



**BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT**

Five Part Action Plan to Address Refinery Emissions

**Board of Directors Meeting
June 3, 2015**

**Eric Stevenson
Director of Meteorology, Measurement and Rules**

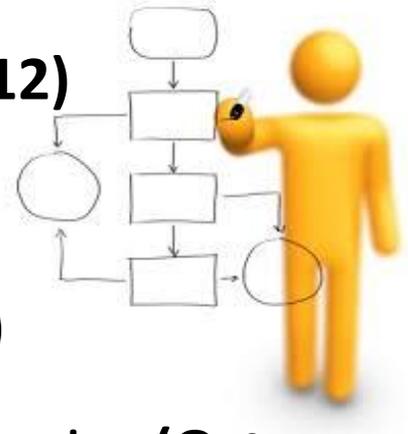
Overview

- Progress to date
- Five Part Action Plan
- Regulatory Greenhouse Gas (GHG) program
- Comments and responses
- Precedent setting actions
- Next steps
- Issues



Progress to Date

- Regulatory Concept paper **(2012)**
- Industrial Facility Accidental Releases Work Plan **(2012)**
- Reg. 12, Rule 15 development **(2013 to the present)**
- Reg. 12, Rule 16 development **(Oct. 2014 to present)**
- Resolution Addressing Emissions from Bay Area Refineries **(Oct. 2014)**
- Refinery Emission Reduction Strategy **(Dec. 2014)**
- Workshops for 12-15 and 12-16 **(Mar. 2015)**



Goals of the Five Part Action Plan

- Address refinery operations/impacts on communities
- Set cap on Toxic Air Contaminants (TACs) and criteria pollutants
- Refinery operation changes will not increase health burden
- Reduce refinery criteria pollutant emissions and health risks by 20%



Five Part Action Plan Elements

- Regulation 12, Rule 15 (12-15)
- Regulation 12, Rule 16 (12-16)
- Permit review for crude oil changes
- Refinery Emission Reduction Strategy Rulemaking
- Refinery Methane Rulemaking



Regulation 12, Rule 15 Elements

- Annual emissions inventories
- Crude oil composition characteristics
- Fence line and community monitoring systems
- Health Risk Assessments (HRAs)
- Total climate change footprint



Regulation 12, Rule 15 Elements (new)

- Additional crude oil composition characteristics
- Energy efficiency audit
- Next draft by July



Regulation 12, Rule 16 New Elements

- Risk limit - 25 in 1 million using HRA required in 12-15
 - Future changes will likely incorporate this limit for all Bay Area facilities
- Implement criteria pollutant cap
- Next draft by July



Permit Review for Crude Oil Changes

- Crude slate modifications trigger permitting review
 - Engineering review of criteria pollutants, GHG and/or TACs
- Best Available Control Technology (BACT) for criteria pollutants, GHG and/or TACs
 - New Source Review for all affected systems



Refinery Emissions Reduction Strategy Rulemaking

- 20% criteria pollutant reductions by 2020
 - Includes five specific refinery emission reduction regulations
 - Additional rulemaking is being investigated
- 20% reduction in risk by 2020
 - 12-16 sets total risk at 25 in 1 million
 - 12-15 HRA and additional monitoring requirements will identify sources for further reductions





Refinery Strategy Rules

Title	Pollutant(s)	Amount Reduced	Projected Completion
Rule 9-14: Petroleum Coke Calcining	SO ₂	894 tons/year (tpy)	Fall 2015
Rule 6-5: Fluid Catalytic Cracking Units	Ammonia, PM	TBD	Fall 2015
Rule 8-18: Equipment Leaks	VOC, toxics, methane	1,227 tpy	Winter 2015
Rule 9-1: Sulfur Dioxide from Refineries	SO ₂	926 tpy	Winter 2015
Rule 11-10: Cooling Towers	VOC, toxics, methane	514 tpy	Winter 2015

Total Reductions for 2015: **3,561 tons per year or 23%** of total refinery criteria pollutant emissions.

Additional rulemaking for further reductions planned for 2016.

