



Three Rehabilitation Projects at Lake Mathews

Engineering & Operations Committee
Item 7-1
March 13, 2017

Current Action

- Appropriate \$1.65 million
- Authorize preliminary design to upgrade the electrical distribution system
- Authorize final design to repair the forebay and its outlet tower
- Authorize construction of structural repairs to the Lake Mathews Hydroelectric Plant

Distribution System



Project 1 - Electrical Upgrades



1. Electrical Upgrades - Background

● Planned Work

- Replace underground & overhead lines
- Replace UPC's
- Integrate elect. system with Metropolitan's SCADA system

● Preliminary Design Activities

- Confirm exist. & estimate future electrical loads
- Conduct condition assessment & hazardous material testing
- Prepare conceptual drawings, envir. documentation & cost estimate

● Preliminary Design by Metropolitan

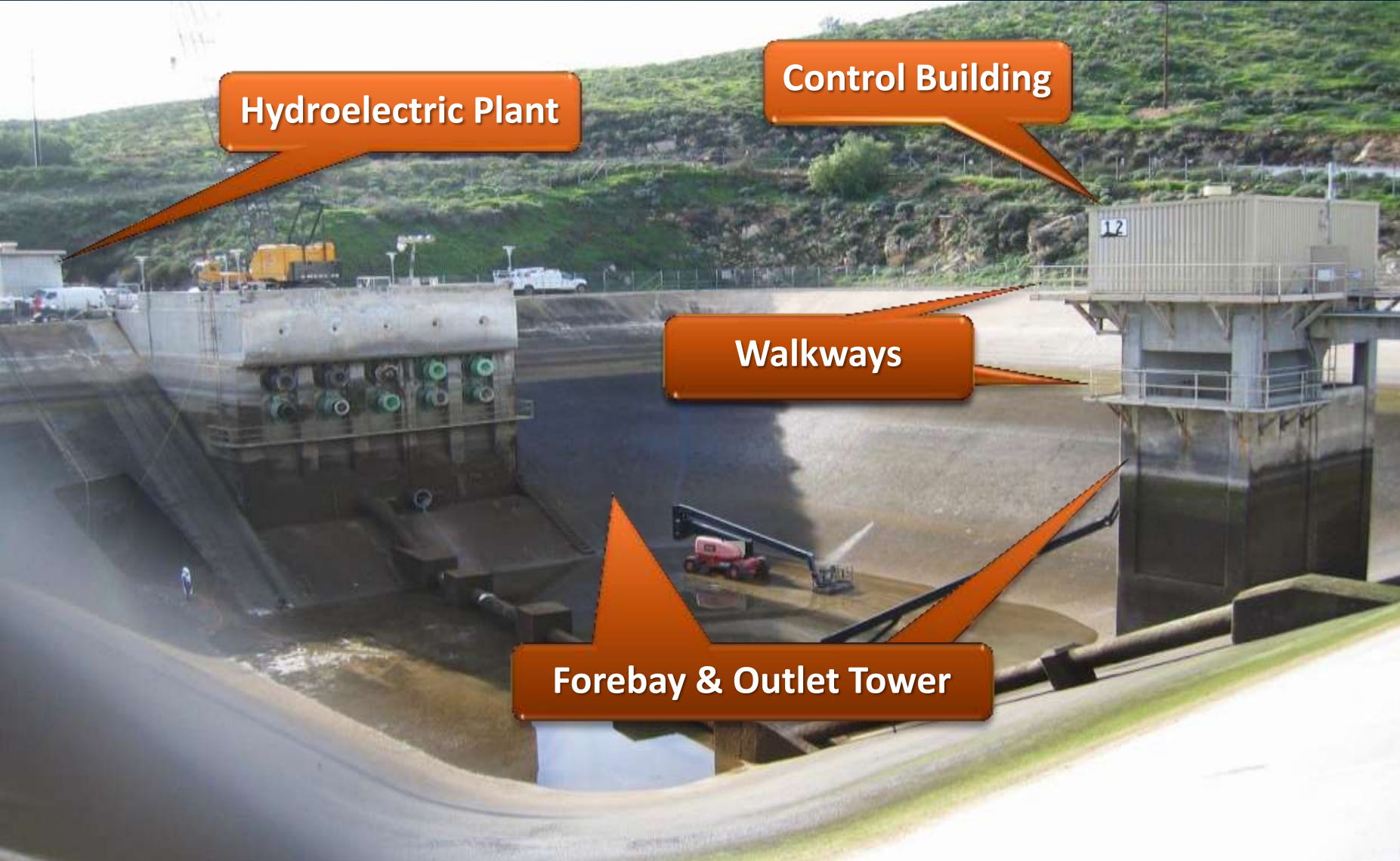
Projects 2 & 3 – Repairs to Hydroelectric Plant & Forebay

