, and Canal O&amp;M in IAC and Potential Supply Reliability Charge (15-25%)</td>
<td>57-61%</td>
<td>49-54%</td>
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February 27th Board Feedback

- Need **fixed revenue policy** to ensure member agencies have a long-term stake in the projects that they approve
- Want to know the number of **guaranteed sales** for the Water Authority
- The **desal project debt is not debt** of the Authority as specified the IAC policy for inclusion in the IAC
- Fixed **O&M recovery in the IAC** sets bad precedent
- Water **supply costs never contemplated** in the IAC
- **Need analysis of allocation** of non-commodity revenues to treatment charges
- Recommendation on **allocating non-commodity charges** is not urgent
- Do not need to approve recommendations for **CY 2015 rates** and charges
- **Can’t separate recommendations** for fixed costs definition and storage charge formula from the reliability charge
- All recommendations should be **considered together**
What is Sales Revenue Volatility?

- Empirical view of volatility: Definition in Finance
  - One year change

- Big **scary** question: How does sales variation affect the Water Authority’s revenues

- Quick conclusion: Minimum sales levels with uniform rates do not mitigate revenue volatility
  - Variation of sales is what impacts net revenues

- Typically the more revenues collected on variable/commodity charges the more potential for revenue volatility (up and down)
  - Cost structure is an important factor

- Why?
What are Minimal Water Authority Sales over the Long-term?

- Note that one-year-ahead sales volatility is not independent from year-to-year
  - Business Cycle – 5 to 7 year
  - El Nino Weather
  - Member agency local resource development

- Observe sales drop over more than 1 year

- Standard of Bond Rating Agencies:
  Lack of contractually committed sales is a consideration

- Water Authority provides a risk pooling benefit: Volatility of sales volume ≠ risk of shortfall

**Cumulative Sales Drop (FY 1994-2013)**

1 year = -14.5% (73 kAF)
2 years = -20.9% (105 kAF)
3 years = -29.3% (147 kAF)
4 years = -36.5% (182 kAF)
Simple Uniform Supply Rate Example

- Each unit of sales revenue covers a portion of costs
- Assumptions:
  - Always sell:
    - QSA water
    - Desal water
    - Some MWD water
- Change in water sales
  - Expenses change (avoidable costs)
  - Revenue changes
  - Net Revenue shortfall/surplus
Mitigating Revenue Risks from Volatility

- **Fixed charges**
  - Through fixed revenue to the Water Authority (recovered regardless of this year sales)
  - Member Agency can vary over time as sales level changes

- **Reserves**
  - Rate Stabilization Fund – provides an alternative revenue source to meet bond covenants
  - Size of fund is impacted with Net Revenue volatility
    - More volatility = More reserves required

- **Contracts**
  - Only if scheduled payments cover a significant portion of costs
    - Can serve the same purpose as fixed charges
Policy Issue

- What is the “Right” amount of revenue volatility?
  - Achieve smooth predictable rates
  - Balance impact on member agencies

- Level of volumetric rates/variable revenues impacts cost burden
  - Roll on/off users may not pay “fair” share of standby capacity costs
  - Long-term commitments paid by current users
Two Sides of The Same Coin

Revenue Volatility
- Swings in revenue are absorbed by customers paying water rates
  - Immediately replenishing reserves

Beneficiaries Pay
- Customers absorbing effects of revenue volatility may not include all beneficiaries
  - Intermittent users
  - Standby users
Addressing Revenue Volatility and Beneficiaries Pay

15% drop in sales equals $15M in unmet revenue (approx. $30 - $40/AF rate increase in following year)

- Making up for lost revenue on commodity rates
  - Effects only those purchasing water in the subsequent year
- Making up lost revenue by using reserves
  - Reserves replenished through rate increases
  - Only agencies purchasing water replenish reserves
- Fixed charges, rates, reserves mitigate volatility
  - Equity between current users of water and those that benefit from availability of supplies and infrastructure
- Policy decision requires balancing the two
Determining Beneficiaries of Supply Reliability

- Benefits of water supply
  - Consumption at the time purchased
  - Greater certainty that supply is available when needed

- Benefit realized when other supplies are unreliable
  - Agencies purchasing water when other supplies at risk
  - Agencies with constant purchase profile
  - Agencies with intermittent purchase profiles
  - Agencies with unavailable local supplies
    - Shortage due to hydrologic, mechanical, regulatory/institutional constraints
Balancing Local Supply Development with Water Authority Reliability Back Stop

