



- Board of Directors
Engineering and Operations Committee

6/12/2012 Board Meeting

7-2

Subject

Appropriate \$1.9 million; and authorize (1) detailed reliability investigations of site improvements for Metropolitan's distribution system within the Orange County and Western San Bernardino County operating regions; (2) preparation of programmatic environmental documentation for the identified work; and (3) professional services agreement with Dudek in an amount not to exceed \$975,000 (Approp. 15474)

Description

This action initiates the Distribution System Infrastructure Protection Program, which will identify, prioritize, and execute site improvement projects through the distribution system. The projects will address access limitations, erosion-related improvement work, and security needs along the surface of Metropolitan's pipeline rights-of-way.

Under the initial stage of the program, staff will conduct detailed reliability investigations of the needed site improvements. The results of these investigations will form the basis for comprehensive regional compliance and permitting programs for each of Metropolitan's five operating regions so that the identified infrastructure protection projects may move forward. A programmatic environmental document will secure environmental approval for multiple projects within a region rather than pursuing individual approvals on a project-by-project basis.

This action authorizes the detailed reliability investigations and preparation of programmatic environmental documentation for the first two operating regions: Orange County and Western Riverside County. Staff will return to the board for certification of the environmental documentation and authorization of mitigation and permit acquisition for these two regions, and for future authorization of similar efforts for the three remaining operating regions.

Timing and Urgency

Encroaching development has impacted numerous portions of Metropolitan's conveyance and distribution system, creating operating challenges such as restricted access, severe local erosion leading to increased maintenance and repairs, and vandalism. If not addressed proactively, these conditions could impact water deliveries to member agencies and lead to increased costs for urgent repairs. In order to minimize these risks, staff recommends initiating an infrastructure protection program which will identify, prioritize, and execute needed site improvement projects throughout the conveyance and distribution system. A key component of this program will be to secure programmatic environmental approvals which will significantly reduce Metropolitan's environmental permitting costs and enable both scheduled work and urgent repairs to proceed expeditiously.

This program has been reviewed with Metropolitan's updated Capital Investment Plan (CIP) prioritization criteria, and is included within the Infrastructure Reliability category. Funds for this action are available within Metropolitan's capital expenditure plan for fiscal year 2011/12.

Background

The backbone of Metropolitan's distribution system was constructed from the 1930s through the 1970s. This system includes over 830 miles of pipelines and nearly 5,000 individual structures that require regular monitoring

and maintenance. Over the past 50 years, land development throughout Southern California has gradually surrounded Metropolitan's right-of-way, creating a number of operating challenges. For example, open fields have been developed and converted to paved surfaces in many areas, increasing storm runoff and undermining Metropolitan facilities such as blow-off structures, pump wells, and patrol roads. Development has also land-locked some portions of Metropolitan's right-of-way, which limits access for patrol activities, needed maintenance, and staging of repairs. Further, increased levels of trespassing and vandalism have occurred as more housing is constructed near Metropolitan properties. These recurring development-related issues have led to increased maintenance and repairs for Metropolitan facilities, access routes, and patrol roads. In Orange County alone, nearly \$500,000 in additional annual maintenance costs can be attributed to required regrading of Metropolitan right-of-way due to development-related erosion caused by storm events.

In recent years, increasingly stringent environmental and regulatory requirements have made system improvements and repairs more challenging, time-consuming, and costly. Staff's prior practice for obtaining environmental clearances, which is common for public agencies, has been to secure them on a project-by-project basis. Under the planned Distribution System Infrastructure Protection Program, a shift in approach to a programmatic environmental effort will provide a regional strategy for securing permits for multiple projects having generally similar environmental impacts. The programmatic approach provides more comprehensive consideration of alternatives and their cumulative impacts, and allows the lead agency to consider broad policy alternatives and program-wide mitigation measures early in the process. This approach is also more efficient and economical. Regional environmental approvals are valid for up to 15 years, and may reduce Metropolitan's environmental permitting costs by more than \$10 million over a 10-15-year period through consolidation of permit costs and mitigation fees, and through reduced efforts to secure project-by-project environmental clearances.

An example of one area to be addressed in this program is a portion of the Allen-McColloch Pipeline (AMP) that currently has an access restriction. The existing entrance road to the AMP right-of-way, which crosses Borrego Canyon Wash, has become impassable due to erosion caused by storm runoff. The 150-foot-long, 20-foot-wide dirt access road across the wash was used regularly by Metropolitan patrollers until storm erosion damaged the road. Metropolitan does not have authority to maintain or improve the road, so all access to AMP structures within the wash (i.e., manholes and valves) is currently conducted by foot, across rocky terrain and through dense vegetation. Improved access across the wash is needed for vehicular transport of equipment like blowers, lights, and cranes for routine maintenance of the structure. In addition, to improve the access, Metropolitan needs to obtain authority from the underlying property owner by means of an easement or license agreement.