Hydroelectric Plant

Control Building

Walkways

Forebay & Outlet Tower



2. Forebay Repairs

Planned Work

- Replace damaged concrete
- Replace corroded reinforcing steel
- Install cathodic protection system
- Replace walkways & control building



2. Forebay Repairs

- Design Activities by Metropolitan
 - Scope of work: Design of forebay repairs, steel walkways & control building
 - Prepare drawings & specifications
 - Prepare construction cost estimate
 - Receive competitive bids
- Design Activities by HDR Engineering
 - Scope of work: Design of tower repairs & cathodic protection system
 - Work performed under exist. Board-authorized agreement
 - No action required
 - SBE participation level: 18 percent
 - Estimated cost: \$125,000

3. Hydroelectric Plant Repairs



**Damaged Concrete
at Bldg Exterior**



**Corroded Reinforcing
Steel Within Bldg**

3. Hydroelectric Plant Repairs

● Construction Contract

- Contract to be awarded under GM authority
- Replace spalled, cracked & damaged concrete
- Replace corroded reinforcing steel & install cathodic protection system

● Activities by Metropolitan

- Construction inspection & project management
- Submittals review & preparation of record drawings

Bid Results

Specifications No. 1851

Bids Received:	January 25, 2017
No. of Bidders:	6
Low Bidder:	O'Connell Engineering
Low Bid:	\$207,800
Range of Other Bids:	\$245,000 to \$297,000
Engineer's Estimate:	\$340,000
SBE Participation*:	15.4%

*SBE (Small Business Enterprise) participation level = 14%

Requested Funds

	1. Elect. Upgrades	2. Forebay Repairs	3. Hydroelectric Plant Repairs
Labor			
Prelim. Invest.	\$735,000	\$ -	\$ -
Final Design	-	188,000	-
PM, Contract Admin.	75,000	67,000	54,000
Submittals Review			20,000
Construction Inspection	-	-	32,000
Professional Services	-	125,000	-
Contracts	-	-	207,800
Remaining Budget	50,000	50,000	46,200
Totals	\$ 860,000	\$430,000	\$360,000

Total Requested Amount: \$1.65 million

Schedule

Lake Mathews Projects	2017	2018	2019	2020
1. Elect. Upgrades				
2. Forebay Repairs				
3. Hydroelectric Plant Repairs				



Board Options

● Option #1

- Adopt CEQA determination that the proposed actions are categorically exempt
- Appropriate \$1.65 million
- Authorize design of two rehabilitation projects at Lake Mathews
- Authorize construction of structural repairs to the Lake Mathews Hydroelectric Plant

Board Options

● Option #2

- Adopt CEQA determination that the proposed actions are categorically exempt
- Appropriate \$790,000
- Authorize construction of structural repairs to the Lake Mathew Hydroelectric Plant
- Authorize design of repairs to the Lake Mathews forebay
- Do not authorize electrical upgrades at Lake Mathews

● Option #3

- Do not proceed with the 3 rehabilitation projects at this time

Staff Recommendation

- Option #1

