



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

3/8/2016 Board Meeting

8-3

Subject

Adopt resolution supporting Metropolitan's application for funding from the State Water Resources Control Board's Water Recycling Funding Program, and for acceptance of potential funding; and authorize two agreements for Metropolitan's potential regional recycled water supply program: (1) agreement with MWH Americas, Inc. in an amount not to exceed \$1.2 million for design of the demonstration-scale recycled water treatment plant; and (2) agreement with Black & Veatch Corporation, Inc. in an amount not to exceed \$1.9 million to conduct feasibility studies of the recycled water delivery system (Approps. 11002 and 15493)

Executive Summary

This action authorizes two agreements related to the potential regional recycled water supply program. Agreement No. 1 with MWH Americas, Inc. is for design of a one-million-gallon-per-day (1-mgd) demonstration-scale recycled water treatment plant, which will verify source water quality criteria and confirm the advanced treatment processes needed to purify secondary-treated wastewater for groundwater recharge. Agreement No. 2 with Black & Veatch Corporation, Inc. is for studies related to the delivery system that would convey recycled water from a full-scale recycled water treatment plant to the groundwater recharge facilities. No funds are required to be appropriated in this action.

This action also authorizes the General Manager to apply for and accept grants or low interest loans on Metropolitan's behalf from the State Water Resources Control Board's (SWRCB) Water Recycling Funding Program. This funding would help defray Metropolitan's costs for the development of the demonstration-scale recycled water treatment plant and for studies that would support a potential regional recycled water supply program.

Timing and Urgency

The potential development of a regional recycled water supply program presents a significant opportunity to provide a new resource that would help to maintain groundwater recharge and storage within Metropolitan's service area. The unprecedented drought conditions of the past eight years have resulted in significant reductions in local surface supplies and groundwater production, and have increased the need for recharge supplies to groundwater and surface reservoirs to improve their sustainable yields and operating integrity. The challenges of continued drought, climate change uncertainties, and the hydrologic variability of imported water supplies, demonstrate the value in accelerating development of additional water resources, including conservation, water recycling, groundwater recovery and storage, and ocean desalination to meet the 2015 IRP target.

In November 2015, Metropolitan's Board authorized the implementation of a demonstration project for the development of a potential regional recycled water supply program. Key components of the demonstration project include the design of a demonstration plant and feasibility studies of the delivery system. These components would proceed in 2016. The demonstration-scale recycled water treatment plant is a critical element of the potential regional program. The results of the demonstration testing will confirm which advanced treatment processes should be incorporated into a full-scale advanced treatment facility. The initial technical feasibility studies of the recycled water delivery system are essential for establishing the configuration and facilities needed to convey the recycled water to Metropolitan's member agencies for recharge of groundwater basins.

The demonstration-scale recycled water treatment plant is a capital project under Metropolitan's Capital Investment Plan (CIP), and funds are available within Metropolitan's capital expenditure plan for fiscal year 2015/16. The feasibility studies will be conducted with operation and maintenance (O&M) funds during fiscal year 2015/16. If awarded, any funding from the SWRCB's Water Recycling Funding Program would help defray Metropolitan's costs for the potential regional recycled water supply program.

Details

Background

In November 2015, Metropolitan's Board authorized an agreement with the County Sanitation District No. 2 of Los Angeles County (Sanitation District) for implementation of a demonstration project that would serve as the first step in development of a potential regional recycled water supply program. The Board also appropriated \$15 million for the design, construction, and operation of a 1-mgd demonstration-scale recycled water treatment plant as part of the demonstration project.

The demonstration project will serve as a proof of concept and will provide critical information needed to move forward with the potential regional recycled water supply program. The demonstration project contains three components:

1. Design, construction, and operation of a 1-mgd demonstration-scale recycled water treatment plant that will verify source water quality criteria and confirm the advanced treatment processes needed to purify water for groundwater recharge.
2. Technical feasibility studies of the recycled water delivery system that will: (a) determine program capacity, phasing, and timing; (b) investigate delivery system facilities, alignments, rights-of-way and substructures; (c) develop initial cost estimates; and (d) assess environmental and regulatory requirements.
3. A financing plan to assess the economic viability of a full-scale regional recycled water supply program.