Distribution System Infrastructure Protection Program

Under the planned infrastructure protection program, a detailed site investigation of access, erosion, and security issues will be conducted along all of Metropolitan's pipeline right-of-way, and recommendations will be made for infrastructure improvements. Upon completion of the investigations, a comprehensive regional compliance and permitting program will be developed for each operating region in order to secure environmental clearances for multiple projects, including newly identified work and future improvements likely needed over the next 10-15 years.

The detailed reliability investigations are planned to cover the Water System Operations Group's five operating regions, and will be conducted in three phases. Under the initial phase of the program, investigations are planned for Orange County and Western San Bernardino County. The future Phase 2 investigations for Riverside, San Diego, and Los Angeles Counties are planned to commence in mid-2013, while the Phase 3 investigations for San Bernardino County's outlying areas, including the Colorado River Aqueduct, will commence in 2014.

The Orange County operating region comprises approximately 143 miles of pipelines, while the western San Bernardino County region comprises approximately 77 miles of pipelines, as follows:

Orange County Pipelines

- Allen-McColloch Pipeline
- East Orange County Feeder No. 2
- Irvine Cross Feeder
- Orange County Feeder
- Santa Ana Cross Feeder
- Santiago Lateral
- West Orange County Feeder
- Lower Feeder
- Second Lower Feeder

Western San Bernardino County Pipelines

- Etiwanda Pipeline
- Inland Feeder
- Yorba Linda Feeder
- Upper Feeder
- Rialto Pipeline

The projects identified in these investigations will be considered from a regional environmental perspective, which will lead to development of a programmatic environmental impact report (PEIR) for each region. The PEIR will include newly identified projects such as repairs to structures and stream crossings, and will encompass any existing project along a pipeline within the operating region. For example, within the Orange County operating region, the PEIR will include previously identified work along the Lower Feeder in Aliso and Mud Canyons, as well as the planned relining project for the Orange County Feeder. The PEIR documents will be developed to consider effects of the identified projects as well as cumulative impacts of the planned regional work. Staff will return to the Board for adoption of the PEIR and to authorize the regional environmental permitting effort, which will cover anticipated work activities for the next 10-15 years. Securing the regional environmental permits may require the future purchase of mitigation credits in advance of the planned activities. However, the fees associated with mitigation purchases are expected to be offset by the reduction in overall permitting costs.

Project No. 1 – Detailed Reliability Investigations of the Orange County and Western San Bernardino County Operating Regions (\$450,000)

The planned investigations will evaluate access, erosion, and security issues along Metropolitan's pipeline right-of-way, and will make recommendations for infrastructure protection improvements. The investigations will cover 220 miles of pipelines and over 2,000 pipeline structures in the Orange County and Western San Bernardino County operating regions. These structures include manholes, blow-offs, pumpwells, and air-release and vacuum valves.

Multi-discipline teams will inspect Metropolitan pipeline alignments and right-of-way within the two operating regions, and will identify potential hazards and needed repairs to patrol roads, blow-off structures, manholes, air-release/vacuum valves, and pipeline crossings. Potential hazards may include natural features such as active streambeds, unstable slopes, and erosion issues. Areas with restricted access due to environmental restrictions will be considered, including locations with sensitive habitat and species, or areas within regulated waters. Security and right-of-way assessments will address vandalism, encroachment by private landowners, and the need to acquire easements or license agreements for recently identified properties which are being used by Metropolitan for access and maintenance.

All inspection activities will be performed by Metropolitan staff. Planned activities include: analyses of drainage patterns; review of potential security breaches; development of guidelines for stream crossings, paving and security; preparation of inspection reports and conceptual design reports for improvements; and conceptual-level cost estimates. The activities will also include field surveys; review of existing habitat conservation easements and utility easements; and development of a long-term road maintenance and repair plan.

This action appropriates \$450,000 and authorizes detailed reliability investigations of the Orange County and Western San Bernardino County operating regions. The requested funds include \$250,000 for inspection activities and conceptual engineering analyses; \$87,000 for field survey and right-of-way activities; \$83,000 for project management, preparation of conceptual cost estimates, compilation of field data, and preparation of summary reports to support the environmental documentation; and \$30,000 in remaining budget.

