

Wastewater System Overview

Presentation to Alameda LAFCO



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Presentation Outline

- Background
- Key Initiatives
 - Renewable Energy Production
 - Wet Weather Flow Management
- Infrastructure Status
- Financial Status
- Future Challenges



Background

Wastewater Service Area



- 88 square miles (325 sq. miles in Water System)
- 650,000 people (1.3 million in Water System)
- Services provided to seven communities
 - Alameda
 - Albany
 - Berkeley
 - Emeryville
 - Oakland
 - Piedmont
 - Stege Sanitary District



Background

Key Wastewater Infrastructure



- Main Wastewater Treatment Plant (MWWTP) in Oakland
- Three wet weather facilities
- 15 pumping stations
 - 8 miles of force mains
- EBMUD owns and operates large interceptor sewers
 - 29 miles of gravity interceptors
 - Stormwater “not included”
- Communities own their collection systems
 - ~1,600 miles of pipe



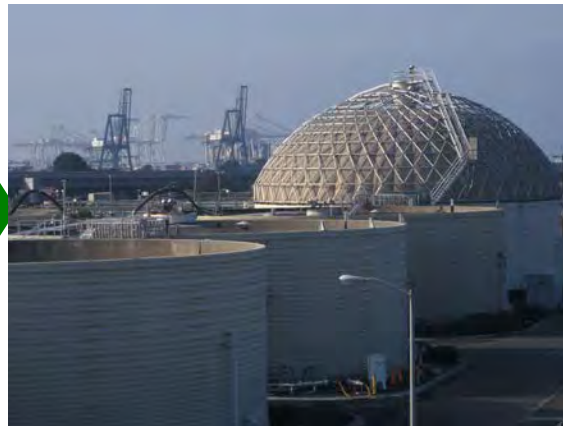
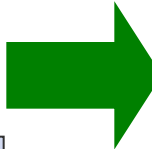
Wastewater Collection and Treatment Capacity



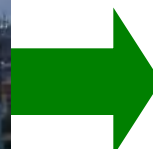
- No concerns regarding **dry weather capacity**
 - Average dry weather flow = 50 MGD
 - Permitted dry weather capacity = 120 MGD
- Key concerns regarding **wet weather capacity**
 - Treatment capacity = 320 MGD
 - EBMUD interceptors receive ~725 MGD during peak storms
 - Requires EBMUD to operate wet weather facilities that only provide partial treatment
 - EBMUD is under a regulatory order to eliminate discharges from WWFs



