THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

BOARD ACTION

- Board of Directors
  Engineering and Operations Committee

1/14/2020 Board Meeting

7-2

Subject

Adopt CEQA determination that the proposed project was previously addressed in the certified 2017 Programmatic Environmental Impact Report and related CEQA actions, and authorize a five-year lease agreement with Los Angeles Community College District in an amount not-to-exceed $850,000 for property to be used for construction staging and storage of steel liner pipe

Executive Summary

Metropolitan's Prestressed Concrete Cylinder Pipe (PCCP) Rehabilitation Program was initiated to develop a comprehensive, long-term plan for rehabilitation of Metropolitan's at-risk PCCP feeders. This action authorizes a property lease agreement, which will be used for construction staging and the storage of items with long lead times such as steel liner pipe.

The rehabilitation of PCCP within the Second Lower Feeder will be staged over a period of eight to ten years with multiple construction and procurement contracts. Procurement contracts are essential due to the long lead-time required for large diameter valves and steel liner pipe. The authorization of this multi-year property lease will support construction contracts on the Second Lower Feeder, as well as future work on the Sepulveda Feeder.

Details

Background

In September 2011, Metropolitan's Board authorized the initial steps of the PCCP Rehabilitation Program in order to develop a comprehensive, long-term plan for replacement or relining of Metropolitan's at-risk PCCP lines. The strategy for maintaining PCCP reliability contains four coordinated elements: (1) continued assessment and monitoring of PCCP lines; (2) monitoring of stray currents and installation of cathodic protection; (3) near-term repair of distressed PCCP segments; and (4) long-term rehabilitation. Background information on the PCCP Rehabilitation Program appears in **Attachment 1**, along with the current status of activities within each of the four elements.

Five feeders have been identified as priority lines to be addressed under the PCCP Rehabilitation Program. These lines include: (1) the Second Lower Feeder, (2) the Sepulveda Feeder, (3) the Rialto Pipeline, (4) the Calabasas Feeder, and (5) the Allen-McColloch Pipeline. A proactive, long-term program to rehabilitate these five feeders has been incorporated into Metropolitan's CIP.

The program has been organized to provide flexibility in the timing and priority of the work. In January 2017, Metropolitan's Board certified the Final Programmatic Environmental Impact Report (Final PEIR) for the PCCP Rehabilitation Program, and approved the program for all five priority PCCP lines for the purpose of compliance with the California Environmental Quality Act (CEQA). The inclusion of all five lines within a single programmatic CEQA document provides flexibility to adjust construction sequencing by enabling the rehabilitation of specific reaches of PCCP to move forward based on the most up-to-date condition assessments and priorities.

The Second Lower Feeder PCCP line was the first one addressed due to its condition, history of repairs, the presence of corrosive soils and third-party stray currents, and high internal operating pressure. In January 2015, Metropolitan's Board authorized design to rehabilitate PCCP within the Second Lower Feeder. To date,

Metropolitan's Board has awarded three pipeline installation contracts. A total of 12.7 miles of PCCP on the Second Lower Feeder have been rehabilitated by installing steel liner pipe within the existing pipeline. This work includes two miles of previous urgent repairs, 4.4 miles completed under Reach 1, 1.8 miles completed under Reach 4, and 4.5 miles currently being relined under Reach 2. The remaining 17.3 miles of the Second Lower Feeder will be relined under future construction contracts.

Staff will return to the Board to award the construction contract for Reach 3 of the Second Lower Feeder.

In October 2018, the Board appropriated funds and authorized the General Manager to initiate or proceed with work on all capital projects identified in the Capital Investment Plan (CIP), subject to any limits on the General Manager's authority and CEQA requirements. This project has been reviewed with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP Evaluation Team to be included in the PCCP Rehabilitation Program. No additional allocation of funds is required for this work, as sufficient funds were previously allocated.

