



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

1/10/2023 Board Meeting

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7-5

**Subject**

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Authorize 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; and authorize an increase of \$950,000 to an existing agreement with CDM Smith, Inc. for a not-to-exceed total of \$3.7 million to support the program's ongoing process demonstration effort; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

**Executive Summary**

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During the past decade, California has experienced significant fluctuations in imported water supplies and groundwater production due to unprecedented drought conditions. The need to develop additional water resources has become increasingly evident with the challenges from recurring droughts, climate change, seismic risks, and uncertainties of imported water supplies. In December 2022, Metropolitan's Board authorized the use of an \$80 million grant from the State Water Resources Control Board (SWRCB) to commence activities related to the initiation of the Pure Water Southern California program (Program) and continue its advanced water treatment demonstration studies. To manage the Program, staff recommends the use of both in-house staff and consultants. This action authorizes an agreement with the joint venture of AECOM Technical Services, Inc. (AECOM) and Brown and Caldwell for an initial term of three years to provide supplemental program management functions in support of in-house staff efforts to manage early implementation activities. This action also authorizes an amendment to an existing agreement with CDM Smith, Inc. for additional operations, maintenance, and testing support at Metropolitan's demonstration plant in Carson. Expenditures for both the program management and demonstration plant support work will be funded by the state grant. This action does not authorize the use of additional funds beyond the state grant funding authorized for use in December 2022, nor does it authorize the initiation of construction.

**Details**

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**Background**

The Program (formerly referred to as the Regional Recycled Water Program) is structured as 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 development of the Program. If approved, the Program would beneficially 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.

The Program would create a new sustainable water supply by harvesting one of the region's largest untapped sources of treated wastewater from the JWPCP. This new water supply would help reduce the region's

dependence on imported water and would assist the region in addressing potential disruptions to imported water supplies from droughts or seismic events. This purified water would not only provide a more diversified water supply to Southern California, it also would enhance Metropolitan's operational resilience, reliability, and flexibility in the face of ongoing challenges including long-term drought and climate change. This program would also reduce the size of Metropolitan's State Water Project (SWP) dependent area, directly improving reliability for agencies that are largely reliant on Metropolitan's delivery of SWP supplies.

To date, Metropolitan has conducted various studies, including pilot and demonstration scale testing of a proposed treatment train, to confirm the feasibility of a full-scale program. In August 2021, Metropolitan's Board authorized an agreement with CDM Smith, Inc. for support of engineering and technical studies at the demonstration plant. To continue the studies to advance potable reuse technologies, develop design criteria, and facilitate regulatory permitting efforts for the Program, staff recommends amending the agreement with CDM Smith, Inc. to ensure the continuation of the consultant's support at the demonstration plant for the current testing phase. Preparation of a programmatic environmental impact report (PEIR) and associated technical studies are also underway.

In December 2022, Metropolitan's Board authorized the use of an \$80 million grant from the SWRCB to commence activities related to the initiation of the Program. One of the key early activities includes the development of a program management team specializing in managing large-scale, similar-scope capital programs. Current industry practice has demonstrated that early initiation of the program management effort is essential to facilitate the successful initiation and advancement of the Program. Staff recommends that the program management activities for the Program be conducted with a team of in-house staff and consultants. Consultant expertise would be utilized to supplement the skill sets and availability of in-house staff. Staff recommends the authorization of a new consulting agreement to achieve these programmatic objectives.

In accordance with the December 2022 action to use state grant funding to initiate 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 Appropriations.

#### **Pure Water Southern California Program Management Support (AECOM and Brown and Caldwell Joint Venture) – New Agreement**

The joint venture of AECOM and Brown and Caldwell is recommended to provide program management consulting support for the Program. The AECOM and Brown and Caldwell team was selected through a competitive process via Request for Proposal No. 1330 based on: (1) the firm's qualifications and record of past performance; (2) key personnel and staffing plan; (3) technical approach, methodology and project schedule; and (4) fee proposal.

Planned program management activities for the consultant include supporting staff in: (1) establishing the program management office, conducting long-term program planning, and developing an overall staffing strategy; (2) developing the program implementation strategy and milestones; (3) assessing project delivery approaches; (4) identifying opportunities for collaborative delivery of specific construction contracts; (5) developing design criteria; (6) preparation of bridging documents for the design of the advanced water purification facility, to be used for the collaborative delivery contract; (7) providing scheduling, cost control, and reporting functions; and (8) performing other program management duties as deemed necessary to advance the Program.