Staff recommends that two professional services agreements move forward in order to implement the demonstration project. The design of the demonstration-scale recycled water treatment plant is anticipated to be completed within one year. After completion of the design and technical feasibility studies, staff will return to the Board to present the findings and recommend award of a construction contract for the demonstration-scale recycled water treatment plant. The studies will provide the basis for recommendations on proceeding with the full-scale regional recycled water supply program.

The SWRCB funding provides assistance with planning, design, and construction of water recycling projects that offset or augment fresh water supplies through Proposition 1 and the Clean Water State Revolving Fund. Projects may be funded through a combination of grants or loans. Both planning and construction projects are eligible, with up to \$75,000 available for each planning grant and \$15 million for each construction grant. A board resolution is required as part of an agency's funding application. The board resolution must document the governing body's support of the application and must be submitted before the application is approved. The subject resolution will not obligate Metropolitan to accept any funding. Following award by the SWRCB, Metropolitan would have the discretion to accept or decline the potential funding. The funding that would be sought in this process would be to defray the costs of the demonstration project and for studies of groundwater basins that could receive water from any potential full-scale water recycling program.

Agreement No. 1 - Design of the Demonstration-Scale Recycled Water Treatment Plant – MWH Americas, Inc.

The 1-mgd demonstration-scale recycled water treatment plant will be located at the Sanitation District's Joint Water Pollution Control Plant in Carson. The demonstration plant will test the effectiveness of various advanced water treatment processes for approximately one year to gather the required technical data for regulatory approval of the potential regional recycled water supply program. The demonstration plant will also establish design criteria and funding needs for a full-scale facility, and will support the program's public outreach effort.

A Title 22 Engineering Report will be prepared for the ultimate permitting of a full-scale facility. This work will be performed by a specialized consultant. During the design phase of the demonstration plant, the consultant will be responsible for: (1) development of the treatment trains; (2) conceptual and final design of demonstration testing and support facilities; and (3) development of a conceptual testing plan.

Conceptual and final design of the demonstration plant will rely on a collaborative effort by Metropolitan staff, the specialized consultant, and Sanitation District staff. Metropolitan and the Sanitation District will be responsible for reviewing the consultant's work and providing technical oversight.

The conceptual and final design of the demonstration-scale recycled water treatment plant is recommended to be performed by MWH Americas, Inc. (MWH) under a new professional services agreement. The selection followed a competitive process via Request for Proposals No. 1116. MWH was selected based on the technical qualifications of staff assigned to the project, the proposed implementation plan, and previous experience on recycled water treatment projects. For this agreement, Metropolitan established a Small Business Enterprise (SBE) or Disabled Veteran Business Enterprise (DVBE) participation level of 10 percent. MWH has agreed to meet this level of participation. The subconsultants planned under this agreement are listed in [Attachment 1](#).

This action authorizes an agreement with MWH in an amount not-to-exceed \$1.2 million, for design of the demonstration-scale recycled water treatment plant.

Agreement No. 2 - Feasibility Studies of the Recycled Water Delivery System – Black & Veatch Corporation, Inc.

Technical feasibility studies for the delivery system related to the potential regional recycled water supply program will be conducted by a specialized consultant. The purpose of these studies is to investigate the feasibility of constructing a regional system to deliver purified water to groundwater basins within Metropolitan's service area. The facility and operational requirements for the delivery of purified water to recharge multiple groundwater systems will be evaluated. The regional system would potentially include large-diameter pipelines with short tunnel reaches, sections with jacked pipe or other trenchless technologies, and multiple pump stations.