Refinery Methane Rulemaking

- Limit methane emissions from refineries by:
 - Reducing equipment leaks
 - Reducing cooling tower emissions
 - Provides near-term climate benefits
- Emissions of specific sources not subject to Cap and Trade
- Investigate other areas that can provide methane emission reductions



Regulatory Program to Reduce GHG from Stationary Sources

- Incorporate GHG evaluation into permitting program
- Require BACT in New Source Review to limit GHG increases
- Develop regulatory proposals to limit short-lived climate pollutants
- Investigate and pursue areas for additional action to reduce GHG



Comments and Responses

- Suggestion to cap GHG
 - Response:
 - Regulatory Program to Reduce GHG from Stationary Sources
- Suggestion to address impacts “looking forward”
 - Response:
 - Changes to crude slate require permit review
 - Increases in criteria pollutant, GHG or TAC emissions trigger BACT



Comments and Responses (Continued)

- Suggestion to remove exemption for increased throughput
 - Response:
 - Exemption removed
- Cap criteria pollutant emissions
 - Response:
 - Required in 12-16



Precedent Setting Actions

- Fence-line and community monitoring required
- Updated HRA using latest methods
- Caps and reduces criteria pollutants
- Caps overall risk
- Identifies energy efficiency improvement opportunities
- Requires New Source Review for crude slate changes
- Reduces methane emissions from refineries
- Addresses GHG in permit review





Next Steps

- Finalize and bring 12-15 and 12-16 to the Board for consideration as soon as possible
- Finalize and bring new and modified regulations in the Refinery Strategy to the Board for consideration before the end of 2015
- Further develop and enact additional items in the five part action plan



Issue and Resolution Submitted by CBE and other Groups

“Bay Area refineries are in the process of infrastructure and crude oil changes that have the potential to result in the significant worsening of Air Quality”

“Direct Air District Staff to develop, for Board consideration in proposed Rule 12-16, enforceable numeric limits on criteria, toxic, and greenhouse gas air pollutant emissions that will prevent increased emissions from Bay Area refineries.”



Staff Concerns with Proposed Solution

- Difficult to make demonstrations required in Health and Safety Code: necessity (H&SC §40727), non-duplication (H&SC §40727b), and cost effectiveness (H&SC §§40703 and 40920.6)
- Caps do not reduce emissions and so are difficult to justify as needed to comply with air quality standards.
- Caps could be considered duplicative with AB 32 Cap and Trade requirements and with existing permit limits.
- Costs and benefits are difficult to calculate since emissions are not reduced.
- Caps provide an advantage to refineries that are less efficient and less well controlled.
- Pulls staff resources away from rulemaking that reduces emissions.



Criteria Contaminants

CBE Issue: Community proposal to cap refinery contaminants

Staff Approach:

- Propose to cap the refineries at maximum permitted capacity.
- Refineries will be required to demonstrate compliance with applicable federal health standards for criteria pollutants at maximum capacity.
- Refineries will be required to reduce allowable emissions if they cannot show compliance with federal air quality standards.



Toxic Air Contaminants

CBE Issue: Cap each toxic pollutant at current levels

Staff Approach:

- Propose to take risk based approach, using latest science on risk.
- Consider the relative toxicity of the contaminants and the distance between emission point and neighboring community.
- Cap based on contaminant that drives risk.
- Based on proven regulatory approach utilized throughout California.

CBE Issue: Establishing **Local** GHG Caps

Staff Approach:

- Refinery sector GHG emissions are already capped and required to decline under AB 32.
- Staff is not proposing to locally cap refinery facilities at this time.
- Staff recommends addressing GHG emissions through Air District permitting rules.
- Staff will proceed with rulemaking to control methane emissions from refineries and other sources.



Consideration for Local GHG Caps

- *Not a Local Problem: The principal GHG is carbon dioxide (CO₂), which is not a local health concern.*
- Efficiency: May not ensure most efficient GHG emission reductions.
- Production Shift: May shift business activity to outside of air basin.
- Emission Leakage: May result in increases of GHG emissions in other part of the State or *beyond*.
- Overall: May not affect overall global level of GHG emissions.



