



● **Board of Directors**
Engineering, Operations, and Technology Committee

3/14/2023 Board Meeting

7-3

Subject

Authorize agreement with Black & Veatch Corporation, Inc. in an amount not to exceed \$8 million for the preliminary design of conveyance Reach 1 of the Pure Water Southern California program; authorize agreement with HDR Engineering, Inc. in an amount not to exceed \$9 million for preliminary design of conveyance Reach 2 of the Pure Water Southern California program; and adopt a resolution to support a grant application to the U.S. Bureau of Reclamation for water recycling and desalination planning and authorize the General Manager to accept the grant if awarded; the General Manager has determined that the proposed actions are exempt or otherwise not subject to CEQA

Executive Summary

In December 2022, Metropolitan's Board authorized use of \$80 million in state funding to commence activities related to the initiation of the Pure Water Southern California program (Program), including the design of the initial conveyance pipeline segments through the cities of Carson, Long Beach, and Lakewood. Staff recommends the use of consultants to design the initial reaches of the conveyance system. The early start of these activities will allow Metropolitan to meet planned online dates for both early deliveries of water and the overall completion of the Program. This action authorizes a professional services agreement with Black & Veatch Corporation, Inc. (Black & Veatch) for preliminary design of Reach 1 of the conveyance system through the city of Carson, and a professional services agreement with HDR Engineering, Inc. (HDR) for preliminary design of Reach 2 of the conveyance system through the cities of Long Beach and Lakewood. This action also adopts a resolution supporting a \$5 million grant application to the U.S. Bureau of Reclamation (USBR) for WaterSMART: Water Recycling and Desalination Planning funding and authorizes the General Manager or a designated representative to accept the grant if awarded to support the Program.

Details

Background

The Program is a regional undertaking with primary leadership stemming from a partnership between Metropolitan and the Los Angeles County Sanitation Districts (Sanitation Districts). Since the formation of this partnership, additional public agencies in the region have also expressed interest in supporting the Program's development. The Program would reuse treated wastewater that is currently being discharged to the Pacific Ocean from the Sanitation Districts' Joint Water Pollution Control Plant (JWPCP) in the city of Carson. The treated wastewater would be further purified at a new advanced water purification facility at the JWPCP to produce approximately 150 million gallons per day (mgd) of purified water at full build-out. The purified water could be used to recharge regional groundwater basins through spreading facilities and injection wells, satisfy industrial demands that currently rely on imported water, and augment existing water supplies at two of Metropolitan's water treatment plants. In addition to the treatment facilities, new conveyance facilities would extend from Carson as far north as the city of Azusa, and potentially east to the city of La Verne to connect with Metropolitan's existing water treatment and distribution facilities.

In December 2022, Metropolitan's Board authorized use of \$80 million in state funding to commence activities related to the initiation of the Program. One of the key early activities includes the design of the initial conveyance pipeline segments starting from the JWPCP through the cities of Carson, Long Beach, and Lakewood. Commencement of early design will enable the Program to meet projected online dates for both early

deliveries of water as well as full-program completion. Staff recommends authorizing two new consulting agreements to provide design services for the initial conveyance pipeline segments and achieve these programmatic objectives. In accordance with the December 2022 action to use state funding to initiate the Program, funds received from the state for the work to be performed pursuant to this action will be managed separately from board-appropriated Capital Investment Plan (CIP) appropriations.

In addition to authorizing the two new agreements, staff recommends pursuing a \$5 million grant application to the USBR for WaterSMART: Water Recycling and Desalination Planning funding and authorizes the General Manager or a designated representative to accept the grant if awarded.

Additional information is provided below on each of this board action's recommendations.

Pure Water Southern California Pipeline Conveyance System Reach 1 and Reach 2 – Preliminary Design

The Program's backbone conveyance system consists of over 40 miles of pipeline. The initial segments of the pipeline system include Reach 1 through the city of Carson and Reach 2 through the cities of Long Beach and Lakewood. The Reach 1 alignment is approximately six miles long, starting at the new advanced water purification facility at the JWPCP and continuing eastward and northward through the city of Carson. The Reach 2 alignment is approximately eight miles long, continuing from Reach 1 eastward and northward through the cities of Long Beach and Lakewood.