Property Lease (Los Angeles Community College District) - New Agreement

The rehabilitation of PCCP within the Second Lower Feeder will be staged over a period of eight to ten years with multiple construction and procurement contracts. Reach 2, currently under construction, is scheduled to be completed in mid-2020 and is located within the cities of Carson and Los Angeles, and the county of Los Angeles. Reach 3 is located within the cities of Lomita, Los Angeles, Rolling Hills Estates, and Torrance and is scheduled to begin construction in 2021 and be completed by 2022. Following this work on the Second Lower Feeder, work will commence on portions of the Sepulveda Feeder that are in the same general geographical location. Each of the construction contracts for these pipeline reaches will require a storage area within the vicinity of the work to support the storage of equipment, steel pipe, and the contractor's mobilization activities.

Staff recommends entering into a three-year lease agreement with the Los Angeles Community College District (LACCD), for use of the vacant property at 1700 W. L St., Wilmington, CA (see **Attachment 3**). This property covers an area totaling 12 acres, which will provide sufficient storage area for equipment and liner pipe for three years to rehabilitate portions of both the Second Lower Feeder and Sepulveda Feeder. Metropolitan will have the option to renew the agreement for two additional years. The agreement will require a security deposit after the execution of the lease in the amount of $200,000, which will be refunded once Metropolitan vacates the property and restores the site to its original condition.

This action authorizes an agreement with the LACCD in an amount not to exceed $850,000, which includes a three-year lease of property, options for two one-year extensions, Consumer Price Index escalation, and a $200,000-security deposit. The property will be used as a pipe and equipment storage area for current and upcoming construction contracts to rehabilitate the Second Lower Feeder and a section of the Sepulveda Feeder.

Alternatives Considered

To date, Metropolitan has been leasing a four-acre site in Long Beach for the storage needs on earlier contracts. Metropolitan is in its third and final year of a property lease within the city of Long Beach. While this four-acre site was convenient to the first two construction contracts, it is not large enough to accommodate the storage of liner pipe segments for both Reaches 2 and 3, nor future Sepulveda Feeder work. Metropolitan staff evaluated approximately 15 vacant sites located near the vicinity of the current and future construction contracts. The majority of the properties were not available for the scheduled construction period. The LACCD site within the city of Wilmington meets the proximity, size, and access needs for delivery and storage of equipment and several thousand feet of 75 inch-diameter coiled steel pipe. The readily available site requires minimal modifications to secure and accommodate the construction staging and storage activities. The lease agreement terms with the LACCD are suitable to Metropolitan and are reasonable and consistent with potential leases of other properties in the area.

Summary

This action authorizes a lease agreement with the Los Angeles Community College District for construction staging and storage activities related to the PCCP Rehabilitation Program. See **Attachment 1** for the Background and Program Status, **Attachment 2** for the Location Map, **Attachment 3** for the Area to be Leased.

Project Milestone

February 2020 – Site available and ready for delivery of Reach 2 and 3 steel liner pipe for the Second Lower Feeder Project

Policy

Metropolitan Water District Administrative Code Section 5108: Appropriations

Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

By Minute Item 51353, dated October 9, 2018, the Board appropriated a total of $290 million for projects identified in the Capital Investment Plan for Fiscal Years 2018/19 and 2019/2020.

By Minute Item 50009, dated January 13, 2015, the Board authorized the first phase of final design to rehabilitate the PCCP portions of the Second Lower Feeder.

By Minute Item 50699, dated January 10, 2017, the Board certified the Final PEIR for the PCCP Rehabilitation Program, and approved the program for the Second Lower Feeder, Sepulveda Feeder, Calabasas Feeder, Rialto Pipeline, and AMP for the purposes of CEQA.

By Minute Item 51197, dated May 8, 2018, the Board awarded a $12,068,634.98 contract to Ameron Water Transmission Group to provide steel liner pipe for the Second Lower Feeder.