Regulatory GHG Approach

- Incorporating greenhouse gases in the Air District's regulatory program; and
- Incorporating greenhouse gases in the Air District's permitting program including evaluation of Best Available Control Technology in New Source Review; and
- Evaluation and adoption of appropriate methods to assure that greenhouse gases from stationary sources do not increase, including requiring reductions from sources subject to cap and trade; and
- Developing regulatory proposals to limit short-lived climate pollutants from stationary sources; and
- Investigating and pursuing all other opportunities to assure greenhouse gas reductions.



Regulatory GHG Approach (cont.)

- Stationary Source Committee provided additional direction at the May 27th meeting
- Board of Directors to consider staff recommendations on July 22, 2015



**BAY AREA
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MANAGEMENT
DISTRICT**

Draft Amendments to Regulation 3: Fees

Board of Directors Meeting

June 3, 2015

Jeff McKay

Deputy Air Pollution Control Officer



Recommendation

- Adopt proposed amendments to Regulation 3: Fees and approve the filing of a California Environmental Quality Act (CEQA) Notice of Exemption.





BAY AREA
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**Air District's
Proposed Budget for Fiscal Year Ending (FYE) 2016**

**Board of Directors
Budget Hearing**

June 3, 2015

**Jeff McKay
Deputy Air Pollution Control Officer**



OUTLINE

- Status of Current FYE 2015
- Review of Revenue and Expenditure FYE 2016
- Review of Proposed Policy Recommendations



PROJECTIONS FOR CURRENT FYE 2015

Out of \$65M Budget

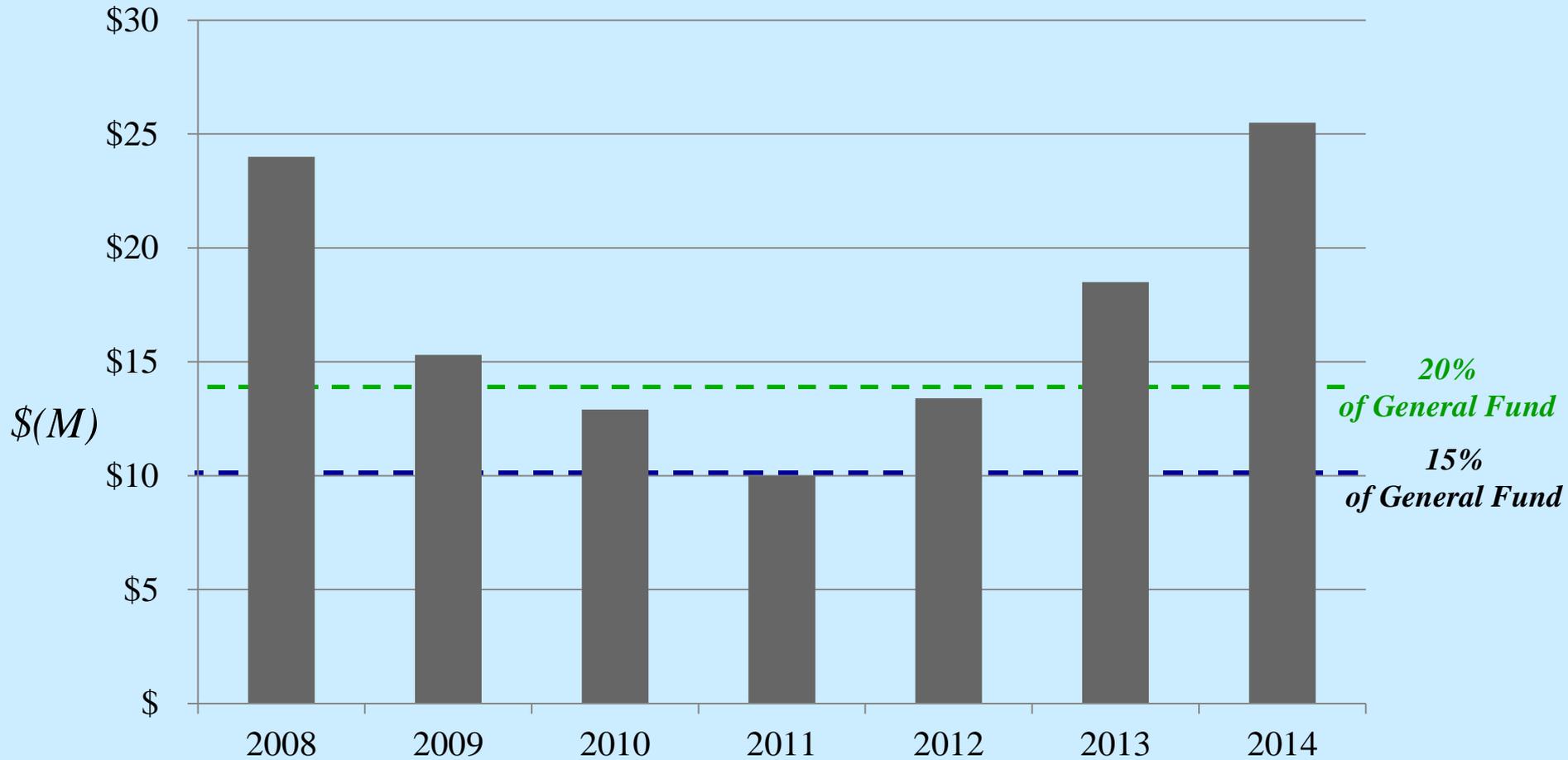
As of 3rd Quarter:

- Revenues on Target = \$49.4M
- Expenditures on Target = \$50.6M



DISTRICT RESERVE FUNDS

Audited Values





APPROVED RESERVE TRANSFERS FYE 2015

During FYE 2015 Board Approved Transfers:

- \$1M for 375 Beale Street Design and Construction
- \$1.4M for JDE Software Upgrade



OVERVIEW

Proposed Budget for FYE 2016

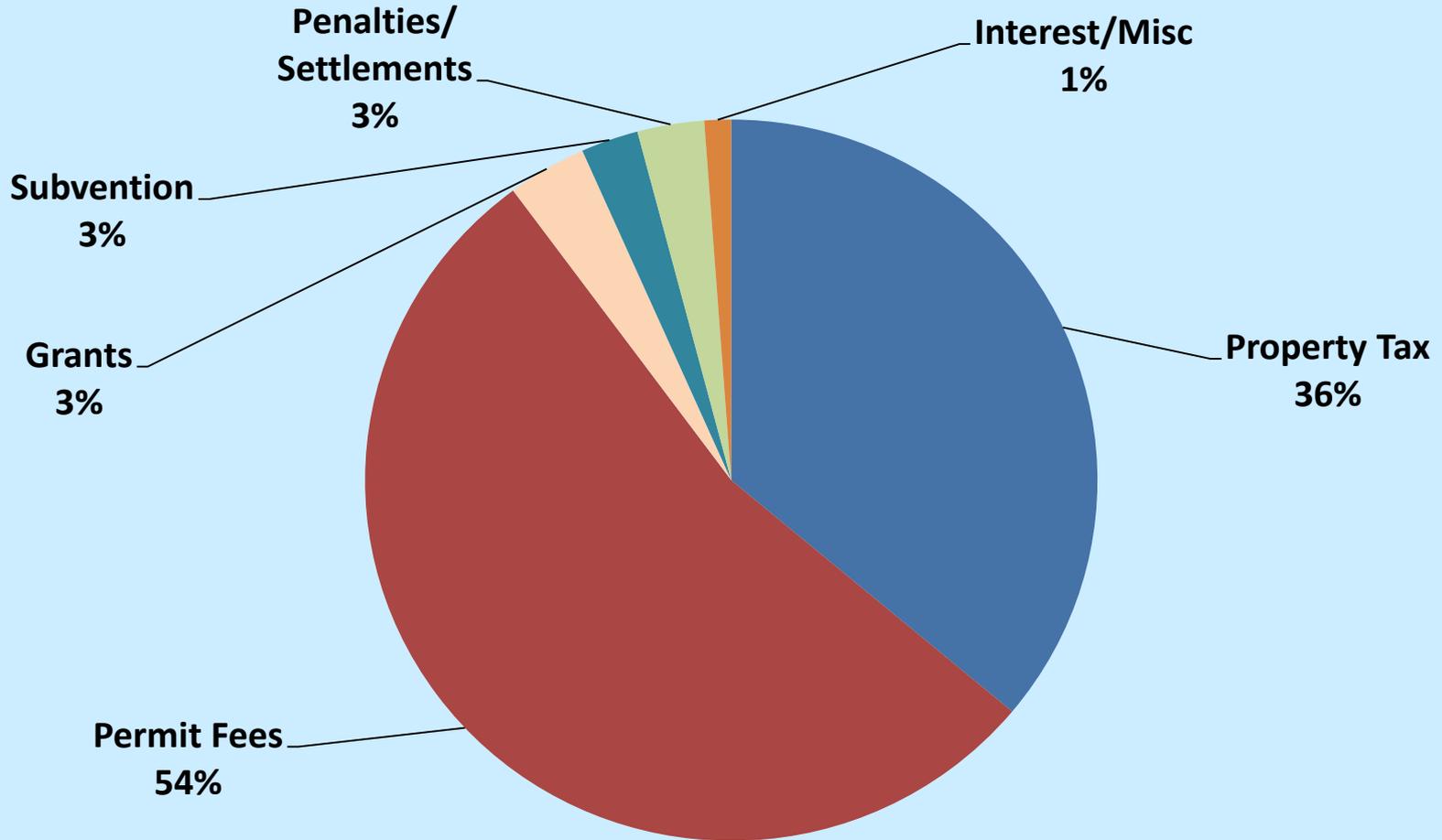
(Excludes New Building Financing)