Planned preliminary design activities include: (1) review of investigations completed to date; (2) performing hydraulic analyses, pipeline sizing, surge analyses, and surge mitigation design; (3) performing alternative evaluations of various pipeline features to address specific project needs; (4) developing a construction implementation plan for sequence of work; (5) conducting field investigations of pipeline alignment and associated facilities to identify underground utilities and other structures along the alignment; (6) performing topographic survey and mapping; (7) performing field geotechnical exploration, utility investigations and potholing; (8) developing the final detailed pipeline alignment; (9) establishing detailed design criteria; (10) identifying equipment and materials with long lead time to be considered for pre-procurement; (11) identifying suitable contractor work and storage areas; (12) developing preliminary traffic control plans, restoration plans, and construction permit requirements with individual cities and other jurisdictions; (13) developing preliminary control schematics, system descriptions, process and instrumentation diagrams, and coordinating with Metropolitan's SCADA system; and (14) providing material selection and design of coating and cathodic protection systems.

A total of \$28,000,000 is required for this work. Allocated state grant funds include \$8,000,000 for Black & Veatch for preliminary design of Reach 1 and \$9,000,000 for HDR for preliminary design of Reach 2, under new agreements as described below. Allocated state funds for Metropolitan staff activities include \$5,800,000 for technical oversight, review of consultant's work, and providing input into the development of detailed design criteria; \$1,000,000 for surveying and mapping; \$2,800,000 for project management, permitting, right-of-way support, and regulatory agency coordination; and \$1,400,000 for remaining budget. Staff anticipates returning to the Board at a later date to authorize final design of each reach. **Attachment 1** provides the allocation of the required funds using state grant funds previously authorized in December 2022.

Pure Water Southern California Conveyance System Reach 1 Preliminary Design Services (Black & Veatch Corporation, Inc.) – New Agreement

Black & Veatch is recommended to provide preliminary design services for the Reach 1 conveyance system through the city of Carson. Black & Veatch was selected through a competitive process via Request for Proposal No. 1334 based on: (1) the firm's qualifications; (2) record of past performance; (3) key personnel and staffing plan; (4) technical approach and methodology; and (5) fee proposal. Preliminary design activities are as described above.

This action authorizes an agreement with Black & Veatch for a not-to-exceed amount of \$8 million for preliminary design of Reach 1 of the conveyance system for Pure Water Southern California. For this agreement, Metropolitan has established a Small Business Enterprise (SBE) participation level of 25 percent. Black & Veatch has agreed to meet this level of participation. See **Attachment 2** for the listing of subconsultants.

Pure Water Southern California Conveyance System Reach 2 Preliminary Design Services (HDR Engineering, Inc.) – New Agreement

HDR is recommended to provide preliminary design services for Reach 2 through the cities of Long Beach and Lakewood. HDR was selected through a competitive process via Request for Proposal No. 1334 based on: (1) the firm's qualifications; (2) record of past performance; (3) key personnel and staffing plan; (4) technical approach and methodology; and (5) fee proposal. Preliminary design activities are as described above.

This action authorizes an agreement with HDR for a not-to-exceed amount of \$9 million for preliminary design of Reach 2 of the conveyance system for Pure Water Southern California. For this agreement, Metropolitan has established an SBE participation level of 25 percent. HDR has agreed to meet this level of participation. See **Attachment 2** for the listing of subconsultants.

Pursuit of Federal Grant Funding for the Pure Water Southern California Program

This action adopts a resolution supporting Metropolitan and the Sanitations Districts' pursuit of a \$5 million grant application to the USBR for WaterSMART: Water Recycling and Desalination Planning funding and authorizes the General Manager to accept the grant if awarded.

