

Engineering, Operations, & Technology Committee La Verne Water Quality Laboratory Upgrades

ltem 8-1 April 7, 2025 Item 8-1 La Verne Water Quality Laboratory Upgrades

Subject

Adopt the CEQA determination that the proposed action was previously addressed in the certified 2024 Program Environmental Impact Report and authorize an increase of \$12.4 million to an agreement with La Cañada Design Group Inc. for a new not-to-exceed total amount of \$16.8 million for final design to upgrade the Michael J. McGuire Water Quality Laboratory

Purpose

Enhance the reliability and extend the functional service of the Water Quality Laboratory for the next 30 years

Recommendation and Fiscal Impact

Adopt the CEQA determination and authorize an amendment to an existing agreement for final design to upgrade Metropolitan's Water Quality Laboratory

Fiscal Impact – \$16 million

Budgeted

Location Map



Water Quality Laboratory – An Essential Facility

- Compliance monitoring & testing
 - Bacteria, disinfection byproducts
 - Metals & minerals, organic chemicals
- General water quality monitoring
 - pH, temperature, TDS, alkalinity, taste & odor, color
- Distribution system integrity
 - Shutdowns & repairs/maintenance
 - Nitrification monitoring (nitrite, ammonia)
- Applied research
 - Treatment processes, emerging contaminants, analytical methods, alternative source waters







Water Quality's Expanded Functions



Water Quality – Looking Toward the Future

- New regulated monitoring
 - PFAS, microplastics
- New contaminants, emerging DBPs
- Impacts of climate volatility
 - Turbidity, cyanotoxins
- Maintaining water quality in the distribution system
 - Variable demand & low flow
 - Nitrification
- New sources & treatment processes



Celebrating 50 Years of Water Quality, 2024



Naming the Water Quality Lab in honor of Dr. Michael J. McGuire – February 2025

Current Building Limitations

- Latest improvements to the lab completed in 1998
- Spaces fully utilized or beyond capacity
- Under-utilized and inefficient spaces
- Lab areas open to common areas
- Overlap between office & lab space
- Inadequate record storage
- Vulnerable to seismic events



Lab Spaces Beyond Capacity



Cubicles and Documents in Hallway

Planned Improvements – Laboratory Function

- Building expansion
- Layout optimization
 - Workflow & adjacencies
 - Public access & circulation
- Laboratory upgrades
 - Modularity & future reconfiguration
 - Reduced risk of cross-contamination
 - New specialized laboratory equipment



Existing and New Building Layout

Planned Improvements – Seismic Upgrades

- Meet essential facility requirements
 - Maintain operability
 - Immediate occupancy after major earthquake
- Seismic strengthening of
 existing structure
- New structural framing at expansions



Structural Analysis Model

Final Design Approach

- Detailed design
 - Design as an essential facility with improved seismic resiliency
 - Integrates old & new construction totaling about 95,000 sq ft
 - Shoring & protection of foundation & structural framing, connection details for foundation, walls, & roofing
 - Upgrades building systems including HVAC, fire system, & mechanical, electrical, plumbing systems
 - Addresses unique laboratory requirements (room-by-room approach)
 - 70,000 sq ft for critical lab functions
 - Specialized & individualized room requirements for building systems
- Relocation planning
 - Design of temporary laboratory space 30,000 sq ft of swing space needed
 - Relocation of ~110 employees & equipment to support lab, office, & storage
 - Maintain laboratory accreditation

La Verne Water Quality Laboratory Upgrades

Alternatives Considered

- Considered Alternative Metropolitan staff to complete all final design activities
 - Resource needs exceed staff availability, additional specialized expertise required
- Selected Alternative Use a professional services agreement to perform final design of the subject project
 - Allows for the completion of this project & other capital work within Metropolitan staff's current schedule & ensure work is conducted in the most efficient manner possible

La Verne Water Quality Laboratory Upgrades

La Cañada Design Group Inc. – Agreement

- Prequalified and selected under RFQ No. 1182
- Board-authorized agreement for preliminary design
 - Preliminary design completed
- Recommended amendment for final design
 - Preparation of drawings & specifications
 - Construction cost estimate
- Amendment amount: \$12.4 M
 - New NTE amount: \$16.8 M
- SBE participation level: 25%

La Verne Water Quality Laboratory Upgrades

Metropolitan Scope

- Provide project management, technical oversight & review of consultant's work
- Provide environmental support
- Relocation planning

Allocation of Funds

La Verne Water Quality Laboratory Upgrades

Metropolitan Labor
Final Design
Owner Costs (Proj. Mgmt., Agreement Admin., Envir. Support)\$ 1,900,000
800,000Professional/Technical Services
La Cañada Design Group Inc.
Value Engineering
Remaining Budget12,400,000
100,000
800,000

Total \$ 16,000,000



Board Options

• Option #1

Adopt the CEQA determination that the proposed action was previously addressed in the certified 2024 Final Environmental Impact Report and related documentation, and that no further environmental analysis or documentation is required and authorize an increase of \$12.4 million to an agreement with La Cañada Design Group Inc. for a new not-to-exceed total amount of \$16.8 million for final design to upgrade the Michael J. McGuire Water Quality Laboratory.

• Option #2

Do not proceed with the project at this time

Staff Recommendation

• Option #1