Project No. 2 - Programmatic Environmental Documentation for the Orange County and Western San Bernardino County Operating Regions (\$1,450,000)

Pipelines and patrol roads within the Orange County and Western San Bernardino County operating regions cross over 150 regulated streambeds, as well as various other environmentally restricted areas such as Chino Hills State Park, designated critical habitat for the San Bernardino Kangaroo Rat, and the Upper Newport Bay. Metropolitan activities could potentially impact regulated streambeds as well as areas with other environmental issues, such as biological and cultural resources. Metropolitan staff, with assistance from a specialized consultant, will prepare programmatic California Environmental Quality Act (CEQA) documentation for the Orange County and Western San Bernardino County operating regions, and will initiate programmatic permitting applications to cover all planned work activities for up to 15 years. Based on the level of work identified in this program, in accordance with CEQA regulations, a PEIR will be prepared for each operating region. The Orange County and Western San Bernardino County operating regions were selected to proceed first because several facilities in those regions have rehabilitation work already planned including the Upper Newport Bay Blow-off Structure, repairs to structures and stream crossings along the Lower Feeder in Aliso and Mud Canyons, the Orange County Feeder relining project, and repairs to structures and stream crossings along the Rialto Pipeline in San Sevaire Creek. These projects will be included in the PEIR when considering program-wide mitigation measures.

Activities to be conducted for the PEIRs will include: identification of impacts and determination of their significance on the basis of specific evaluation criteria for topography and soils; hydrology; biological resources (threatened, endangered and sensitive species); cultural resources; paleontological resources; traffic; air quality; land use; and aesthetics. Numerous agencies at the federal, state and local levels will have jurisdiction over various aspects of the planned projects. For certification of the PEIR, Metropolitan will serve as the lead agency. Reviewing agencies will include the California Department of Fish & Game (CDFG), U.S. Fish & Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and the California Coastal Commission. One of the advantages of a PEIR is that it provides a comprehensive consideration of effects, alternatives, and cumulative impacts for all the planned projects in the defined region, and allows the integration of tiered, project-specific environmental documents.

This action appropriates \$1,465,000 and authorizes preparation of programmatic environmental documentation for planned infrastructure protection improvements within Orange County and Western San Bernardino County. The scope of work for PEIR preparation includes: evaluation of environmental impacts as required under State CEQA Guidelines; development of mitigation and monitoring plans; preparation and issuance of the programmatic EIR document for public comment; and preparation of responses to comments received during the public review period. Requested funds include \$975,000 for preparation of the programmatic environmental documentation by Dudek, as discussed below; \$240,000 for preparation of regional general permit applications by AECOM, as discussed below; \$66,000 for staff review and distribution for public review of the EIR; \$59,000 for project management and consultations with local, state, and federal resource agencies; and \$95,000 in remaining budget.

Staff will return to the Board at a later date for adoption of the programmatic CEQA documents.

Agreement for Preparation of Programmatic Environmental Documentation – Dudek (New Agreement)

Preparation of environmental documentation and technical assistance with permitting is recommended to be performed by a specialized consulting firm (Dudek) under a new professional services agreement. Dudek was selected through a competitive process via Request for Qualifications No. 956. Dudek has extensive experience with programmatic CEQA compliance and environmental clearances.

The planned scope of work includes preparing the two PEIRs; performing technical studies which address issues such as air quality, traffic, and noise for all capital repair and rehabilitation projects within Orange County and Western San Bernardino County; supporting Metropolitan staff at public hearings; and preparing correspondence and related documentation in support of CEQA activities. This work is highly specialized and Metropolitan has insufficient technical staff in-house to conduct this work. The estimated cost to provide these services is \$975,000.

This action authorizes an agreement with Dudek, in an amount not to exceed \$975,000 to prepare environmental documentation for the Orange County and Western San Bernardino County operating regions. For this agreement, Metropolitan has established a Small Business Enterprise participation level of 18 percent.

Agreement for Preparation of Regional General Permit Applications – AECOM (No Action Required)

Preparation of the regional general permit packages for the Orange County and Western San Bernardino County operating regions is recommended to be performed by a specialized consulting firm (AECOM) under an existing professional services agreement. AECOM was selected through a competitive process via Request for Qualifications No. 956. AECOM has extensive experience with preparation and procurement of regional general permits, including resource agency consultations and wetland mitigation negotiations.

The planned scope of work includes preparation of regional general permit applications under Sections 404 and 401 of the Clean Water Act and Section 1602 of the California Department of Fish and Game Code; providing support for Section 404 permit public notifications; initializing informal consultations with each resource agency (i.e., USACE, RWQCB, CDFG and the USFWS); preparation of the final wetland mitigation plans; and assisting in pre-consultation for potential endangered species take under Section 7 of the Federal Endangered Species Act, including preparation of the Biological Opinion to be submitted by the USACE to the USFWS.