Large-scale water recycling construction projects, such as Metropolitan's Pure Water Southern California Program, are eligible for USBR funding under Section 40905 of the Bipartisan Infrastructure Law P.L. 117 58. A feasibility study must first be submitted to ensure that the project meets all the requirements specified in the Feasibility Study Directive and Standards. The USBR offers funding through WaterSMART for preparation of the feasibility study with funding available from October 2023 and October 31, 2025. If selected for the \$5 million grant, Metropolitan and the Sanitation Districts must jointly provide at least a 75 percent local cost-share (\$15 million) and incur the expenses before October 31, 2025. It is anticipated that both Metropolitan and the Sanitation Districts will provide matching funds to meet the overall grant requirements. Currently, staff anticipates potential use of this grant funding for: (1) completion of a large-scale water recycling construction project feasibility study for USBR review and approval; (2) preliminary design of the initial conveyance pipeline segments; and (3) preliminary design of treatment facilities at the JWPCP that would reduce the amount of nitrogen in the influent to the advanced water purification facility. Preliminary design of these treatment facilities at the JWPCP will be the responsibility of the Sanitation Districts, and the Sanitation Districts will provide any required matching funds for this portion of the work. The anticipated grant funding application for these three work activities is \$5 million.

Alternatives Considered

Alternatives considered for completing design activities for the Program's initial conveyance system included assessing the availability and capability of in-house Metropolitan staff to conduct this work. Metropolitan's staffing strategy for utilizing consultants and in-house Metropolitan staff has been: (1) to assess current work assignments for in-house staff to determine the potential availability of staff to conduct this work; and (2) to use project-specific professional services agreements when resource needs exceed available in-house staffing or require specialized technical expertise to provide a concentrated engineering effort over an extended duration.

This strategy relies on the assumption that in-house engineering staff will handle the baseload of work on the Program, while professional services agreements are selectively utilized to handle activities above this baseload or where specialized needs are required. This strategy allows Metropolitan's staff to be strategically utilized on the Program to best maintain key engineering competencies and to address special needs or issues. After assessing the current workload for in-house staff and the relative priority of these initial conveyance reaches for the Program, staff recommends the use of professional services agreements for the subject design. Furthermore, due to the extent of work required to complete design for both reaches of the conveyance system, staff recommends using two consulting firms to complete the work rather than awarding both reaches to a single firm. This approach will allow for timely completion of program milestones. Metropolitan staff will manage and coordinate the activities of the design consultants to ensure the overall objectives of the program are achieved.

Staff also considered separating the actions related to preliminary design apart from the action to adopt a resolution in support of the federal grant application. However, bringing these actions together in one action item allows for streamlined board consideration. Staff altered the board options section of the letter to allow the board to consider different actions on the preliminary design work or the board resolution, as desired.

Summary

This action authorizes a new professional services agreement with Black & Veatch for preliminary design of Reach 1 of the conveyance system, and a new professional services agreement with HDR for preliminary design of Reach 2 of the conveyance system for Pure Water Southern California. This action also adopts a resolution supporting a grant application to the USBR for water recycling and desalination planning. See **Attachment 1** for the allocation of funds, **Attachment 2** for the listing of subconsultants, **Attachment 3** for the location map, and **Attachment 4** for the board resolution that supports the grant funding.

Project Milestones

October 2023 – Expected grant award notification from USBR

December 2023 – Completion of preliminary design for Reach 1 of the conveyance system

June 2024 – Completion of preliminary design for Reach 2 of the conveyance system

September 2024 – Board to consider certification of environmental documentation for the Program

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

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

By Minute Item 52174, dated November 10, 2020, the Board authorized preparation of environmental documentation and technical studies, and public outreach activities for the Regional Recycled Water Program.

By Minute Item 52405, dated June 8, 2021, the Board adopted a resolution supporting the WaterSMART: Title XVI WIIN Reclamation and Reuse grant application and authorized the General Manager to accept funding and enter contract if awarded.

By Minute Item 53052, dated December 13, 2022, the Board authorized the General Manager to use \$80,000,000 in grant funding from the State Water Resources Control Board and to commence activities related to the initiation of the Pure Water Southern California program.