By Minute Item 51597, dated May 14, 2019, the Board awarded a $53,273,196 contract to J.F. Shea Construction, Inc. to procure materials and perform construction for the rehabilitation of portions of the Second Lower Feeder.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The environmental effects from implementation of the PCCP Program were evaluated in the Final Programmatic Environmental Impact Report (Final PEIR) for the Rehabilitation Program, SCH #2014121055. Metropolitan's Board certified the Final PEIR on January 10, 2017, and also approved the Findings of Fact, the Statement of Overriding Considerations, the Mitigation Monitoring and Reporting Program, and the program itself. This action is based on the acquisition of a lease agreement and not on any changes to the approved program itself. Hence, the previous environmental documentation acted on by the Board in conjunction with the proposed action fully complies with CEQA and the State CEQA Guidelines. Accordingly, no further CEQA documentation is necessary for the Board to act on the proposed action.

CEQA determination for Option #2:

None required

Board Options

Option #1

Adopt the CEQA determination that the proposed project was previously addressed in the certified 2017 Programmatic Environmental Impact Report and related CEQA actions, and

Authorize a lease agreement with Los Angeles Community College in an amount not-to-exceed $850,000 for a five-year term, for property to be used for construction staging and storage of steel liner pipe.

Fiscal Impact: Expenditure of $850,000 in capital funds. Approximately $250,000 will be incurred in the current fiscal year and has been previously authorized. The remaining funds from this action and for future construction costs will be accounted for and appropriated under the next biennial budget.
Business Analysis: This option would help facilitate Metropolitan's long-term plan to rehabilitate PCCP portions of the Second Lower Feeder. This option will enhance the reliability of Metropolitan's PCCP feeder and reduce the risk of costly emergency repairs.

Option #2

Do not move forward with a lease with the Los Angeles Community College District at this time.
Fiscal Impact: Costs are unknown.
Business Analysis: This option would require that staff continue to search for a suitable site near future construction contracts.

Staff Recommendation

Option #1

12/18/2019

John V. Bednarski *Date*
Manager/Chief Engineer
Engineering Services

12/20/2019

Jeffrey Kightlinger *Date*
General Manager

Attachment 1 – Background and Program Status

Attachment 2 – Location Map

Attachment 3 – Location of Area to be Leased

Ref# es12673413

PCCP REHABILITATION PROGRAM
BACKGROUND AND PROGRAM STATUS

Metropolitan's water delivery system includes approximately 830 miles of large-diameter pipelines, of which 152.8 miles are currently comprised of prestressed concrete cylinder pipe (PCCP). The total original length of PCCP was 163 miles. There are PCCP reaches within 27 feeders, with diameters ranging from 54 to 201 inches. These PCCP lines were installed between 1965 and 1985, and are located in both dense urban regions and remote areas.

Over the last several decades, water agencies throughout the United States and other countries have found that under certain conditions, PCCP lines may have a reduced service life and elevated risk of failure versus other types of pipe. PCCP failures can be catastrophic and may occur without forewarning, which may compromise system reliability and result in significant costs due to interruption of service, unplanned major repairs, and potential third-party damages.

In September 2011, as a proactive measure to maintain overall system reliability, Metropolitan initiated a comprehensive program to inspect, manage, and rehabilitate its PCCP feeders. This effort included the preparation of a risk analysis to assess the need and priority for the rehabilitation of individual PCCP lines. Through this process, five of Metropolitan's 27 PCCP lines were identified to have experienced a disproportionate share of all prestressing wire breaks, repair length to date, and cost of repairs. The five priority lines are: (1) the Allen McColloch Pipeline (AMP), (2) the Calabasas Feeder, (3) the Rialto Pipeline, (4) the Second Lower Feeder, and (5) the Sepulveda Feeder. The PCCP within these five lines is expected to continue to deteriorate, as indicated by a progression of wire breaks over time. While Metropolitan's other PCCP feeders contain prestressing wire breaks in some pipe segments, they do not exhibit the same trend of increasing wire breaks over time. These other feeders may eventually need to be rehabilitated, but appear to be stable at present. Their condition will be reevaluated on a regular basis, and adjustments will be made to the program if additional feeders are determined to be at risk in the future.