Planned work will also include collection of data required for preparation of permits and development of the PEIR, including collection of baseline biological resources information at approximately 150 regulated streambeds within the Orange County and Western San Bernardino County operating regions, wetland delineations, vegetation communities mapping, habitat assessments for state and/or federally protected species; and compilation of an environmental database for all jurisdictional streambeds identified per region.

AECOM's activities will be performed under an existing professional services agreement. The estimated cost to provide these services is \$240,000. The work is highly specialized and Metropolitan has insufficient technical staff in-house to conduct these activities. For this agreement, Metropolitan has established a Small Business Enterprise participation level of 18 percent.

Summary

This action appropriates \$1.9 million, authorizes detailed reliability investigations and preparation of programmatic CEQA documentation for the Orange County and Western San Bernardino County operating regions, and authorizes a professional services agreement with Dudek.

This work has been evaluated and recommended by Metropolitan's CIP Evaluation Team, and funds are available within the fiscal year 2011/12 capital expenditure plan. This is the initial action for the Distribution System Infrastructure Protection Program (Appropriation No. 15474). See [Attachment 1](#) for the Financial Statement, and [Attachment 2](#) for the Location Map.

Project Milestones

Late 2012 – Completion of investigations for the Orange County and Western San Bernardino County operating regions

Mid 2014 – Adoption of programmatic CEQA documentation for the Orange County and Western San Bernardino County operating regions

Policy

Metropolitan Water District Administrative Code Section 5108: Appropriations

Metropolitan Water District Administrative Code Section 8201: Acquisition of Real Property

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed action consists of basic data collection and resource evaluation activities, which do not result in a serious or major disturbance to an environmental resource. This may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded. Accordingly, the proposed action qualifies as a Class 6 Categorical Exemption (Section 15306 of the State CEQA Guidelines).

The CEQA determination is: Determine that pursuant to CEQA, the proposed action qualifies under a Categorical Exemption (Class 6, Section 15306 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

Adopt the CEQA determination and

- a. Appropriate \$1.9 million;
- b. Authorize detailed reliability investigations of the Orange County and Western San Bernardino County operating regions;
- c. Authorize preparation of programmatic CEQA documentation for the Orange County and Western San Bernardino County operating regions; and
- d. Authorize professional services agreement with Dudek in an amount not to exceed \$975,000.

Fiscal Impact: \$1.9 million of capital funds under Approp. 15474

Business Analysis: Under the programmatic approach to regional environmental permitting, staff projects a savings on environmental permitting costs of at least \$10 million over the next 10-15 years versus individual permitting of projects.

Option #2

Do not proceed with the proposed work at this time.

Fiscal Impact: None

Business Analysis: Under this option, staff would execute infrastructure protection projects and obtain environmental clearances on a project-by-project basis. This approach could lead to project delays, disruption of water deliveries to member agencies, increased costs for urgent repairs, and increased environmental permitting costs.

Staff Recommendation

Option #1


Gordon Johnson
Manager/Chief Engineer,
Engineering Services

5/24/2012

Date


Jeffrey Kightlinger
General Manager

5/31/2012

Date

Attachment 1 – Financial Statement

Attachment 2 – Location Map

Ref# es12616607

Financial Statement for Distribution System Infrastructure Protection Program

A breakdown of Board Action No. 1 for Appropriation No. 15474 for initiation of the Distribution System Infrastructure Protection Program¹ is as follows:

	Current Board Action No. 1 (June 2012)
Labor	
Studies & Investigations	\$ 312,000
Preliminary Design	-
Owner Costs (Program mgmt. and envir. doc.)	238,000
Construction Inspection & Support	-
Metropolitan Force Construction	-
Materials & Supplies	-
Incidental Expenses	10,000
Professional/Technical Services	-
Dudek (Programmatic CEQA documentation)	975,000
AECOM (Regional general permit applications)	240,000
Equipment Use	-
Contracts	-
Remaining Budget	125,000
Total	\$ 1,900,000

Funding Request

Program Name:	Distribution System Infrastructure Protection Program		
Source of Funds:	Revenue Bonds, Replacement and Refurbishment or General Funds		
Appropriation No.:	15474	Board Action No.:	1
Requested Amount:	\$ 1,900,000	Capital Program No.:	15474
Total Appropriated Amount:	\$ 1,900,000	Capital Program Page No.:	323
Total Program Estimate:	\$ 12,000,000	Program Goal:	Reliability

¹ This is the initial appropriation for the Distribution System Infrastructure Protection Program.

Metropolitan's Distribution System