- Member Agency investments in local supply improve regional reliability
  - Offset demands for Water Authority Supply
  - Greater certainty that Water Authority supply will meet anticipated need

- Water Authority recognizes local supply benefit
  - Drought Allocation method
    - Additional regional supply to agencies developing reliable local water
    - Insures against loss of local supply by adding 100% of loss back into need for Water Authority water
Water Authority Backstops Reliability

2030 Dry year

<table>
<thead>
<tr>
<th>Source</th>
<th>Demand</th>
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<tbody>
<tr>
<td>QSA/Desal</td>
<td>336,000 AF</td>
</tr>
<tr>
<td>MWD</td>
<td>204,000 AF</td>
</tr>
<tr>
<td>UWMP Local</td>
<td>124,000 AF</td>
</tr>
<tr>
<td>Add'l Local</td>
<td>140,000 AF</td>
</tr>
<tr>
<td><strong>Total Demand</strong></td>
<td><strong>804,000 AF</strong></td>
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Water Authority Backstops Reliability
25% MWD Cutback

2030 Dry year

= 3% Regional Shortage

- QSA/Desal: 336,000 AF
- MWD: 153,000 AF
- UWMP Local: 124,000 AF
- Add'l Local: 140,000 AF
- Carryover: 30,000 AF
- Shortage: 11,000 AF

Total Demand: 804,000 AF
Water Authority Backstops Reliability
25% MWD Cutback, 25% Loss Of Local Supply

2030 Dry year

- 25% Cutback
- 25% Loss of Local Supply
- = 11% Regional Shortage

QSA/Desal: 336,000 AF
MWD: 153,000 AF
UWMP Local: 93,000 AF
Add'l Local: 105,000 AF
Carryover: 30,000 AF
Shortage: 87,000 AF

Total Demand: 804,000 AF
Balancing Local Supply Development with Water Authority Reliability Back Stop

- Member Agency benefits from local supplies
  - Improves member agency reliability
  - Additional water in drought allocation
  - Increases price certainty on supply
    - Cost competitive with future imported water prices
  - Changing economics of local supply development
    - Vast majority of Water Authority costs are avoidable at time local supply is first produced
    - Some local supply development avoids wastewater disposal costs
Economics of Local Supply Development

Avoidable Roll Off Unavoidable

$ per Acre-foot

$1,200

$1,000

$800

$600

$400

$200

$0

Avoidable Roll Off Unavoidable

IAC
Storage
Cust. Svc
Transp.
Treatment
Supply
Policy Question

- Do member agencies with local supplies benefit from Water Authority reliability?

- If so, and there is no payment for that benefit, is that equitable to the other member agencies that pay for regional reliability and absorb the full cost of rate volatility?

- FSTF strategy to address the Policy Question
  - Desal plant debt and equity charge included in IAC calculation
  - Desal Plant O&M and Canal O&M included in IAC calculation
  - Future consideration of fixed reliability charge
Inconsistent Policy Allocation

- Allocation for non-commodity revenues to all rate categories, including Treatment
- Addresses COS Phase I consultant finding to review the application of offsetting revenue credits to the rate categories, including Treatment
- Impact: -$16/AF Treatment surcharge
  +$1/AF Supply, $2/AF Transportation
  +$0.49 M Customer Service, $1.31 M Storage
- Does not set precedent for future allocation of revenue from revenue producing projects
Summary Charts

- Fixed Revenue to Total Revenue
  - Current Rate Structure
  - Adjusted for Recommendation #3 – Treatment Offsets
  - Adjusted for Recommendation #1 – Fixed Costs Definition
  - Adjusted for Recommendation #4 – Potential Supply Reliability Charge

- Fixed Revenue in comparison to Fixed Costs
Fixed Revenue to Total Revenue

Current Rate Structure

VARIABLE Water Sales 80.5%

FIXED REVENUE:
- Standby Availability ($11.2M) 1.5%
- Property Tax ($11.5M) 1.6%
- IAC ($31.4M) 4.2%
- Storage ($64.2M) 8.7%
- Customer Service ($26.0M) 3.5%

TOTAL 19.5%

*Based on FY16 estimates for illustrative purposes only.
## Fixed Revenue to Total Revenue