- \$72.5 M General Fund Budget
- Incorporates Cost Recovery Policy
- Additional GHG funding for 2 new positions
- Hire Staff: From 329 to 334 filled positions
- Addresses Retirement Liabilities
- Includes 2.6% COLA
- Use of Reserves & Proposed Reserve Policy



GENERAL FUND REVENUE SOURCES

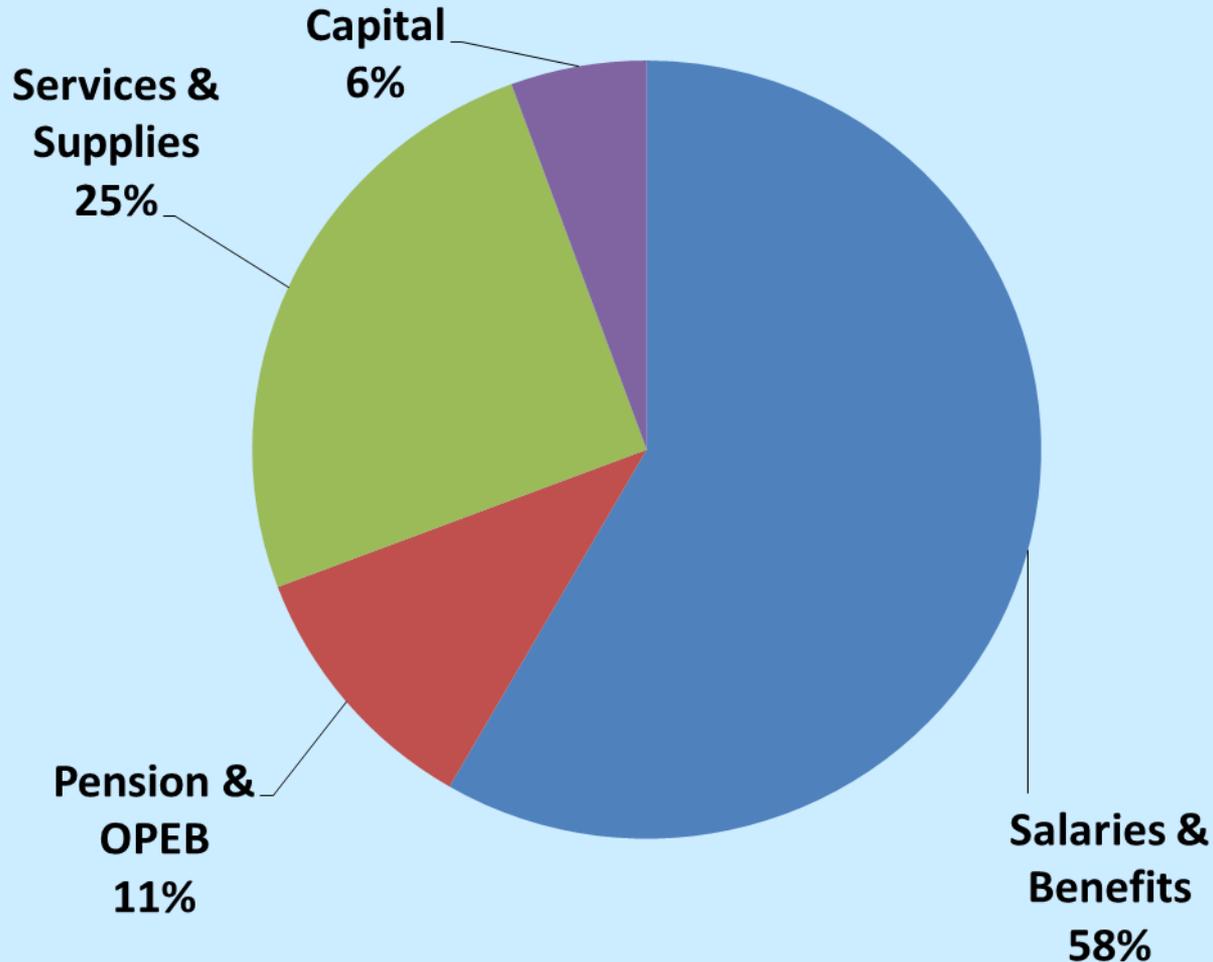
FYE 2016 Proposed Budget



Excludes Building Proceeds

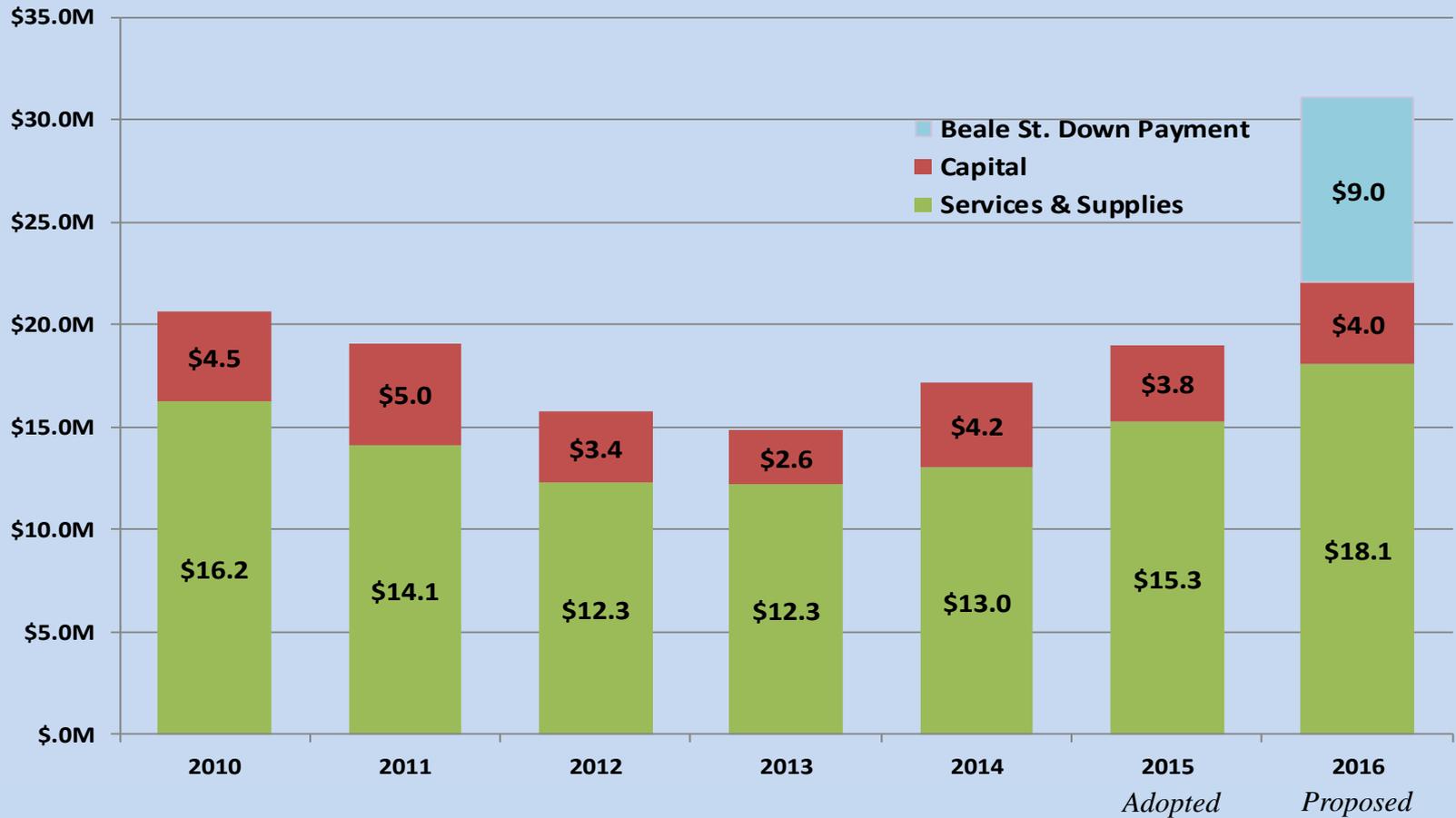


GENERAL FUND EXPENDITURES FYE 2016 Proposed Budget



Excludes Building Financing

CAPITAL and SERVICES & SUPPLIES



Beale St. Down Payment								\$9.0
Capital	\$4.5	\$5.0	\$3.4	\$2.6	\$4.2	\$3.8	\$4.0	\$4.0
Services & Supplies	\$16.2	\$14.1	\$12.3	\$12.3	\$13.0	\$15.3	\$18.1	\$18.1
Total	\$20.7	\$19.1	\$15.7	\$14.8	\$17.2	\$19.0	\$31.1	\$31.1



FYE 2016 PROPOSED FEES

Fourth Year of Cost Recovery Policy

- Average 6.4% fee increase in FYE 2016 budget
- Additional GHG fees to cover new programs
- Strong involvement by regulated community



CLIMATE PROGRAM STAFFING