The PCCP Rehabilitation Program has been organized to provide flexibility in the timing and priority of the work. In January 2015, final design commenced to rehabilitate the initial pipeline, the Second Lower Feeder. In January 2017, Metropolitan's Board certified the Final Programmatic Environmental Impact Report (Final PEIR) for the entire PCCP Rehabilitation Program, and approved the program for all five priority PCCP lines for the purpose of compliance with the California Environmental Quality Act (CEQA). The inclusion of all five lines within a single programmatic CEQA document provides flexibility to adjust construction sequencing by enabling the rehabilitation of specific reaches of PCCP to move forward based on up-to-date condition assessments and priorities. In August 2018, the initial construction contract under the program was completed, rehabilitating 4.4 miles of the Second Lower Feeder.

The comprehensive strategy for managing Metropolitan's PCCP lines and maintaining their reliability is comprised of four coordinated elements. The following describes these elements and summarizes the status of activities for each.

No.	Element	Status
1.	**Continued Assessment and Monitoring of PCCP Lines –** Metropolitan currently inspects all PCCP lines within the distribution system every three to seven years. In order to increase knowledge of the pipelines' baseline condition to track prestressing wire breaks over time, and to identify distressed PCCP segments, staff will continue to aggressively inspect PCCP lines using state-of-the-art inspection techniques.	At present, electromagnetic inspection continues to be the industry's primary technique for the identification of wire breaks. A complete cycle of inspections of Metropolitan's feeders takes approximately five to seven years to complete. To date, three cycles of electromagnetic inspections have been performed on most of the PCCP feeders. The 4th cycle of inspections on portions of the Box Springs Feeder, East Lake Skinner Bypass, Foothill Feeder (from Castaic Lake PCS to Jensen),

No.	Element	Status
		Lake Perris Bypass Pipeline, Rialto Pipeline, San Diego Pipeline No. 5, Second Lower Feeder, and Sepulveda Feeder were completed during the 2018/19 shutdown season. Inspections of portions of the Diemer Reservoir AMP Bypass, Auld Valley Pipeline, San Diego Pipeline No. 4, Second Lower Feeder, Skinner Plant Effluent No. 2, Skinner Plant Influent No. 2, and Yorba Linda Feeder are scheduled to be completed during the 2019/20 shutdown season.
2.	**Monitoring of Stray Currents and Installation of Cathodic Protection** – Metropolitan will continue to perform corrosion surveys and monitor stray currents on a one- to two-year cycle. Where indicated by corrosion monitoring, staff will install stray current drain stations or impressed current systems to minimize continued deterioration from stray current interference, which is a major cause of corrosion damage.	To date, stray current protection has been installed in 31.5 miles of PCCP lines. This protection includes both current drain stations and impressed current systems. In November 2017, impressed current cathodic protection stations were installed on PCCP portions of the AMP.
3.	**Near-Term Repair of Distressed PCCP Segments** – Metropolitan will continue to prioritize and repair PCCP segments with elevated numbers of prestressing wire breaks, broken-back cracks, or other indications of risk or distress. During the course of the PCCP Rehabilitation Program, individual PCCP segments may be identified as distressed prior to the scheduled rehabilitation of an entire feeder. If needed, staff will recommend moving forward with near-term repairs to those individual PCCP segments.	To date, over 14,800 feet of distressed PCCP segments have been repaired. Most recently, urgent repairs of distressed PCCP on the Second Lower Feeder were completed in 2013, 2014, and 2016, and on the Sepulveda Feeder in 2016 and 2019.
4.	**Long-Term Rehabilitation –** The PCCP Rehabilitation Program will complete the rehabilitation or replacement of all PCCP segments within the five priority feeders.	For the Second Lower Feeder, the following is a summary of work to date: • Preliminary Design – Reach 9, which crosses the Newport-Inglewood Fault zone: Geotechnical investigations and seismic studies are underway. • Final Design – Reach 3: Design is underway. • Procurement – Pipe liner fabrication for Reaches 2 and 3 is underway. – Manufacturing of 13 large-diameter conical plug isolation valves is underway. Delivery of the first three 48-inch valves scheduled for the end of 2020. • Construction – Reach 1: Rehabilitation of 23,100 feet of PCCP is complete. – Reach 4: Rehabilitation of 10,000 feet of PCCP is complete. – Reach 2: Construction to Rehabilitate 24,000 feet of PCCP is underway.