The consultant will be responsible for delivering a complete feasibility-level assessment and recommendations for the pipelines, pump stations, and other features required for the delivery system. This work will aid in determining future design features, developing cost estimates for various options, and providing input to environmental feasibility studies that will be underway at the same time.

The technical feasibility studies are recommended to be conducted by Black & Veatch Corporation, Inc. (Black & Veatch) under a new professional services agreement. The selection followed a competitive process via Request for Proposals No. 1126. Black & Veatch was selected based on the technical qualifications of staff assigned to the project, the proposed implementation plan, and previous experience on large delivery system projects. For this agreement, Metropolitan established a SBE/DVBE participation level of 25 percent. Black & Veatch has agreed to meet this level of participation. The subconsultants planned under this agreement are listed in [Attachment 1](#).

This action authorizes an agreement with Black & Veatch in an amount not-to-exceed \$1.9 million, to conduct technical feasibility studies for the delivery system related to the potential regional recycled water supply program.

Application for Water Recycling Funding

Under the SWRCB's Water Recycling Funding Program, Metropolitan is eligible to apply for grant funding up to \$75,000 for each planning project and up to \$15 million for each construction project under the potential regional recycled water supply program. At this time, staff is considering a request of \$75,000 for each of seven planning grants from the Water Recycling Funding Program to conduct feasibility studies for the potential regional recycled water supply program. One application would be submitted for the studies related to the demonstration-scale recycled water treatment plant, while six applications would be submitted for each of the potential groundwater recharge basins. The total grant funding requested would be \$525,000.

This action adopts a resolution supporting Metropolitan's application for funding from the SWRCB's Water Recycling Funding Program, and authorizes the General Manager to accept the funding and enter into contract(s) with SWRCB in a form approved by the General Counsel.

Summary

This action authorizes Metropolitan to enter into two professional services agreements related to the potential regional recycled water supply program, and adopts a resolution supporting Metropolitan's application for financial assistance from the SWRCB's Recycled Water Funding Program.

The demonstration-scale recycled water treatment plant is a capital project within Metropolitan's CIP. Funds for this project were appropriated in November 2015, and are available within Metropolitan's capital expenditure plan for fiscal year 2015/16. The feasibility studies for the recycled water delivery system will be completed with O&M funds during fiscal year 2015/16. No funds are required to be appropriated in this action.

See [Attachment 1](#) for the listing of Subconsultants for Agreements, [Attachment 2](#) for the Resolution Supporting SWRCB Water Recycling Funding Program Application, and [Attachment 3](#) for the Location Map.

Project Milestones

December 2016 – Completion of feasibility studies and financing plan for the potential regional recycled water supply program

May 2017 – Board award of construction contract for the demonstration-scale recycled water treatment plant

Policy

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

By Minute Item 42287, dated February 11, 1997, the Board adopted a set of policy principles on water recycling

Metropolitan Board Report No. 01122016 IRP 8-3 B-L, "2015 Integrated Water Resources Plan Update," adopted January 2016

California Environmental Quality Act (CEQA)

CEQA determinations for Option #1:

Agreement No. 1 - The proposed action was previously determined to be categorically exempt under the provisions of CEQA and the State CEQA Guidelines. On November 10, 2015, the Board determined that the design, construction, and operation of the demonstration plant was exempt under Class 1, Section 15301; Class 3, Section 15303; Class 4, Section 15304; and Class 6, Section 15306 of the State CEQA Guidelines. A Notice of Exemption was filed on the project at that time and the statute of limitations has ended. With the current action, there is no substantial change proposed to the project since the original Notice of Exemption was filed. Hence, the previous environmental documentation in conjunction with the current action fully complies with CEQA and the State CEQA Guidelines. Accordingly, no further CEQA documentation is necessary for the Board to act with regards to the proposed action.

