EAST BAY MUNICIPAL UTILITY DISTRICT

Long-Term Financial Stability Workshop #2

Board of Directors
July 22, 2014

Agenda

- Introduction
- Rate Stabilization Fund mechanics
- Drought financial management
- Rate Stabilization Fund levels

Introduction

Schedule

Workshop 1	March 25, 2014
Workshop 2	Today
Workshop 3	August 12, 2014
Workshop 4	September 2014
Workshop 5	November 2014
Budget/Rates Workshop #1	Jan/Feb 2015
Budget/Rates Workshop #2	March 2015
Budget/Rates Workshop #3	April 2015
Budget/Rates Adoption	June 2015

Workshop Topics

Workshop 1 *Introduction*	Workshop 2 *Reserves*	Workshop 3 *Drought Rates*	Workshop 4 *Capital Plan*	Workshop 5 *Rates*
• Strategic Plan Update • Review Financial Planning Model • How policies drive revenue requirements	• Demand projections and variability • Funding drought costs • Fixed/variable revenues • Review/evaluate reserve policies	• EBMUD drought rate history • Alternative drought rate structures • Pros/cons of alternative drought rate structures	• CIP Projections • Review/evaluate capital investment policies • CIP funding: debt vs. cash • Debt Service Coverage Ratios • Seismic Improvement program	• Develop Financial Forecast based on Workshops 1-3 • Review preliminary results of Cost of Service study

Workshop #1 Recap

- Strategic plan update
- How the financial model works
- How financial policies drive revenue requirements
- Model outputs

Workshop #1—Strategic Plan Update

Strategy 1	***Develop a Long-Range Financing Plan that sets forth the long-term funding needs of the District***
Objectives	• Develop and maintain financial planning models to include long-term forecasts of operating and capital expenditures, revenue requirements and rates and charges
	• Ensure the long-term financial plan is based on reasonable, conservative assumptions and accounts for uncertainties
	• Ensure the long-term plan maintains the District's good standing in the credit markets to provide ready access to cost-effective capital financing
	• *Evaluate the District's capital financing and debt service coverage policies to optimize cash funding of capital investments*
	• ***Evaluate the District's cash reserve policies to consider optimal uses and levels of reserves, including alternative strategies for funding drought-related costs***

Workshop #1—How The Financial Model Works

- Revenue Requirement from Rates & Charges based on assumptions and financial policies

  \+ Operating Expenditures

  \+ Debt Service Payments

  \+ PAYGO Capital Expenditures

  \- Non-Rate Revenues

  = Revenue Requirement from Rates & Charges

Workshop #1—Financial Policies Drive Revenue Requirements

- Debt/PAYGO funding of capital plan
  - no more than 65% debt funding over 5-year period
- Debt Service Coverage Ratio (DSCR)
  - at least 1.60 x coverage
- Reserve level targets for each reserve type
  - working capital,
  - self-insurance,
  - workers compensation,
  - contingency/rate stabilization

Reserve Considerations

- 2000 Little Hoover Commission Report raised issues regarding special district reserves
  - Lack of guidelines was one of the key issues raised in the report
- In 2004, a California State Auditor's report on water districts made a similar finding that reserve fund amounts did not always have sufficient justification.
- CSDA and ACWA recommend local agencies adopt detailed reserve policies to provide a clear and compelling rationale for fund accumulation and to demonstrate the active management of reserve funds.
  - Reserve policies should include sub-policies where appropriate—working capital, rate stabilization, PAYGO capital, etc…

Workshop #1— Reserves

- Unrestricted District cash is pooled by system
- Policy 4.02 allocates unrestricted cash to reserves
  - Established in 1984 revised in 1994, 2000, 2004

Reserve	Definition
Working Capital	3 month's O&M
Self Insurance	125% estimated claims
Workers Compensation	Estimated annual claims
Contingency & Rate Stabilization • Water • Wastewater	 20% volume revenues 5% O&M expense
Capital Projects	Remaining Amount

Workshop #1—Use of Reserves

- Reserves can be used in event of budget shortfall; however
- Use of reserves does not help with DSCR calculation
- Use of reserves is a reduction in unrestricted cash