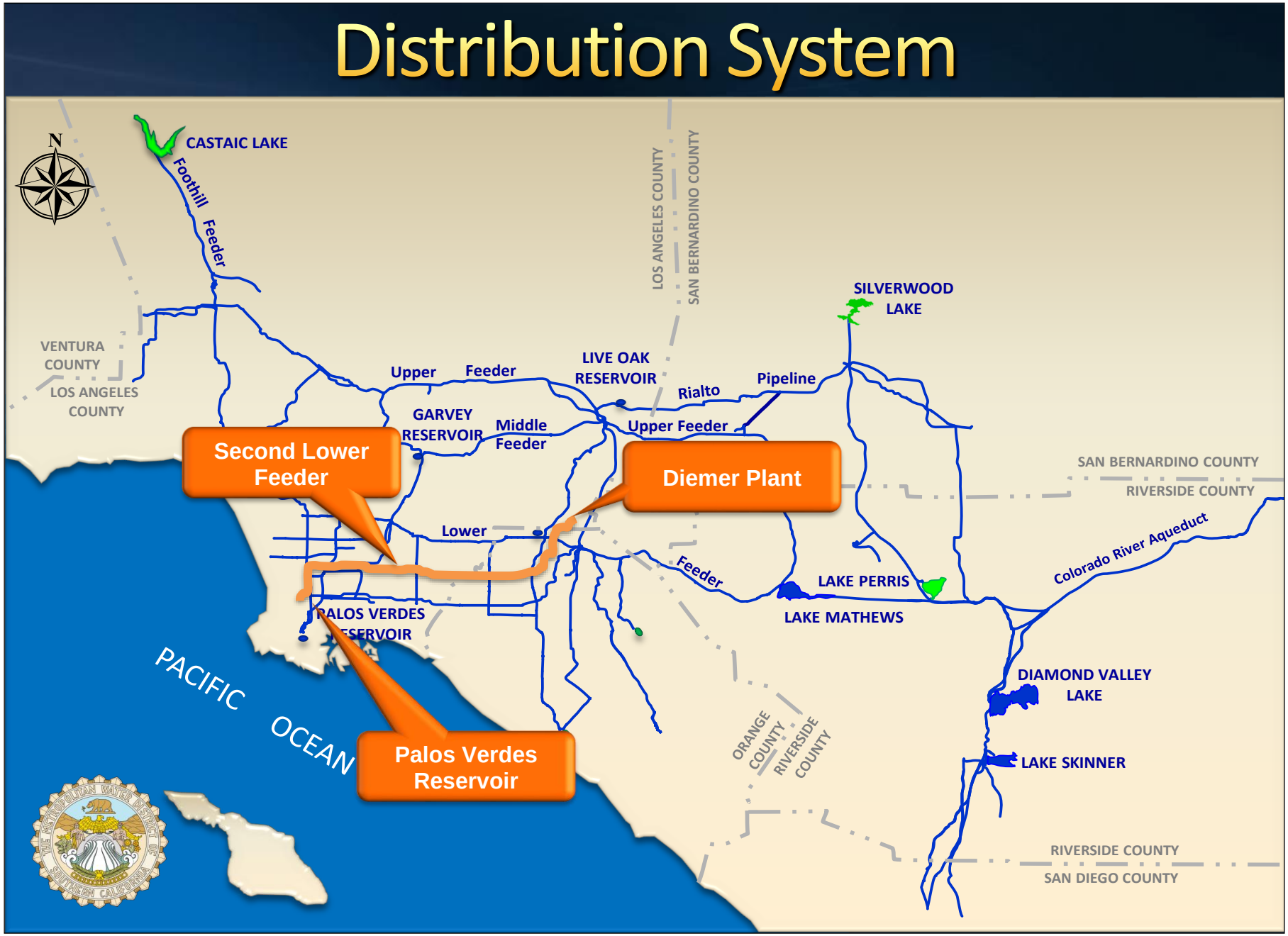
No.	Element	Status
		• Outreach – Currently underway with member agencies to address construction phasing, isolation points, shutdown durations, and water quality-related issues. Currently underway with local agencies to minimize traffic and other potential impacts to the public. For the AMP, Calabasas Feeder, Rialto Pipeline, and Sepulveda Feeder, following is a summary of work to date: • Preliminary design activities are underway.