**Adjusted for FSTF Recommendation #3 (Treatment Offsets)**

<table>
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<tr>
<th>Variable</th>
<th>Revenue</th>
<th>Percentage</th>
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<tr>
<td>Water Sales</td>
<td>$80.3M</td>
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<tr>
<td>Standby Availability</td>
<td>($11.2M)</td>
<td>1.5%</td>
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<td>Customer Service</td>
<td>($26.4M)</td>
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**Fixed Revenue**

- **Total Fixed Revenue**: 19.7%
- Incremental Change: +0.2%
- Cumulative Change: +0.2%

*Based on FY16 estimates for illustrative purposes only.*
Fixed Revenue to Total Revenue

Adjusted for FSTF Recommendation #1 (Fixed Costs Definition)

**VARIABLE**

Water Sales 78.0%

**FIXED REVENUE:**
- Standby Availability ($11.2M) 1.5%
- Property Tax ($11.5M) 1.6%
- IAC ($31.4M) 4.2%
- Desal Debt in IAC ($11.9M) 1.6%
- Desal Fixed & Canal O&M in IAC ($4.6M) 0.6%
- Storage ($65.2M) 8.8%
- Customer Service ($26.4M) 3.6%

**TOTAL FIXED REVENUE** 22.0%

Incremental Change +2.3%
Cumulative Change +2.5%

*Based on FY16 estimates for illustrative purposes only.*
Fixed Revenue to Total Revenue

Adjusted for FSTF Recommendation #4
(Potential Supply Reliability Charge of 15-25%)

VARIABLE
Water Sales
73.5%

FIXED REVENUE:
- Standby Availability ($11.2M) 1.5%
- Property Tax ($11.5M) 1.6%
- IAC ($31.4M) 4.2%
- Desal Debt in IAC ($11.9M) 1.6%
- Desal Fixed & Canal O&M in IAC ($4.6M) 0.6%
- Storage ($65.2M) 8.8%
- Customer Service ($26.4M) 3.6%
- Supply Reliability Charge 15-25% ($19.6M-33.3M) 2.6 - 4.5%

TOTAL FIXED REVENUE 24.6 – 26.5%

Incremental Change +2.6 – 4.5%
Cumulative Change +5.1 – 7.0%

*Based on FY16 estimates for illustrative purposes only.
Fixed Revenue in Comparison to Fixed Costs

- **Fixed Costs (in millions)**
  - FY12: $150
  - FY14: $200
  - FY16: $250
  - FY18: $300
  - FY20: $350

- **Fixed Revenue as a Percent of Fixed Costs**
  - FY12: 0%
  - FY14: 10%
  - FY16: 20%
  - FY18: 30%
  - FY20: 40%

Graph legend:
- **TOTAL FIXED COSTS**
- Fixed Revenue to Fixed Costs (without adjustments)
- Fixed Revenue to Fixed Costs (with all recommendations)
Cumulative Impact to Member Agencies

- Range of Impact for Recommendations 1-4:
  - Increase in costs of $102/AF to savings of $29/AF\(^1\)
  - >50% of member agencies realize reduced contribution
  - Average increase among all member agencies of $2/AF
    - $0.07/month average residential customer

- Actual impact by member agency dependent on sales portfolio
  - Substantially less impact in dry years to agencies with local surface water supplies
  - Increased purchase from Water Authority reduces average cost of water

\(^1\)Measured on a basis of Total Financial Contribution to the Water Authority
# FSTF Recommendations to Board

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<th>Alternatives on Timing</th>
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| 1) Expand definition of fixed costs to include desal and QSA | 1. Approve definition March 2014  
2. Recommend Board approval of clarification of existing IAC policy on debt only as it relates to desal  
3. Defer the question of inclusion of O&M in IAC to FY 2015 for decision on CY 2016 rates  
(Timing: November 2014) |
| 2) Adjust Storage Charge to reflect 5 year rolling average of member agency M&I deliveries | Defer to FY 2015 for decision on CY 2016 rates  
(Timing: November 2014) |
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- Additionally, the FSTF recommends any further discussion return to the A&F Committee for consideration.
Upcoming Discussions

- **March 27th Board**
  - Consideration of FSTF Final Recommendations

- **April**
  - Member Agency Work Group finalize Cost of Service, Phase II

- **May 22nd Board**
  - Notice the public hearing on proposed CY15 rates and charges
  - Cost of Service Phase II Report – Desal costs

- **June 26th Board**
  - Hold public hearing
  - Vote on recommended CY15 rates and charges

- **Other Activities**
  - Bond disclosure and rating agency meetings related to Extendable Commercial Paper issuance (May)