Workshop #1—Drought Impacts to DSCR (FY15)

		Budget	Drought	Net
+	Operating Revenues	$500 MM	-$30 MM	$470 MM
-	Operating Expenditures	$247 MM	$23 MM	$270 MM
=	Net Revenues	$253 MM	- $53 MM	$200 MM
-	Senior Debt Service	$152 MM		$152 MM
	DSCR	1.66 x		1.32 x

- Drought assumes 10% drop in sales volume, and purchase of 65 taf of supplemental supplies—$53 million variance
- DSCR drops from 1.66x to 1.32x

Rate Stabilization Fund (RSF) Mechanics

Rate Stabilization Fund (RSF)

- Established in Bond Indenture to help manage DSCR
- Requires separate fund & tracking of deposits/withdrawals
- End of year adjustments to Net Revenues
  - "Bad Year"—withdraw funds
  - "Good Year"—deposit funds
- History
  - Deposits in 1986—$50M Water, $15M WW
  - Not administered or utilized pursuant to Bond Indenture

RSF Mechanics—Withdrawal

"Bad Year"—e.g. Drought

CURRENT PRACTICE

		Budget	Drought	Net
+	Operating Revenues	$500 MM	-$30 MM	$470 MM
-	Operating Expenditures	$247 MM	$23 MM	$270 MM
=	Net Revenues	$253 MM	- $53 MM	$200 MM
-	Senior Debt Service	$152 MM		$152 MM
	DSCR	1.66 x		1.32 x

- *No RSF draw*
- *DSCR drops below Board target*

USING INDENTURE RSF

		Budget	Drought	Net
+	Operating Revenues	$500 MM	-$30 MM	$470 MM
+	RSF Draw			+$43 MM
-	Operating Expenditures	$247 MM	$23 MM	$270 MM
=	Net Revenues	$253 MM	- $53 MM	$243 MM
-	Senior Debt Service	$152 MM		$152 MM
	DSCR	1.66 x		1.60 x

- *RSF draw of $43 MM*
- *DSCR meets target*
- *RSF balance is $7 MM and can only be replenished with a "good year"*

RSF Mechanics—Deposit

"Good Year" —e.g. Property Sale

CURRENT PRACTICE	Budget	Property Sale	Net
+ Operating Revenues	$500 MM	+$30 MM	$530 MM
- Operating Expenditures	$247 MM		$247 MM
= Net Revenues	$253 MM	+30 MM	$283 MM
- Senior Debt Service	$152 MM		$152 MM
DSCR	1.66 x		1.86 x

- *No RSF deposit*
- *DSCR rises above target*

USING INDENTURE RSF	Budget	Property Sale	Net
+ Operating Revenues	$500 MM	+$30 MM	$530 MM
- RSF Deposit			$30 MM
- Operating Expenditures	$247 MM		$247 MM
= Net Revenues	$253 MM	+$30 MM	$253 MM
- Senior Debt Service	$152 MM		$152 MM
DSCR	1.66 x		1.66 x

- *RSF deposit of $30 MM*
- *DSCR meets budget*
- *RSF balance is $80 MM*

RSF Recommendation

- Administer and utilize RSF as provided for in Bond Indentures
  - Establish as separate fund
  - Track deposits and withdrawals
  - Report in financial statements
- Make deposit from FY14
- Will help manage DSCR during FY15

Drought Financial Management Tools

Drought Management Tools

Supply/Demand Tools	Financial Tools
• Voluntary conservation • Supplemental supplies (CVP, Placer, other) • Mandatory conservation	• RSF • Rates -Supplemental Supply Surcharge -Drought rates

FY15 Planning Scenarios ($Millions)

	Normal Weather	Moderate Drought	Severe Drought
Scenario Assumptions			
Water savings	10%	10%	15%
Water sales (FY13 = 168.4 MGD)	152	152	143
Supplemental supply volume	0 TAF	35 TAF	65 TAF
Fiscal Impact			
Water Sales revenue decrease	($25)	($25)	($41)
Supplemental supply cost	$0	$13	$23
Subtotal	($25)	($38)	($64)
FY15 projected net budget variance	$11	$11	$11
Net	($14)	($27)	($53)

