



# Authorize two improvement projects at the Diemer plant

Engineering and Capital Programs Committee

Item 7-4

August 17, 2009

# Current Action

- Appropriate \$540,000 in budgeted funds
- Authorize final design of Diemer filter media replacement
- Authorize final design of Diemer East Washwater Tank Roof Refurbishment

# Metropolitan Treatment Plants



# Project Location



# Filter Media Replacement Final Design



- Background
  - Existing filter media is coated with manganese from previous ferric chloride use as coagulant
  - Biological filtration will commence after ORP is on-line
- Concerns/Issues
  - Release of high levels of manganese is expected, which will elevate color and turbidity
  - Potential complaints from member agencies and consumers

# Filter Media Replacement

**Anthracite**



**Filter Sand**



- **Scope**
  - Replace 14 in. of anthracite in the 24 east side filters
  - Replace 20 in. of anthracite in the 24 west side filters
  - Replace 8 in. of sand in all 48 filters
  - 7,200 cu. yd. total volume
- **Final Design**
  - Metropolitan Staff

# Filter Media Replacement

<b>Owner Costs</b>	<b>\$107,000</b>
<b>Studies &amp; Design</b>	<b>\$125,100</b>
<b>Incidental, Materials &amp; Supplies</b>	<b>\$2,500</b>
<b>Professional / Technical Services</b>	<b>\$2,400</b>
<b>Remaining Budget</b>	<b>\$113,000</b>

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<b>Total</b>	<b>\$350,000</b>
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# East Washwater Tank Roof Refurbishment Final Design



## Background

- Coating failures and corroded structural supports in tank roof
- Trapped chlorine vapor in tank's headspace zone, creating a highly corrosive environment

## Scope

- Install additional openings in tank roof to improve ventilation
- Repair or replace corroded structural elements
- Repair local coating failures

## Final Design by Metropolitan Staff



# 2008/09 Tank Inspection Findings

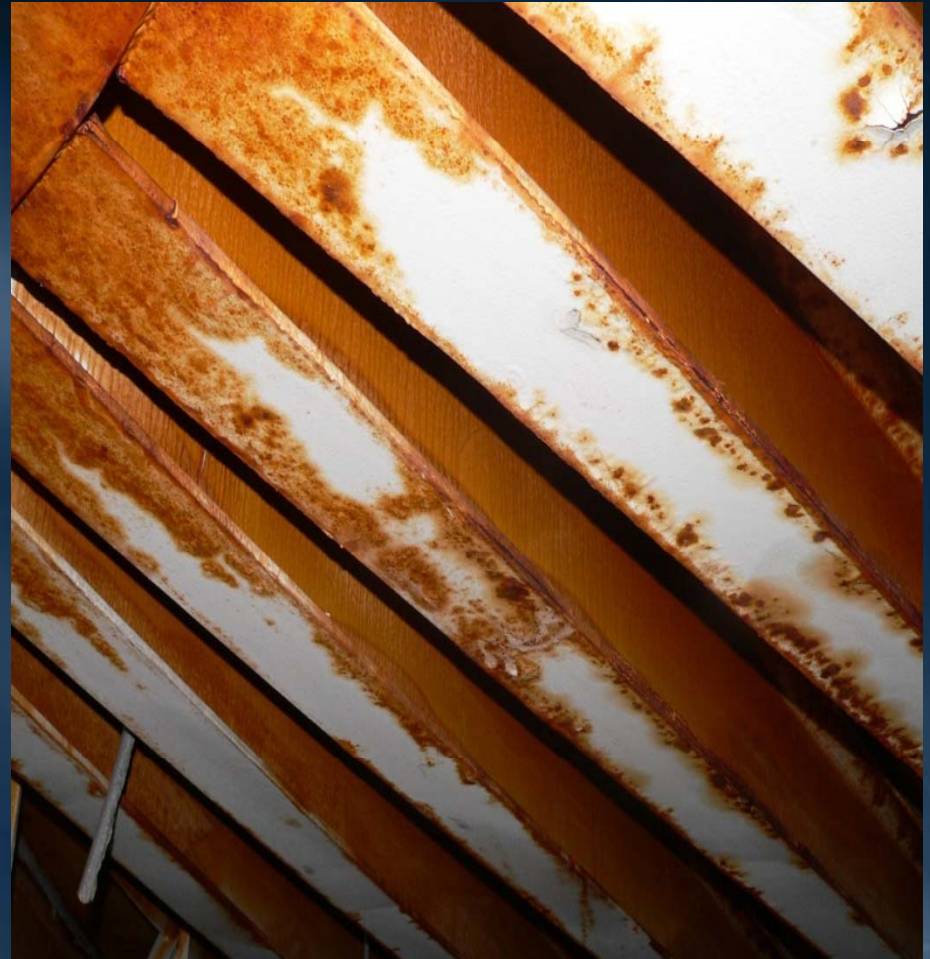


- 3/8-inch dia. hole in roof
- Significantly reduced roof-plate thickness
- Accelerated corrosion in interior roof support elements
- Local coating failures, exposing bare metal
- Interior lining below water surface in good condition