- Implementation of the Air District's 10-Point Climate Action Work Plan
- 4.6 cents per ton of GHG implemented over 2 years
 - 4 Positions (2 in 2015 and 2 in 2016)
 - Planning (2)
 - Inspection (1)
 - Technical (1)
- Total Climate Positions = 7



FYE 2016 FTE STAFFING LEVEL

FYE 2015 Budgeted Positions	329
FYE 2016 Recommended Positions	5
Total Budgeted Positions	334

FYE 2016 FUND BALANCE SUMMARY

FUND BALANCES	6/30/2014 Audited	6/30/2015 Projected	6/30/2016 Projected
Reserve for Building and Facilities	\$ 500,000	\$ 500,000	\$ -
Reserve for Capital Equipment Contingency	\$ 1,000,000	\$ 1,000,000	\$ 1,360,000
Reserve for Economic Contingency (20%)	\$ 10,114,309	\$ 10,114,309	\$ 14,501,024
Reserve for Fleet Contingency	\$ -	\$ -	\$ 1,000,000
Reserve for IT-Desktop Equipment	\$ 500,000	\$ 500,000	\$ 500,000
Reserve for IT- Event Response	\$ 500,000	\$ 500,000	\$ 500,000
Reserve for JD Edwards Software Upgrade	\$ 1,000,000	\$ 1,000,000	\$ -