Financial Tools—RSF

- Funding level of RSF
  - Currently 20% of volumetric revenues
  - $50 million
- Adequacy of RSF Funding Level
  - Sufficient to address intermittent, un-correlated events (e.g chemical and energy costs)
  - Less effective managing significant, multi-year drought events
    - RSF quickly depleted
    - Drought rates would need to recover all subsequent costs

Financial Tools—Supplemental Supply Surcharge

Supplemental Supply Surcharge	
Description • 14% on flow charge • Noticed per Prop 218 • Automatic implementation when Board declares need to purchase water to meet demand • In place long enough to recover costs of supplemental supplies	Benefits • Credit rating—match revenues & expenses • Price signal when supplies are purchased Challenges • Limits operational flexibility in utilizing supplemental supplies • Only recovers cost of supplemental supplies

Financial Tools—Drought Rates

- Drought rates have been implemented on an ad hoc basis as needed; no board policy in place on when drought rates should be used or how they should recover drought costs
- Drought rate workshop August, 12 2014

Financial Tools

Short-Term and Long-Term Considerations

Short-Term

- Depending on severity and duration of drought, current RSF may not be sufficient to meet needs
- Deploy additional tools
  - Supplemental Supply Surcharge in FY15
  - Develop drought rates for FY16 and FY17

Long-Term

- RSF not sized to handle a multi-year drought event
- Supplemental Supply Surcharge may inhibit optimal water supply decisions
- A larger RSF could
  - Help manage through a multi-year event
  - Support optimal water supply decisions
  - Mitigate volatility in drought rates

Rate Stabilization Fund Levels

RSF Manages a Range of Risks

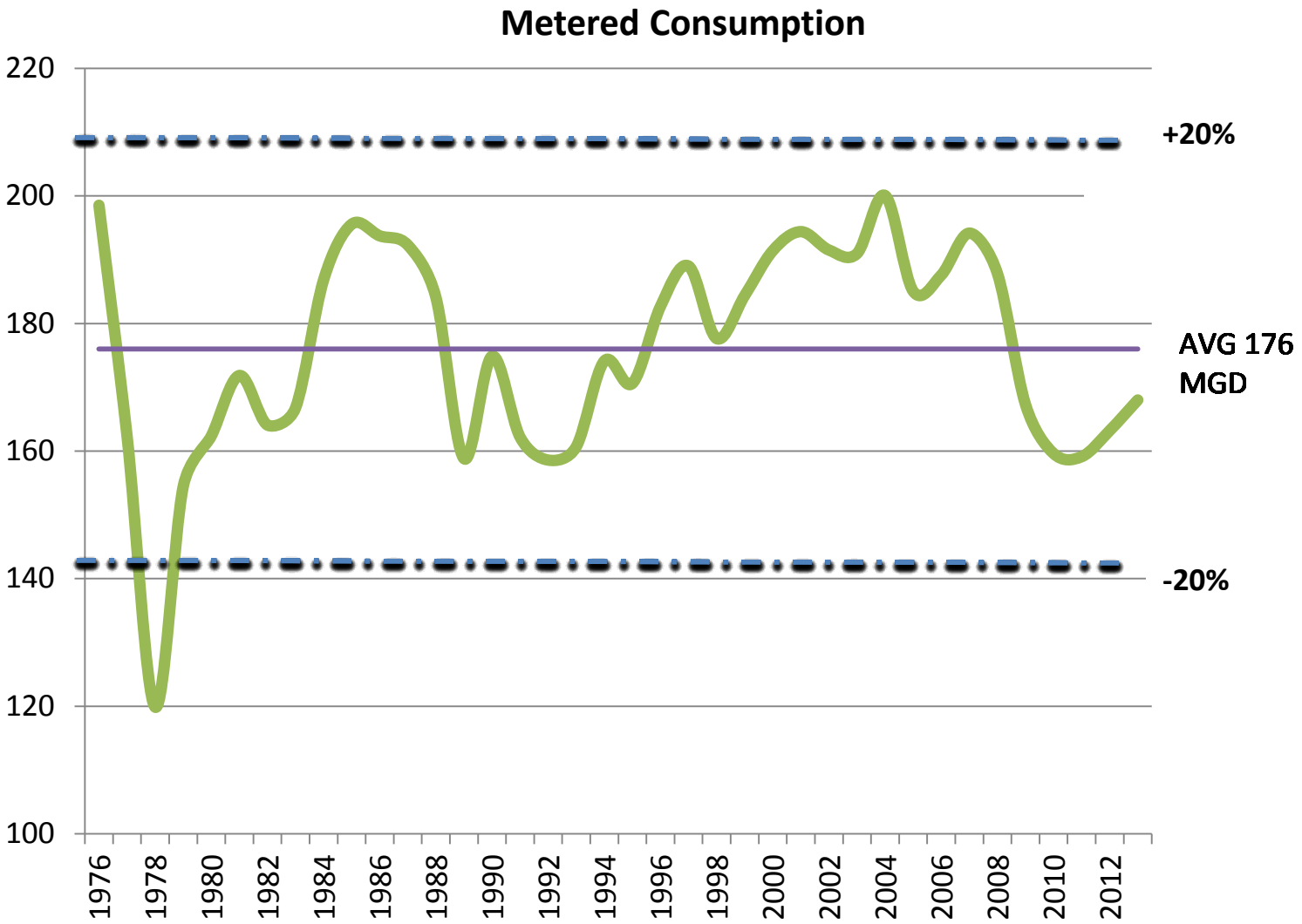
- Climate/hydrology
  - Sales volume volatility
  - Water purchases
- Economic
  - Capacity charge revenue
  - Financial—short-term interest rates, liquidity risk, market access risk, counterparty risk
  - Energy prices
  - Chemical prices