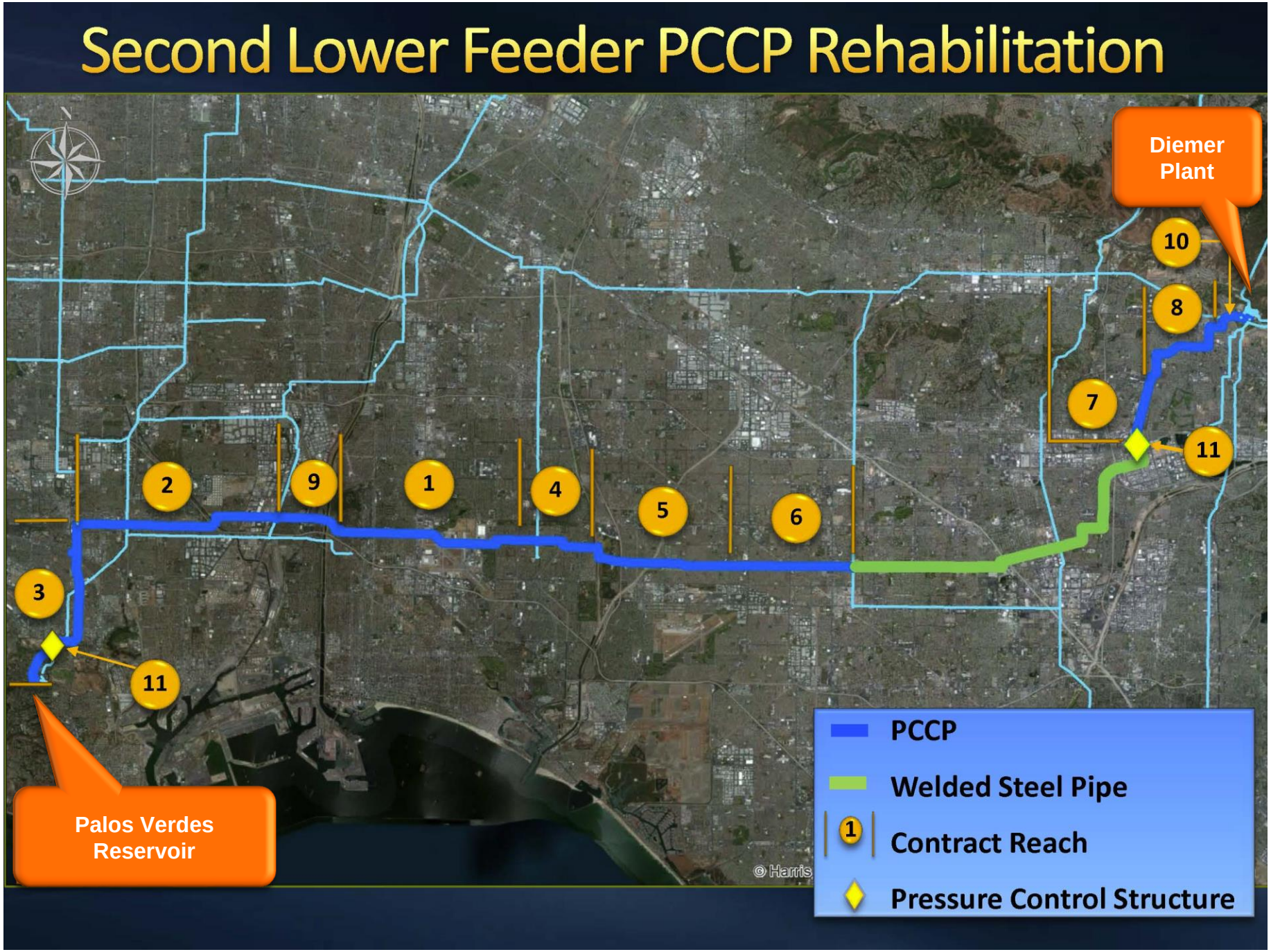
The goal of this comprehensive strategy for managing PCCP lines is to maintain reliable deliveries to Metropolitan's member agencies while optimizing the remaining useful life of PCCP lines. The effort includes the development of a multi-year schedule and conceptual-level cost estimates with a long-term rehabilitation and replacement plan for the five priority PCCP lines. The overall schedule, cost estimates, and sequencing of work will be reassessed regularly during the development of Metropolitan's biennial capital budget.