Reserve for Pension & Post Employment Liability	\$ 1,800,000	\$ 1,800,000	\$ 1,600,000
Reserve for Tech- GHG Monitoring Equipment	\$ 360,900	\$ 360,900	\$ 360,900
Reserve for Tech- Meterological Network Equipment	\$ 417,100	\$ 417,100	\$ 417,100
Reserve for Tech- Mobile Monitoring Instruments	\$ 450,000	\$ 450,000	\$ 450,000
Reserve for GHG Abatement Technology Study	\$ -	\$ -	\$ 500,000
Reserve for Woodsmoke Program	\$ -	\$ -	\$ 1,000,000
Reserve for Worker's Comp Self -Funding	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
Unreserved and Undesignated	\$ 7,404,751	\$ 7,404,751	\$ -
Prior Approved Transfers	\$ -	\$ (1,858,036)	\$ -
Proposed Use of Fund Balance	\$ -	\$ -	\$ (1,316,825)
TOTAL SPECIAL RESERVES	\$ 25,047,060	\$ 23,189,024	\$ 21,872,199
Building Proceeds:	\$ 14,668,200	\$ 14,668,200	\$ 14,168,200
Design & Construction Cost	\$ -	\$ (500,000)	\$ -
Building Financing Cost	-	-	(9,000,000)
TOTAL BUILDING PROCEEDS	\$ 14,668,200	\$ 14,168,200	\$ 5,168,200
TOTAL FUND BALANCE	\$ 39,715,260	\$ 37,357,224	\$ 27,040,399