By Minute Item 53099, dated January 10, 2023, the Board authorized the General Manager an agreement with the joint venture of AECOM Technical Services, Inc. and Brown and Caldwell in an amount not to exceed \$25 million for program management services to support the Pure Water Southern California program.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is statutorily and categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed action involves only feasibility or planning studies for possible future actions which a public agency has not approved, adopted, or funded. In addition, the proposed action consists of basic data collection and resource evaluation activities which does not result in a serious or major disturbance to an environmental resource as part of a study leading to an action which a public agency has not yet approved, adopted, or funded. These proposed actions involve minor alterations in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees. Accordingly, the proposed action qualifies under the feasibility and planning studies exemption (Section 15262 of the State CEQA Guidelines) and under the Class 4 and Class 6 categorical exemptions (Sections 15304 and 15306 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

- a. Authorize agreement with Black & Veatch Corporation, Inc. in an amount not to exceed \$8 million for the preliminary design of conveyance Reach 1 of the Pure Water Southern California program.
- b. Authorize agreement with HDR Engineering, Inc. in an amount not to exceed \$9 million for preliminary design of conveyance Reach 2 of the Pure Water Southern California program.
- c. Adopt a resolution to support a grant application to the U.S. Bureau of Reclamation for water recycling and desalination planning and authorize the General Manager or a designated representative to accept the grant if awarded.

Fiscal Impact: Expenditure of \$28 million in state grant funds previously approved for use by Metropolitan’s Board in December 2022. Funds received from the state for the work pursuant to this action will be managed separately from CIP Appropriations. If awarded, funds received from the federal grant would reduce Metropolitan’s expenditures by \$4 million and Sanitation Districts’ expenditures by \$1 million. Metropolitan’s \$12 million federal grant matching funds will come from state grant funds previously approved for use by Metropolitan’s Board in December 2022. An additional \$3 million in matching funds will be provided by the Sanitation Districts.

Business Analysis: This option would advance the delivery of new water sources in Southern California to augment regional supplies within Metropolitan’s service area and facilitates completion of a feasibility study required for future federal construction funding.

Option #2


- a. Choose to proceed or not proceed with one or both of the agreements at this time and/or;
- b. Choose to support or not support the USBR grant application.

Fiscal Impact: None

Business Analysis: This option would forego the opportunity to accelerate the Program and to pursue potential Program construction funding and would delay development of a new water resource which is resilient to drought, climate change, and seismic risks.

Staff Recommendation

Option #1



 John V. Bednarski
 Manager/Chief Engineer
 Engineering Services

2/23/2023
 Date



 Adel Hagekhalil
 General Manager

2/27/2023
 Date

Attachment 1 – Allocation of Funds

Attachment 2 – Listing of Subconsultants

Attachment 3 – Location Map

Attachment 4 – Resolution for the WaterSMART: Water Recycling and Desalination Planning Grant Application

Allocation of Funds for Pure Water Southern California Preliminary Design of Reaches 1 and 2

	Current Board Action (Mar. 2023)
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Labor	
Studies & Investigations (tech. oversight, surveying, mapping, etc.)	\$ 6,800,000
Final Design	-
Owner Costs (project mgmt., permitting, etc.)	2,800,000
Submittals Review & Record Drwgs.	-
Construction Inspection & Support	-
Metropolitan Force Construction	-
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	-
Black & Veatch Corporation, Inc.	8,000,000
HDR Engineering, Inc.	9,000,000
Right-of-Way	-
Equipment Use	-
Contracts	-
Remaining Budget	1,400,000
Total	<hr/> \$ 28,000,000 <hr/>

In December 2022, Metropolitan’s Board authorized use of an \$80 million grant from the State Water Resources Control Board (SWRCB) to commence activities related to the initiation of the Program. Funds received from the SWRCB for the work to be performed pursuant to this action will be managed separately from board-appropriated Capital Investment Plan (CIP) appropriations. The total estimated cost to complete the program is currently being updated. The updated program costs, which will provide the basis of the rate study and cost of service analysis, are anticipated to be completed later this year.

The Metropolitan Water District of Southern California
Subconsultants for Agreement with Black & Veatch Corporation, Inc.