While the Second Lower Feeder is the initial pipeline to be addressed under the PCCP Rehabilitation Program, staff's strategy for the four other priority feeders is to complete preliminary design of the rehabilitation work for the entire length of each feeder at an early stage of the program. This approach will provide flexibility to adjust construction sequencing of individual reaches if priorities change. The sequencing for rehabilitation will be determined by several factors, including: (1) updated assessments of risk; (2) Metropolitan's water supply availability and the operational needs for specific feeders; (3) impacts to member agency service connections; and (4) readiness for construction.

System-wide hydraulic analyses are underway to assess hydraulic impacts of the PCCP rehabilitation work on Metropolitan's distribution system. The results of the analyses have been used to develop alternatives to minimize the loss of hydraulic capacity, to evaluate impacts of extended shutdowns on individual service connections, and to identify options for maintaining deliveries. The replacement of small-diameter sectionalizing valves and meters with larger units is an example of an approach for maintaining feeder hydraulic capacity.

Preliminary design to rehabilitate the AMP, Calabasas Feeder, Rialto Pipeline, and Sepulveda Feeder has been authorized and is underway. Staff will return to the Board in 2021 to certify environmental documentation for these priority feeders and to authorize the final design for their rehabilitation.


Distribution System
N
CASTAIC LAKE
Foothill Feeder
VENTURA COUNTY
LOS ANGELES COUNTY
LOS ANGELES COUNTY
SAN BERNARDINO COUNTY
SILVERWOOD LAKE
Upper Feeder
LIVE OAK RESERVOIR
Rialto Pipeline
GARVEY RESERVOIR
Middle Feeder
Upper Feeder
Second Lower Feeder
Diemer Plant
SAN BERNARDINO COUNTY
RIVERSIDE COUNTY
Lower
Feeder
Colorado River Aqueduct
LAKE PERRIS
LAKE MATHEWS
PALOS VERDES RESERVOIR
PACIFIC OCEAN
DIAMOND VALLEY LAKE
ORANGE COUNTY
RIVERSIDE COUNTY
LAKE SKINNER
Palos Verdes Reservoir
RIVERSIDE COUNTY
SAN DIEGO COUNTY


Second Lower Feeder PCCP Rehabilitation
Diemer Plant
Palos Verdes Reservoir
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3
4
5
6
7
8
9
10
11
11
PCCP
Welded Steel Pipe
Contract Reach
Pressure Control Structure
© Harris

Location of Area to be leased

Owner: Los Angeles Community College District

Address: 1700 W. L St., Wilmington, CA, 90744

Los Angeles County APN No.: 7412-012-903

Total area to be leased: 12 Acres