Key Initiatives Renewable Energy Production



Anaerobic Digesters



Generation Capacity = 11 MW

WASTE

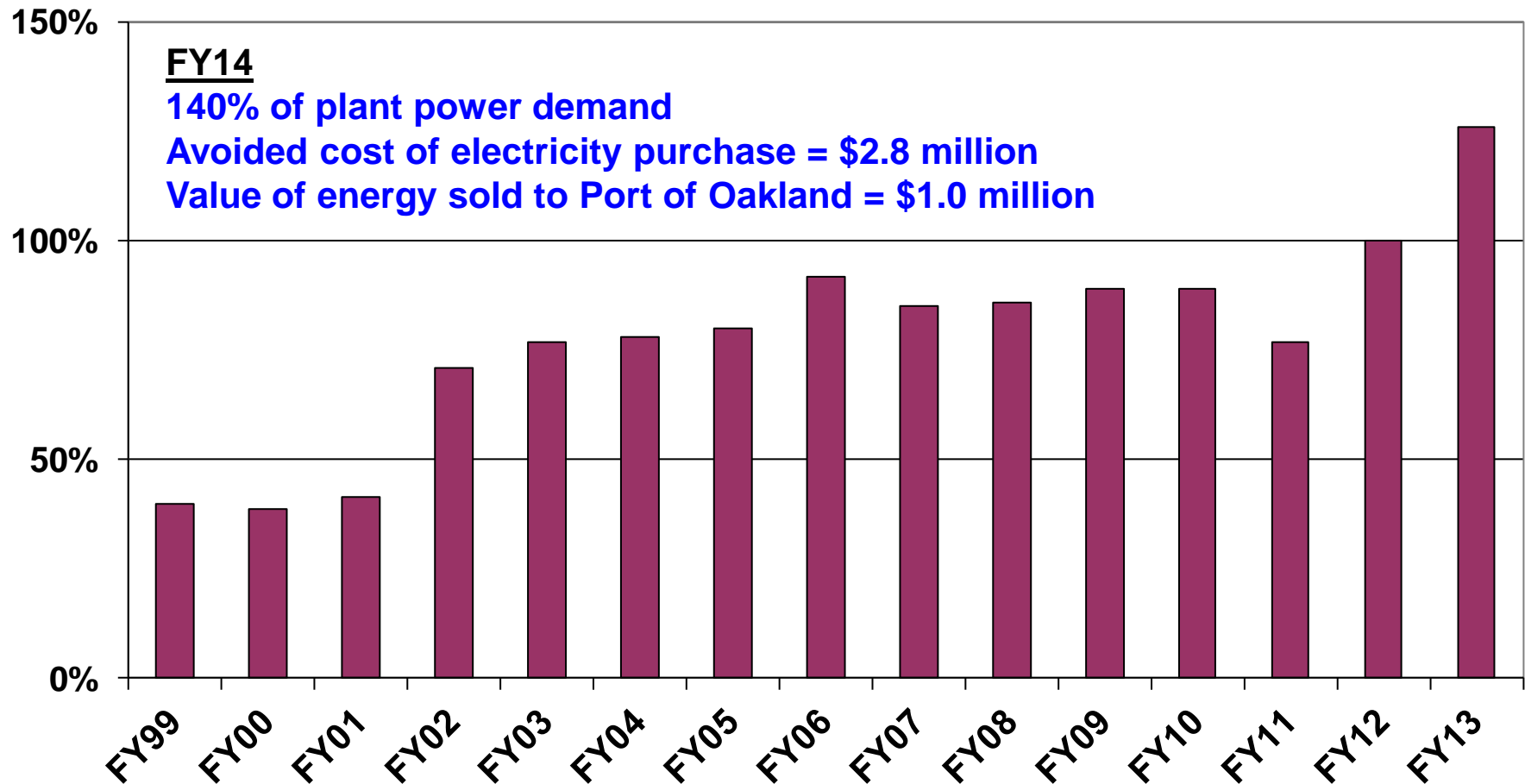
BIOGAS

ELECTRICITY

EBMUD's MWWTP is the first net-energy producer in North America



**Percent of Plant Power Demand
Met by On-Site Generation**



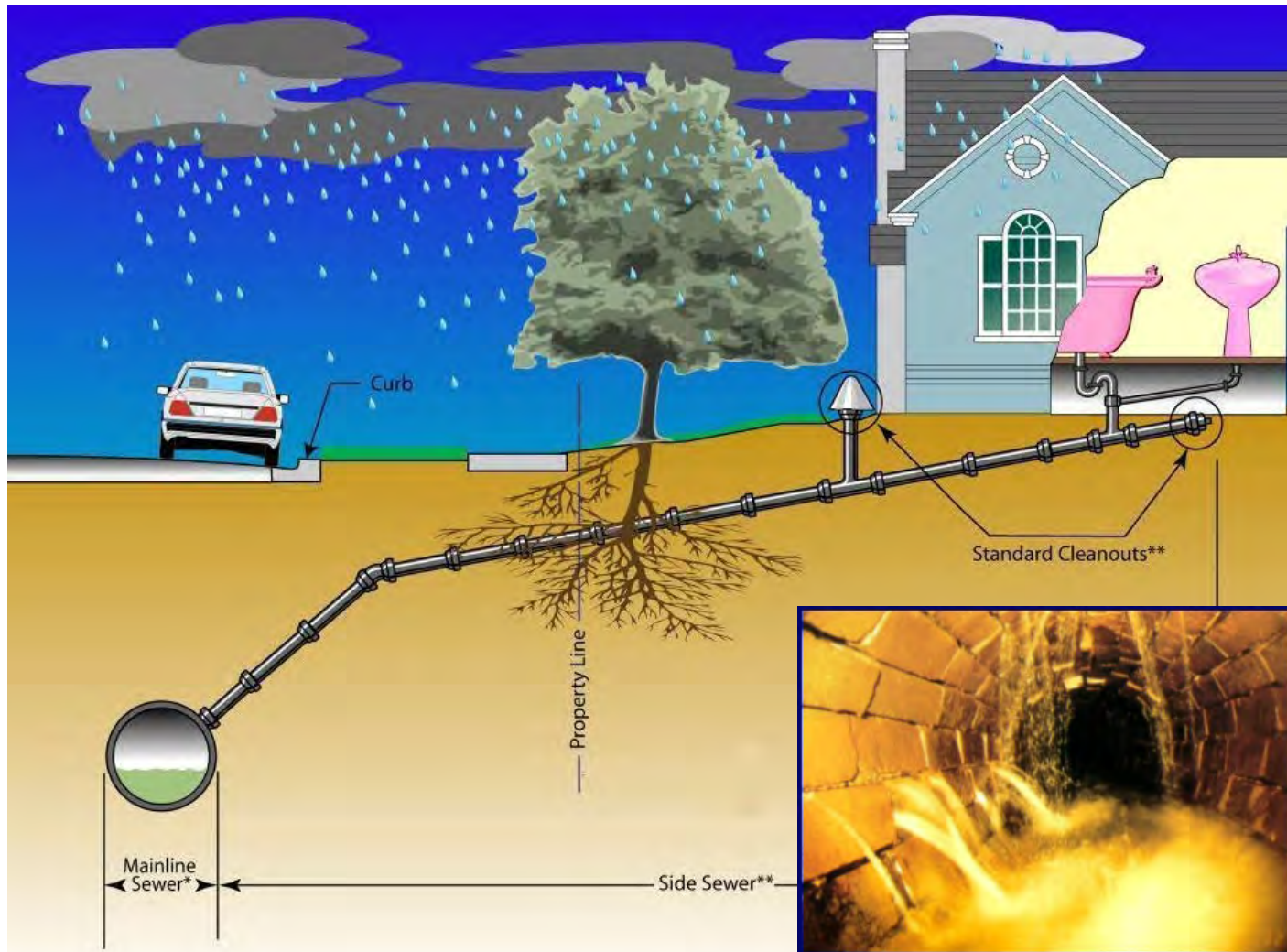
Key Initiatives

Wet Weather Flow Management



- EBMUD is working with the East Bay communities to develop and implement a long-term regional solution
 - Reduce inflow/infiltration of stormwater into wastewater collection system via cracks in pipes, damaged joints, illegal connections
- Key Focus Areas
 - Address aging infrastructure via sewer rehabilitation and replacement
 - Inspect and replace private sewer laterals, if needed, at point of home sale or in coordination with trunk sewer repairs by communities