The CEQA determination is: Determine that the proposed action has been previously addressed in the 2015 Notice of Exemption (Class 1, Class 3, Class 4, and Class 6; Sections 15301, 15303, 15304, and 15306 of the State CEQA Guidelines) and that no further environmental analysis or documentation is required.

Agreement No. 2 - The studies authorized under Agreement No. 2 are exempt under the provisions of CEQA and the State CEQA Guidelines, since they involve only feasibility and planning studies for possible future actions, as well as basic data collection and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. These activities may be strictly for information gathering purposes, or as part of a study leading to actions which a public agency has not yet approved, adopted, or funded. Accordingly, authorization of Agreement No. 2 qualifies for both a statutory exemption (Section 15262 of the State CEQA Guidelines) and a categorical exemption (Class 6, Section 15306 of the State CEQA Guidelines).

The CEQA determination is: Determine that the proposed action is exempt from CEQA pursuant to Sections 15262 and 15306 of the State CEQA Guidelines.

Application for Water Recycling Funding - The authorization to apply for and accept grants or low interest loans from the SWRCB's Water Recycling Funding Program is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The overall program will involve carrying out future preliminary studies and environmental analyses for the potential regional recycled water supply program. These preliminary studies and investigations would consist 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 that a public agency has not yet approved, adopted, or funded. Accordingly, the proposed actions qualify as both a statutory exemption (Section 15262 of the State CEQA Guidelines) and a categorical exemption (Section 15306 of the State CEQA Guidelines). Furthermore, the funding mechanism in support of the proposed program is not defined as a project under CEQA and is therefore not subject to the CEQA process (Section 15378(b) of the State CEQA Guidelines). Before any final commitment of resources is made via execution of a contract with the SWRCB, Metropolitan will complete any required analysis pursuant to CEQA.

The CEQA determination is: Determine that the proposed action is not defined as a project and is exempt from CEQA pursuant to Sections 15262, 15306 and 15378(b) of the State CEQA Guidelines.

CEQA determination for Option #2:

None required

Board Options

Option #1

Adopt the CEQA determination that the proposed actions are not defined as a project and/or are statutorily and categorically exempt, and

- a. Adopt a resolution supporting Metropolitan's application to SWRCB's Water Recycling Funding Program, and authorize the General Manager to accept potential grant funding or low interest loans, and to enter into an agreement with SWRCB in a form approved by the General Counsel;
- b. Authorize agreement with MWH Americas, Inc. in an amount not to exceed \$1.2 million for design of the demonstration-scale recycled water treatment plant; and
- c. Authorize agreement with Black & Veatch Corporation, Inc. in an amount not to exceed \$1.9 million to conduct initial feasibility studies of the recycled water delivery system.

Fiscal Impact: Funds for the demonstration-scale recycled water treatment plant were previously appropriated. The feasibility studies will be completed with O&M funds during fiscal year 2015/16. Up to \$525,000 in grant funding may be awarded from the SWRCB's Water Recycling Funding Program to defray Metropolitan's costs for board-authorized planning projects related to the potential regional recycled water supply program.

Business Analysis: This project would advance the development of significant water reuse for the recharge of groundwater basins in Southern California, and would augment regional supplies for Metropolitan's entire service area to deal with droughts, climate change, seismic risks, and to meet Integrated Resource Plan resource targets.

Option #2

Do not authorize the professional services agreements and do not adopt the resolution supporting Metropolitan's application for SWRCB funding.

Fiscal Impact: None

Business Analysis: This option would forgo an opportunity to receive SWRCB funding and to develop a significant recycled water resource to meet the increasing need for groundwater and surface reservoir recharge supplies, and to increase the region's water supply to deal with droughts, climate change, seismic risks, and to meet Integrated Resource Plan resource targets.