20% of Budget



FYE 2016 USE OF RESERVE RECOMMEDATIONS

375 Beale Building Acquisition	\$9,000,000
Information Technology	\$900,000
Lab & Monitoring Equipment	\$416,825
	<u>\$10,316,825</u>



FUND BALANCE POLICY

Current Fund Balance Policy: 15% of General Fund Expenditures

- FYE 2016 Budget of \$73M = \$11M (minimum)
- Proposed Policy: 20% = \$14.5M (minimum)
- Represents 2.5 months of General Fund Budget
- GFOA: Minimum 2 months of Operating Expenditure



UNFUNDED LIABILITIES

(based on June 30, 2013 Valuation)

- CalPERS Retirement
 - \$232M Obligation – 77% Funded
 - \$53M Unfunded

- OPEB Medical
 - \$50M Obligation – 40% Funded
 - \$30M Unfunded



UNFUNDED LIABILITIES RESPONSE for CalPERS

- CalPERS projects required contributions will increase from about 15% of salary to about 20% of salary over five years
- Annual Required Contribution (ARC) FYE 2016 = \$5.25M
- Proposed FYE 2016 Prefund = \$250,000
 - 105% of ARC = \$5.5M



MOTIVATION

PRE-FUND CalPERS

- Reduce year-to-year changes in future budgets
- Use CalPERS return on funds to reduce future obligations



UNFUNDED LIABILITIES RESPONSE for OPEB

- Unfunded Liability = \$30M
- FYE 2016 OPEB Estimated Normal Cost = \$2M
- Propose continuation of prefund amount = \$3M
- Proposed Policy: 90% minimum funded level
- No target date in Policy



OFFICE BUILDING OBLIGATIONS

- 375 Beale Street projected acquisition date: January 2016
 - Contribution of \$9M; reducing obligation
 - FYE 2016 Monthly Base Financing is \$100,000
 - HOA approximately \$1M/year, SSO additional

- 939 Ellis Street monthly lease of \$91,925
 - Lease becomes \$114,906 beginning October 1, 2015



SCHEDULE

- April 15 - Held 1st Public Hearing on Proposed Fees
- April 22 – Budget & Finance recommended Budget
- May 20 – 1st Public Hearing on Proposed Budget
- June 3 – 2nd Public Hearing and Adoption of:
 1. Proposed Fees
 2. Proposed Budget



2016 PROPOSED BUDGET SUMMARY

- Budgeted positions increased to 334
- Obligate \$9M of sale proceeds for 375 Beale Street
- Reserve drawdown of \$1.3M
- Other Post-Employment Benefits (OPEB):
 - Contribution remains at \$3M
 - 90% Funding Target
- Additional CalPERS contribution (\$250K)
- Minimum Reserve increased to 20% of Budget



RECOMMENDATIONS

- Adopt Proposed FYE 2016 Budget
- Approve a policy designating a reserve minimum equal to 20% of the general fund budget
- Approve a policy designating a 90% minimum funding target for OPEB