Approach to RSF Sizing

- Build policy funding levels based on most significant risk—sales volume volatility
  - Extreme wet-weather
  - Drought

Agency	RSF Policies
EBMUD	• 20% volumetric revenues (~1year protection)
MWD	• Min—1 ½ years protection • Max—3 ½ years protection
SDCWA	• Target—2 ½ years protection • Max—3 ½ years protection

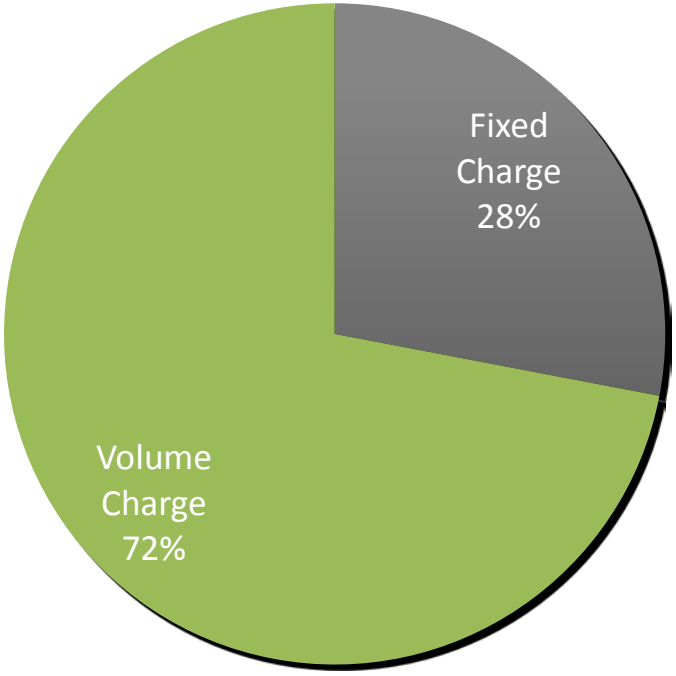
Sales Volume - Historical Volatility