This action authorizes an agreement with the joint venture of AECOM and Brown and Caldwell for a not-to-exceed amount of \$25 million for a term of three years to provide program management support services for the Program. For this agreement, Metropolitan has established a Small Business Enterprise participation level of 25 percent. The AECOM and Brown and Caldwell team has agreed to meet this level of participation. See **Attachment 1** for the listing of Subconsultants for the AECOM and Brown and Caldwell joint venture, and **Attachment 2** for the Location Map.

#### **Pure Water Southern California Demonstration Plant Support (CDM Smith, Inc.) – Agreement Amendment**

In August 2021, Metropolitan's Board approved an Agreement with CDM Smith, Inc. for engineering services for support of engineering and technical studies at the advanced water treatment demonstration facility. CDM Smith, Inc. was selected in 2021 through a competitive process via Request for Proposals No. 1274, based

on the firm's experience in engineering and technical activities of a similar scope to the planned demonstration plant operations and testing.

The engineering and technical services for the demonstration plant include: (1) operating the facility to test advanced water purification technologies; (2) executing the testing and monitoring plan for secondary MBR (sMBR) treating primary effluent from the JWPCP; (3) training Metropolitan operations staff; (4) developing engineering design and operating criteria for a full-scale facility; and (5) preparing documents for regulatory approval and program permitting. Metropolitan staff is overseeing and coordinating the work performed by CDM Smith, Inc. and, along with Sanitation Districts staff, is conducting additional technical analyses to complement these activities.

An amendment to the CDM Smith, Inc. agreement is required to ensure that the consultant can continue to support the overall operations, maintenance, and testing activities at the demonstration plant for the current testing of the sMBR process. Transitioning from the previous tertiary MBR (tMBR) to the sMBR testing phase required substantial equipment and programming changes needed for the sMBR process train, including critical process, water quality, and chemical feed systems. The sMBR pretesting period was extended to ensure a stable biological process and proper functioning of equipment and instrumentation. Testing of the sMBR process and preparation of associated reports is expected to be complete by the end of 2023.

This action authorizes an increase of \$950,000 to the existing agreement with CDM Smith, Inc. for a new not-to-exceed amount of \$3.7 million for operations and testing activities to support ongoing engineering and technical studies at the demonstration plant. For this agreement, Metropolitan has established a Small Business Enterprise participation level of 25 percent. CDM Smith, Inc. has agreed to meet this level of participation. CDM Smith's subconsultants include Black & Veatch Corporation, DRP Engineering, DR Consultants & Designers, and MARRS Services.

### **Alternatives Considered**

The Program's staffing strategy has always envisioned the use of a melded team of in-house staff and consultants. This strategy relies on the assumption that a base load of in-house staff would be assigned to the Program, while professional services agreements are selectively utilized to work on projects above this baseload or where specialized needs are required. Metropolitan has a successful history of utilizing melded teams of consultants and in-house staff, and some examples include the Diamond Valley Lake program in the late-1990s and Inland Feeder program in the early 2000s.

The alternatives considered for the Program's management effort focused on determining the optimum mix of in-house staff and consultants. In developing the recommended staffing complements for the Program, staff conducted numerous interviews and assessments with other public sector agencies that were conducting similar-sized programs. The results of these assessments indicated that hybrid owner/consultant teams were effective in managing large programs. The key differentiation between programs was the level of in-house staff that were engaged to work with the consultants, ranging from only three owner's staff to approximately 60 owner's staff assigned to manage \$1.5 to \$2 billion programs. In several cases, the programs were managed with an approximately equivalent split between owner's staff and consultant staff.

For Metropolitan's program, staff will be assigned a variety of leadership roles. The consultant will then be relied upon to provide additional staff to augment Metropolitan skill sets, or to provide specialized skills that in-house staff does not currently possess. It is anticipated that the size of the overall management team, and the assignment of in-house staff, will ramp up over time as the workload on the program increases with the identification of specific design and construction packages. This flexible approach to staffing the program ensures that the work is conducted in the most efficient manner possible.

In developing the recommended approach to perform the demonstration studies, several alternatives were considered. The alternatives included utilizing Metropolitan's staff to perform all the work or conducting the work with a combination of in-house and consultant staff. With staffing constraints and the need for specialized technical expertise in advanced water purification, the continued use of consultants to support sMBR operations and testing is recommended. Metropolitan staff will continue to oversee the consultant's work and perform technical activities consistent with in-house staff's core competencies. This approach also allows for staff

training on advanced water purification facility operations, as it is anticipated that Metropolitan staff would be operating and maintaining a potential future full-scale facility.