# Tank Roof Corrosion and Coating Failures



# Tank Roof Corrosion and Coating Failures



# East Washwater Tank Roof Refurbishment

Owner Costs	\$85,000
Studies & Design	\$75,300
Incidental, Materials & Supplies	\$2,300
Professional / Technical Services	\$2,400
Remaining Budget	\$25,000

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<b>Total</b>	<b>\$190,000</b>
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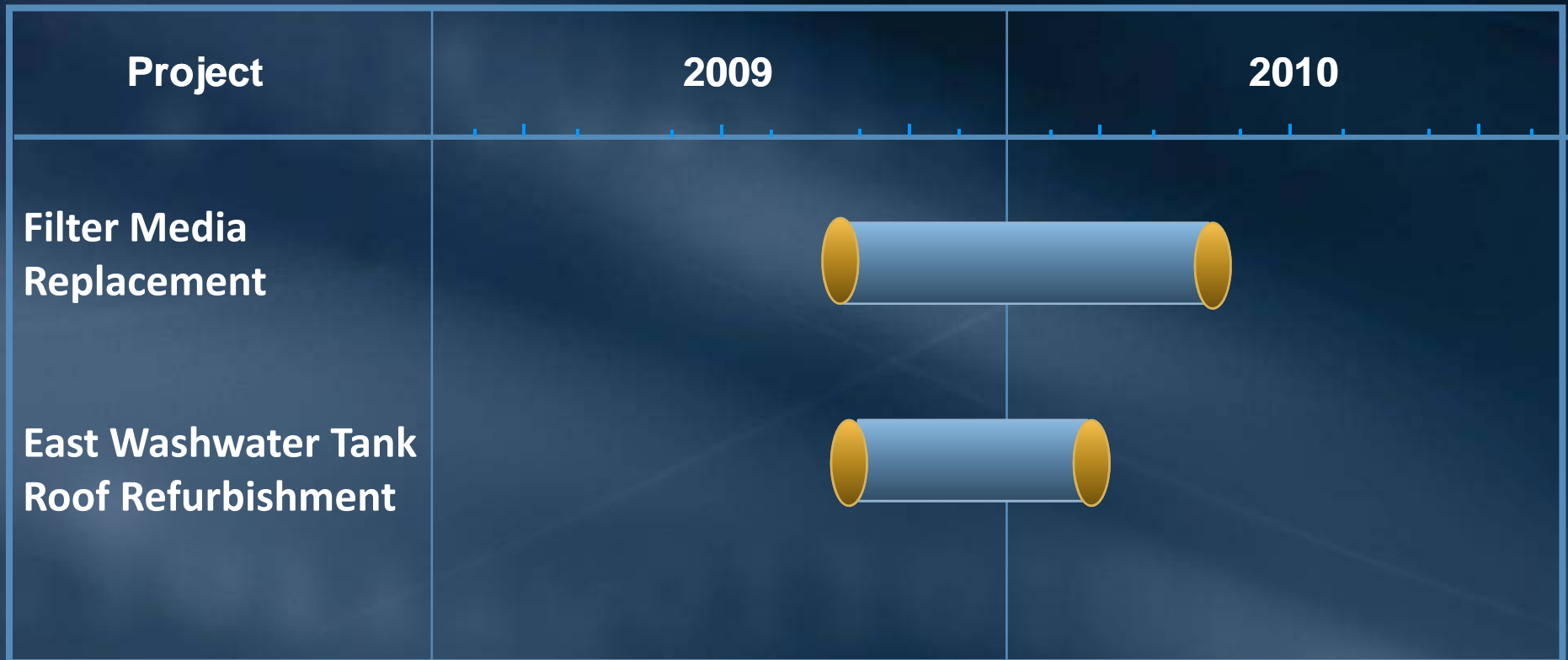
# Total Requested Funds

<b>Owner Costs</b>	<b>\$192,000</b>
<b>Studies &amp; Design</b>	<b>\$200,000</b>
<b>Incidental, Materials &amp; Supplies</b>	<b>\$5,000</b>
<b>Professional / Technical Services</b>	<b>\$5,000</b>
<b>Remaining Budget</b>	<b>\$138,000</b>

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<b>Total</b>	<b>\$540,000</b>
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# Diemer Project Schedules



Board Action



Final Design

# Board Options

- Option #1
  - Adopt the CEQA determination
  - Appropriate \$540,000 in budgeted funds
  - Authorize Diemer Filter Media Replacement final design
  - Authorize Diemer East Washwater Tank Roof Refurbishment final design
- Option #2
  - Do not proceed with the two projects

# Staff Recommendation

- Option # 1