Significant Financial Exposure to Sales

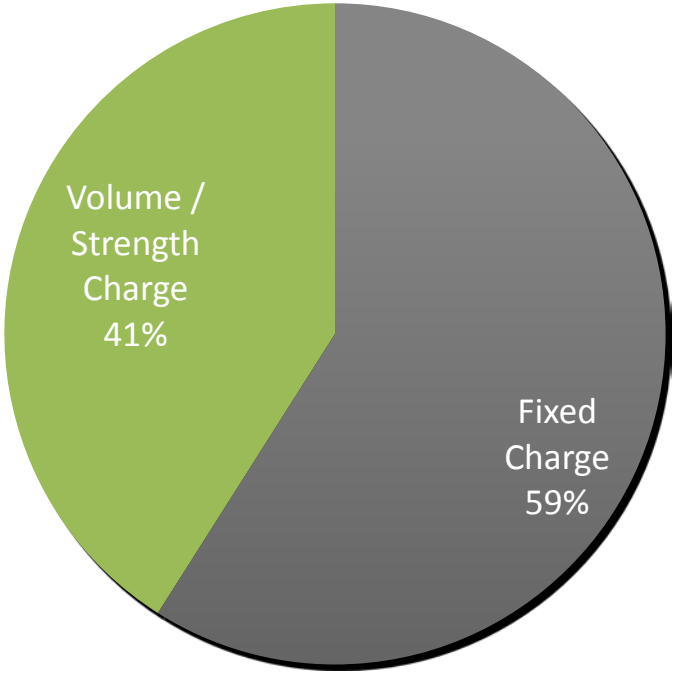
Revenue Structure—Rates

Water



- Fixed meter charge
- Volume charge

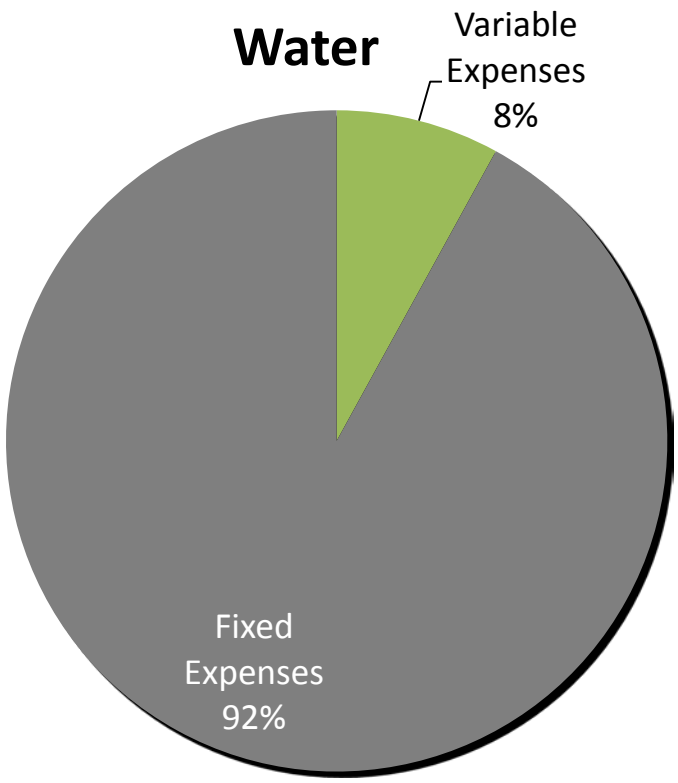
Wastewater

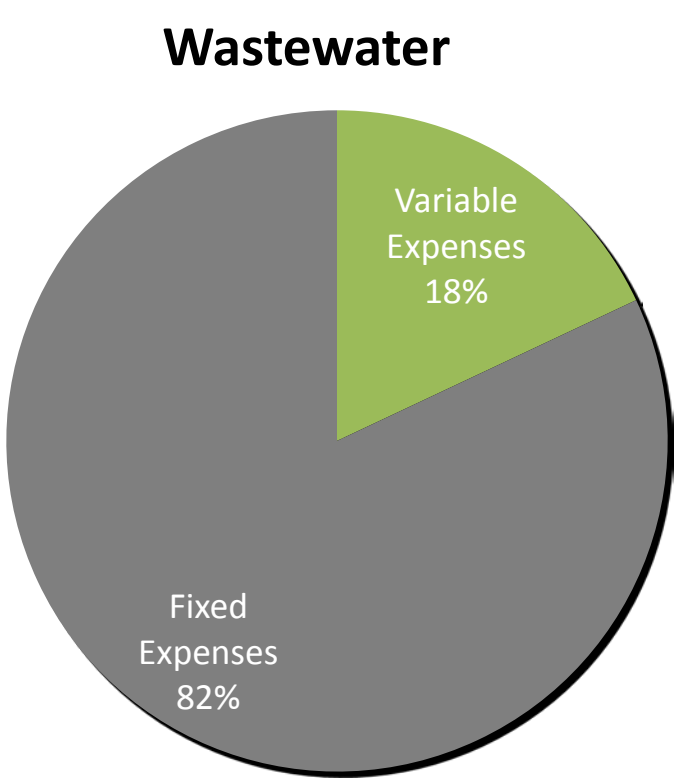


- Fixed charge, wet weather fee
- Volume/strength charges

Significant Financial Exposure to Sales

Cost Structure—O&M





- Variable Operating Expenses – electricity, chemicals, disposal