### **Summary**

This action authorizes a new professional services agreement with AECOM and Brown and Caldwell as a joint venture for a term of three years in an amount not to exceed \$25 million to support program management activities for the Program, and authorizes an amendment to an existing agreement with CDM Smith, Inc. to increase the agreement by \$950,000 for a new not-to-exceed total of \$3.7 million to support the ongoing demonstration study efforts. See **Attachment 1** for the listing of subconsultants and **Attachment 2** for the location map.

### ***Project Milestone***

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

### **Policy**

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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 50299, dated November 10, 2015, the Board authorized an agreement with County Sanitation District No. 2 of Los Angeles County for development of a potential regional recycled water supply program and a demonstration project.

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 52476, dated August 17, 2021, the Board authorized an agreement with CDM Smith, Inc. for support of engineering and technical studies at the advanced water treatment demonstration facility.

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.

### **California Environmental Quality Act (CEQA)**

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#### **CEQA determination for Option #1:**

The proposed action is not defined as a project under CEQA (Public Resources Code Section 21065, State CEQA Guidelines Section 15378(b)(4) and 15378(b)(5)) because it involves government funding mechanisms or government fiscal activities which do not involve any commitment to any specific project, and organizational or administrative activities that would not result in a direct or indirect physical change to the environment.

The proposed action is also categorically exempt under the provisions of CEQA and the State CEQA Guidelines because it involves 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 under a Class 6 Categorical Exemption (Section 15306 of the State CEQA Guidelines).

#### **CEQA determination for Option #2:**

None required

**Board Options**

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**Option #1**

- a. Authorize 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.
- b. Authorize an increase of \$950,000 to an existing agreement with CDM Smith, Inc. for a not-to-exceed total of \$3.7 million to support the Program’s ongoing process demonstration effort.

**Fiscal Impact:** Expenditure of \$25.95 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.

**Business Analysis:** This option would advance the development of new water sources in Southern California to augment regional supplies within Metropolitan’s entire service area.

**Option #2**

Do not proceed with the agreements at this time.

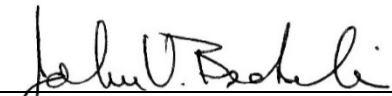

**Fiscal Impact:** None

**Business Analysis:** This option would require staff to return to the Board with a new staffing plan to support the Program, would delay the completion of the Program’s demonstration study to facilitate full-scale implementation, and would delay development of a new water resource which is resilient to drought, climate change, and seismic risks.

**Staff Recommendation**

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Option #1

 <hr/> John V. Bednarski Manager/Chief Engineer Engineering Services	12/20/2022 Date
 <hr/> Adel Hagekhalil General Manager	12/22/2022 Date

**Attachment 1 – Listing of Subconsultants (Revised)**

**Attachment 2 – Location Map**

Ref# es12688275

**The Metropolitan Water District of Southern California**  
**Subconsultants for Agreement with AECOM Technical Services, Inc. and**  
**Brown and Caldwell, a joint venture**  
**Pure Water Southern California Program Management**

<b>Subconsultant and Location<sup>1</sup></b>
C2PM Mission Viejo, CA
DR Consultants and Designers, Inc. Los Angeles, CA
Integrated Management, Inc. San Pedro, CA
MARRS Services, Inc. Fullerton, CA
PMCS Group, Inc. Long Beach, CA
Project Partners, Inc. Laguna Hills, CA
<u>MA Engineering</u> <u>Alhambra, CA</u>
<u>Geosyntec Consultants</u> <u>Los Angeles, CA</u>
<u>BLP Engineers, Inc.</u> <u>El Cajon, CA</u>
<u>Brio Solutions LLC</u> <u>Chino, CA</u>
<u>Converse Consultants</u> <u>Redlands, CA</u>
<u>Flow Science, Inc.</u> <u>Pasadena, CA</u>
<u>FPL and Associates, Inc.</u> <u>Irvine, CA</u>
<u>John Friedman Alice Kimm Architects</u> <u>Los Angeles, CA</u>
<u>Kana Subsurface Engineering</u> <u>Riverside, CA</u>

<b>Subconsultant and Location<sup>†</sup></b>
<u>Katz and Associates</u> <u>Glendale, CA</u>
<u>MBI Media</u> <u>Covina, CA</u>
<u>ProjectLine Technical Services, Inc.</u> <u>Costa Mesa, CA</u>
<u>V &amp; A Consulting Engineers, Inc.</u> <u>Oakland, CA</u>
<u>Wagner Engineering &amp; Survey, Inc.</u> <u>Northridge, CA</u>

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<sup>†</sup> ~~Subconsultants with estimated contract value greater than or equal to 3 percent.~~

# Pure Water Southern California - Preliminary Configuration