Staff Recommendation

Option #1



Gordon Johnson
Manager/Chief Engineer
Engineering Services

2/23/2016
Date



Jeffrey Kightlinger
General Manager

2/24/2016
Date

Attachment 1 – Subconsultants for Agreements

Attachment 2 – Resolution Supporting SWRCB Water Recycling Funding Program Application

Attachment 3 – Location Map

Ref# es12641427

The Metropolitan Water District of Southern California

Subconsultants for Agreements

**Agreement No. 1
Design of the Demonstration-Scale Recycled Water Treatment Plant**

Prime Consultant: MWH Americas, Inc.

Subconsultant and Location
Trussell Tech Inc., Pasadena, CA
Carollo Engineers Inc., Los Angeles, CA
DDB Engineering Inc., Irvine, CA
Katz & Associates, Los Angeles, CA
William R. Mills & Associates, Yorba Linda, CA

**Agreement No. 2
Feasibility Studies of the Recycled Water Delivery System**

Prime Consultant: Black & Veatch Corporation, Inc.

Subconsultant and Location
CDM Smith Inc., Los Angeles, CA
DDB Engineering Inc., Irvine, CA
GeoPentech Inc., Santa Ana, CA
Melissa Blanton, Laguna Woods, CA
Minagar & Associates, Irvine, CA
MWA Architects, Irvine, CA
Project Line Technical Services, Costa Mesa, CA
Todd Groundwater, Alameda, CA

Resolution Supporting SWRCB Water Recycling Funding Program 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 WATER RECYCLING FUNDING PROGRAM AND TO AUTHORIZE THE
EXECUTION OF A FINANCING AGREEMENT, AMENDMENTS AND REQUIRED ASSOCIATED
RESPONSIBILITIES

FOR

POTENTIAL REGIONAL RECYCLED WATER SUPPLY PROGRAM

WHEREAS, The Metropolitan Water District of Southern California (Metropolitan) desires to request funding from the State of California for the costs for the planning, design, and construction of all components of the Potential Regional Recycled Water Supply Program (Project); and

WHEREAS, Metropolitan Board of Directors has authorized development of studies, investigations and assessments for the Project that will include but not be limited to construction and operation of a 1-mgd Demonstration Plant, feasibility studies to determine the treatment, conveyance, recharge and extraction requirements, and a Finance Plan to determine overall program costs, program financing options and member agency agreements to purchase the water; and,

WHEREAS, Metropolitan intends to finance the Project with the assistance of funds provided by the State of California acting by and through the State Water Resources Control Board (SWRCB); and

WHEREAS, the SWRCB requires that Metropolitan indicate by resolution that it has designated an authorized representative or their designee to sign and file the funding application, provide the assurances, certifications, and commitments required for the financial assistance application, including executing a financial assistance agreement from the SWRCB and any amendments or changes thereto, and carry out Metropolitan's responsibilities under the agreement, including certifying disbursement requests on behalf of Metropolitan and compliance with applicable state and federal laws.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of The Metropolitan Water District of Southern California that the Board supports Metropolitan's application for funding from the SWRCB for the planning, design, and construction of all components of the Potential Regional Recycled Water Supply Program (Project);

BE IT FURTHER RESOLVED that Metropolitan's Board authorizes Metropolitan's General Manager to sign and file, for and on behalf of Metropolitan, a Financial Assistance Application for a funding agreement with SWRCB for the Project;

BE IT FURTHER RESOLVED that Metropolitan's Board delegates legal authority to Metropolitan's General Manager to provide the assurances, certifications, and commitments, required for the financial assistance application, including executing a financial assistance agreement from SWRCB

and any amendments, subject to the approval of the General Counsel, relevant to the receipt of the requested Water Recycling Funding Program.

BE IT FURTHER RESOLVED that Metropolitan's General Manager, or his/her designee, is designated to represent Metropolitan is carrying out Metropolitan's responsibilities under the funding agreement, including certifying disbursement request on behalf of Metropolitan and compliance with applicable state and federal laws.

I HEREBY CERTIFY that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted by the Board of Directors of The Metropolitan Water District of Southern California at its meeting held March 8, 2016.

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

Location Map