- Fixed Operating Expenses – labor, equipment, materials
- Excludes other fixed expenses such as debt service and capital investment

Steps to Determine Appropriate Mix of RSF and Rates

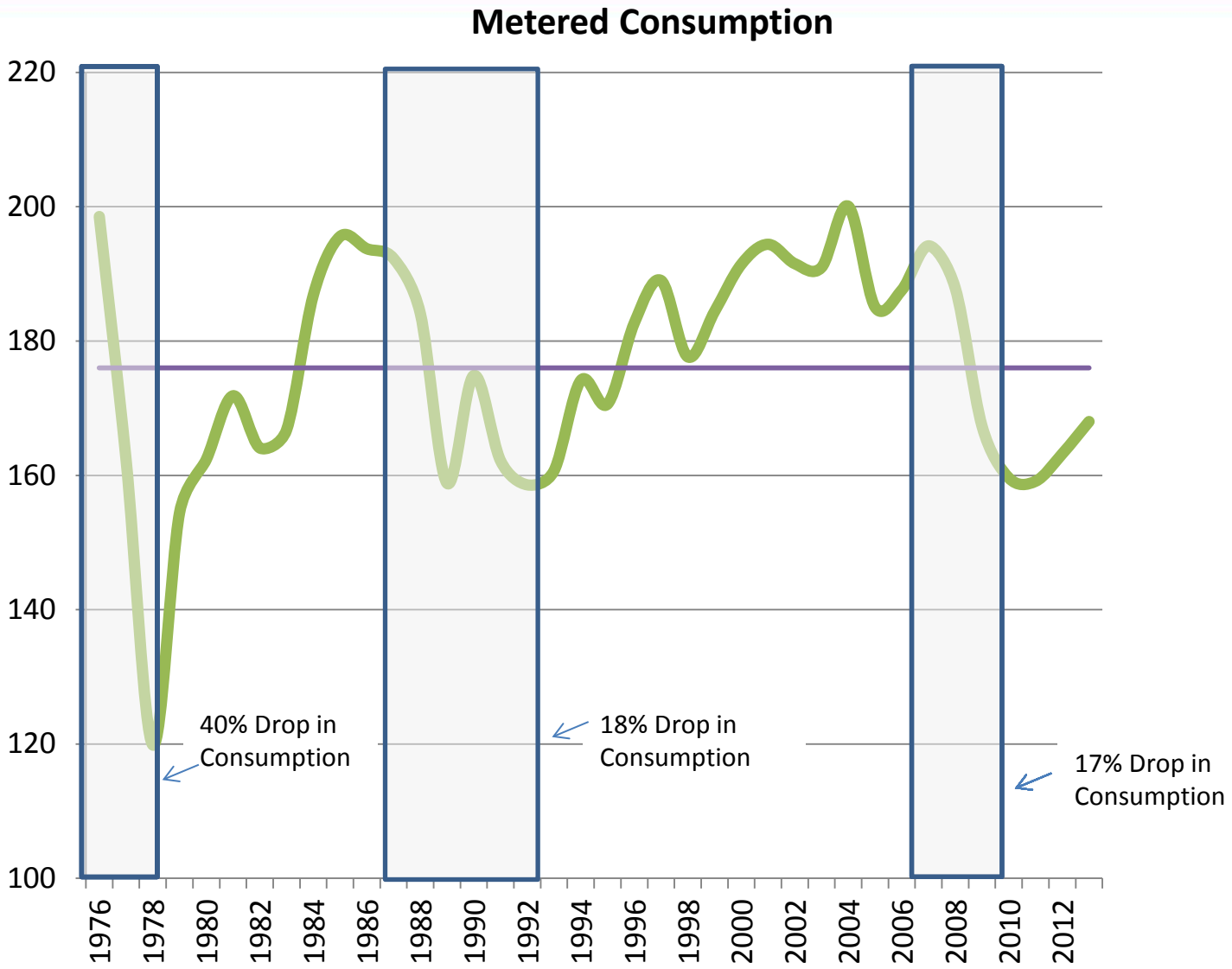
Step 1: Model drought and post-drought recovery scenario
- » Water sales reductions
- » Purchase of supplemental water
- » Drought enforcement, outreach, etc…