Subconsultant and Location	Service Category; Specialty
CDM Smith Inc. Los Angeles, CA	Trenchless/Tunnel Design
Delve Underground (Formerly McMillen Jacobs Associates) Pasadena, CA	Pipeline Design, Hazardous Materials
Aldea Services, Inc. Los Angeles, CA	Tunnel Design Peer Review, Risk Management
C Below, Inc. Chino, CA	Potholing, GPR
DRP Engineering, Inc. Monterey Park, CA	Drafting, Utility Research
GeoPentech Irvine, CA	Geotechnical
Harris Water Engineering, Inc. Durango, CO	SCADA, I&C
Scott Foster Engineering, Inc. La Cañada Flintridge, CA	Hydraulics
SC Solutions, Inc. Sunnyvale, CA	Pipeline Structural Design, Fault Crossings
Ruth Villalobos & Associates, Inc. Ontario, CA	Permitting
The Alliance Group Enterprise, Inc. Los Angeles, CA	Traffic Control, Utility Relocation

The Metropolitan Water District of Southern California
Subconsultants for Agreement with HDR Engineering, Inc.

Subconsultant and Location	Service Category; Specialty
Brierley & Associates Woodland Hills, CA	Trenchless/Tunnel Design, Geotechnical
C Below, Inc. Chino, CA	Potholing, GPR
DRP Engineering, Inc. Monterey Park, CA	Drafting
Scott Foster Engineering, Inc. La Cañada Flintridge, CA	Surge Analysis
Guida Surveying, Inc. Irvine, CA	Surveying
Lettis Consultants International, Inc. Concord, CA	Seismic Analysis of Faults

Pure Water Southern California – Preliminary Configuration



Resolution for the WaterSMART: Water Recycling and Desalination Planning Grant Application

RESOLUTION

**RESOLUTION OF THE BOARD OF DIRECTORS
OF THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
IN SUPPORT OF ITS PROPOSAL FOR FUNDING
UNDER THE WATERSMART: WATER RECYCLING AND DESALINATION
PLANNING FUNDING ANNOUNCEMENT FOR THE METROPOLITAN
WATER DISTRICT'S PURE WATER SOUTHERN CALIFORNIA LARGE
SCALE WATER RECYCLING FEASIBILITY STUDY PROPOSAL**

WHEREAS, the U.S. Bureau of Reclamation (Reclamation) is requesting proposals from sponsors to facilitate project development under the Title XVI Program, The Desalination Construction Program, and the Large-Scale Water Recycling Program through the WaterSMART: Water Recycling and Desalination Planning December 2022 funding announcement R23AS00076; and

WHEREAS, the submittal of a proposal for grant funding by Metropolitan has been determined to be exempt from the California Environmental Quality Act (CEQA) under Section 15378(b)(4) of the State CEQA Guidelines.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of The Metropolitan Water District of Southern California that the Board supports the proposal, the Metropolitan Water District's Large Scale Water Recycling Feasibility Study, under Reclamation's WaterSMART: Water Recycling and Desalination Planning December 2022 funding announcement R23AS00076.

BE IT FURTHER RESOLVED that Metropolitan's Board authorizes Metropolitan's General Manager or his/her designee to accept grant funding of up to \$5,000,000.

BE IT FURTHER RESOLVED that Metropolitan's Board delegates' legal authority to Metropolitan's General Manager to enter into an agreement with Reclamation, subject to the approval of the General Counsel, relevant to receipt of the requested Water Recycling and Desalination Planning grant.

BE IT FURTHER RESOLVED that Metropolitan is capable of providing the amount of funding and/or in-kind contributions specified in the funding plan.

BE IT FURTHER RESOLVED that if selected for funding, Metropolitan will work with Reclamation to meet established program deadlines.

I HEREBY CERTIFY that the foregoing is a full, true and correct copy of a resolution adopted by the Board of Directors of The Metropolitan Water District of Southern California at its meeting held March 14, 2023.

Secretary of the Board of Directors
of The Metropolitan Water District
of Southern California