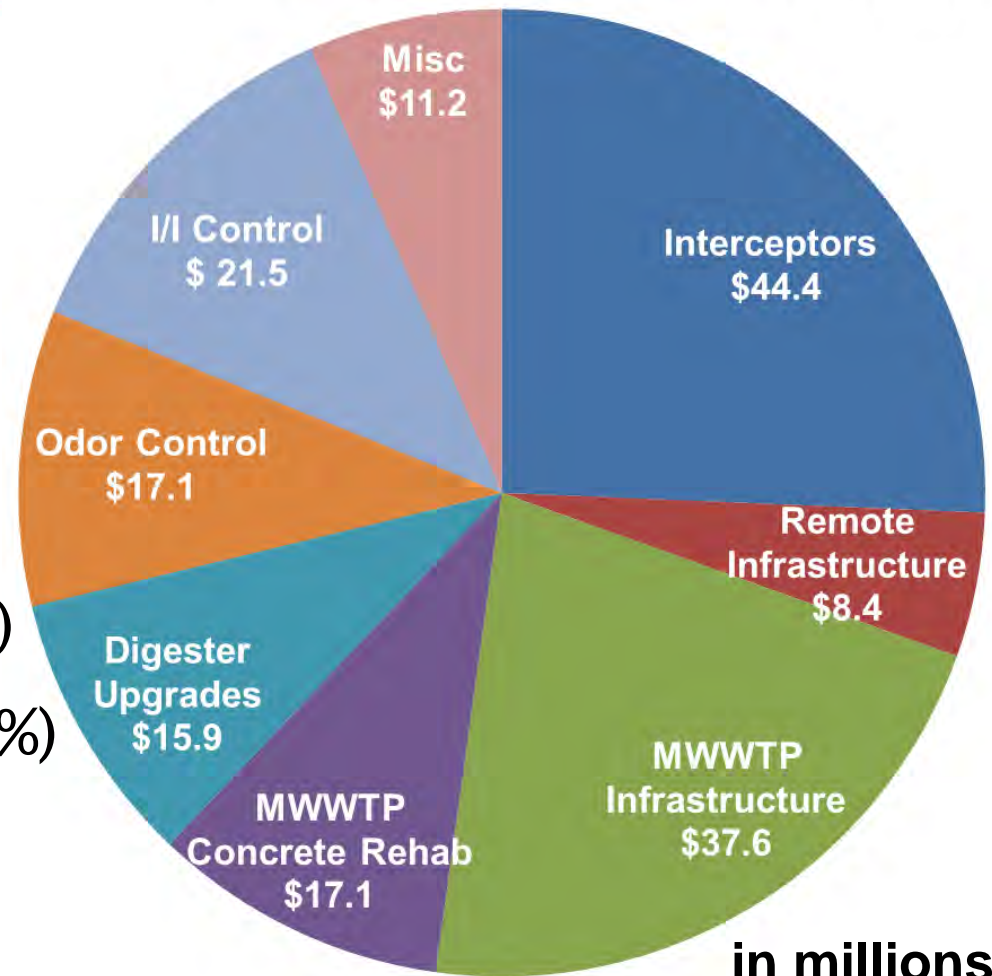
Wet Weather Inflow/Infiltration Diagram



Wastewater CIP Infrastructure Status



- Wastewater Capital Improvement Program
 - 5-year: \$175 million
 - 10-year: \$350 million
- Key Program Areas
 - Interceptor Rehab (26%)
 - Plant Infrastructure (22%)
 - I/I Control (12%)
 - Odor Control (10%)
 - Concrete Rehab (10%)



FY14-FY18

in millions

Wastewater System Financial Status



- FY15 Budget = \$144 million
 - Capital = \$46.8 million
 - Operating = \$63.4 million
 - Debt Service = \$34.3 million
- Rate Increases
 - FY14: 9.0%; FY15: 8.5%
- Excellent bond rating with stable outlook

Future Challenges Nutrient Loading to SF Bay



- The resiliency of SF Bay to nutrient (nitrogen, phosphorus) loading is declining
- Most Bay Area agencies are not currently required to remove nutrients
- Implementing potential capital improvements at treatment plants may cost billions of dollars
 - Outstanding questions regarding condition and potential impairment of SF Bay
- Bay area wastewater agencies are working with regulatory agencies to implement a science-based approach to determining what actions are required

Future Challenges (cont'd)

- Odor control
- Biosolids management
- Aging infrastructure
- Workforce transition



EBMUD Wastewater System Overview



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