Step 2: Estimate financial impact
- » Water sales revenue reductions
- » Cost of supplemental water
- » Other drought costs

Step 3: Meet financial obligations
- » Use of RSF
- » Drought rate revenue

Step 1: Model Drought Scenario

Three Historical Drought Events



Step 1: Model Drought Scenario

Water Sales Reduction & Supplemental Water

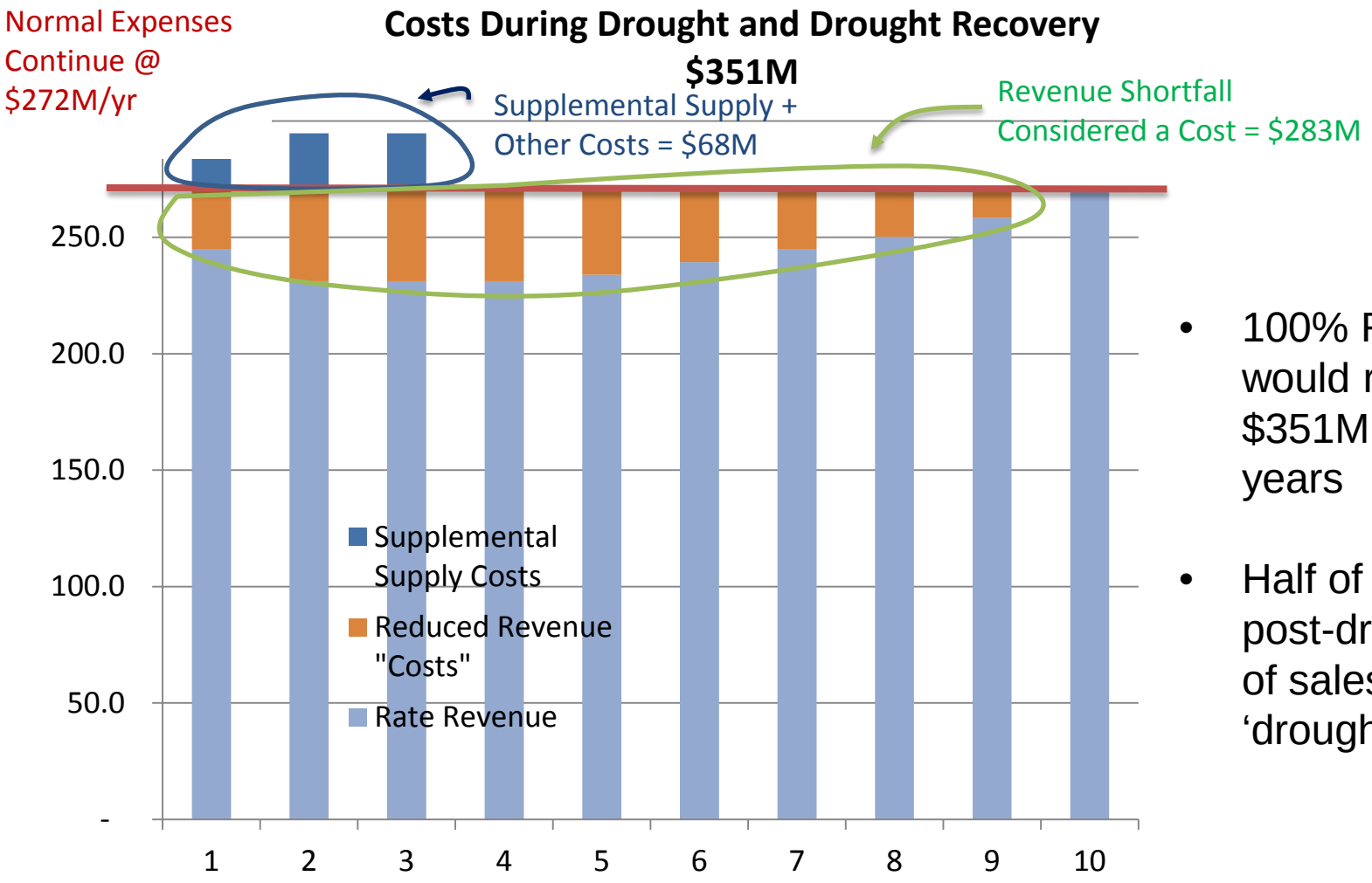
Year	Water Supply Condition	Water Sales Reduction	Supplemental Water
1	Moderate	10%	35k
2	Severe	15%	65k
3	Severe	15%	65k
4	Normal	15%	
5	Normal	14%	
6	Normal	12%	
7	Normal	10%	
8	Normal	8%	
9	Normal	5%	
10	Normal	0%	

3 Year Drought

7 Year Drought Recovery

Step 2: Estimate Financial Impact

Impact by Year



- 100% RSF funding would require $351M over 10 years
- Half of costs are post-drought loss of sales due to 'drought tail'

Step 3: Meet Financial Obligations

- Meet financial obligations through RSF draws and rate adjustments
- Size the RSF based on tolerance for rate adjustments and rate volatility
- Rate adjustments
  - Send price signal during drought
  - Avoid extreme rate shock
  - Mitigate volatility in rate adjustments

"Just-In-Time" Rate Adjustments

0% RSF, 100% Rates

Year	Annual Rate Adjustment	RSF Draw
1	+17%	$0
2	+11%	$0
3	0%	$0
4	-9%	$0
5	-1%	$0
6	-2%	$0
7	-2%	$0
8	-2%	$0
9	-3%	$0
10	-5%	$0

- 0% RSF
  - ✓ No use of reserves
- 100% Rates
  - ✓ "Just-In-Time" adjustments match revenues and expenses
  - ✓ Significant rate volatility
    - ✓ 17% rate increase at first sign of shortage
    - ✓ 28% increase during first two years of shortage
    - ✓ Subsequent rate reductions as demand recovers

Progressive Rate Adjustments

36% RSF, 64% Rates

Year	Annual Rate Adjustment	RSF Draw/ Deposit $M	RSF Ending Balance $M
1	0%	-$41	$109
2	10%	-$44	$64
3	5%	-$33	$31
4	0%	-$6	$25
5	0%	-$3	$22
6	0%	$3	$25
7	0%	$10	$35
8	0%	$16	$51
9	0%	$25	$76
10	0%	$41	$117

- 36% RSF
  - ✓ $150M beginning balance
  - ✓ Draws mitigate rate adjustments
  - ✓ Reserves replenished over time
- 64% Rates
  - ✓ Progressive price signal during drought
    - ✓ 10% increase in 2nd year of shortage
    - ✓ 5% increase in 3rd year of shortage
    - ✓ 15% total increase over 3 years

"Just In Time" vs Progressive Rate Adjustments

Year	"Just In Time" Rate Adjustments	Progressive Rate Adjustments
1	+17%	0%
2	+11%	10%
3	0%	5%
4	-9%	0%
5	-1%	0%
6	-2%	0%
7	-2%	0%
8	-2%	0%
9	-3%	0%
10	-5%	0%

- Increasing the size of the RSF would provide for
  - Avoid extreme rate shock
  - Progressive price signals during drought
  - Mitigate overall rate volatility

Summary

- In line with best practice District has written policy framework for Reserves (Policy 4.02)
- Enhancements to RSF provide additional utility
  - Short-Term—operate RSF as specified in Bond Indentures
  - Long-Term—evaluate increasing size of RSF as part of Long Range Financial Plan

Board Discussion