



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

12/14/2021 Board Meeting

7-1

Subject

Amend the Capital Investment Plan for fiscal years 2020/2021 and 2021/2022 to include water supply reliability improvements in the Rialto Pipeline service area; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

The current state-wide drought and resulting low allocation of State Water Project (SWP) supplies by the California Department of Water Resources (DWR) have a direct impact on Metropolitan's ability to deliver water to the Rialto Pipeline service area. Expanding delivery of alternative supplies from Diamond Valley Lake (DVL) and possibly Colorado River water would benefit this area and preserves limited SWP supplies for West Branch SWP member agencies in times of drought. This action amends the Capital Investment Plan to include infrastructure improvements that would enhance water delivery capabilities to member agencies that can only receive State Project Water (SPW). Initial work on this project will involve planning and design activities for the related infrastructure improvements. Staff will return to the Board in the future to award construction contracts, or report on the award of any contracts by the General Manager pursuant to his authority under the Drought Emergency Resolution adopted November 9, 2021. As this project was not included in the Capital Investment Plan (CIP) budget for fiscal years 2020/21 and 2021/22, this action amends the current CIP to include this project.

Details

The Rialto Pipeline, constructed in 1972, is approximately 30 miles long with a diameter ranging from 96 to 144 inches. It conveys untreated water from DWR's Lake Silverwood to Metropolitan's Live Oak Reservoir in La Verne. Under normal conditions, the Rialto Pipeline relies on raw water deliveries from the East Branch of the SWP via DWR's Devil Canyon Afterbay. Member agencies with service connections on the Rialto Pipeline include the Inland Empire Utilities Agency, Three Valleys Municipal Water District, and the Upper San Gabriel Valley Municipal Water District.

Metropolitan's DVL provides emergency storage in the event of a major earthquake, carryover storage as a reserve for drought conditions, and seasonal storage to meet annual member agency demands. DVL is Metropolitan's largest reservoir, with a maximum storage capacity of 810,000 acre-feet. At this time, the Rialto Pipeline is unable to access the water stored in DVL due to infrastructure and operational constraints, as well as hydraulic limitations.

The Rialto Pipeline water supply reliability improvements that are the subject of this letter consists of three project components: Wadsworth Pumping Plant Bypass Pipeline, Inland Feeder Rialto Pipeline Intertie, and Inland Feeder/San Bernardino Valley Municipal Water District (SBVMWD) Pump Station Intertie. These incremental infrastructure improvements coupled with major existing infrastructure would greatly increase operational flexibility and enhance the water supply availability to member agencies with service connections on the Rialto Pipeline. The three project components are as follows:

1. Wadsworth Pumping Plant Bypass Pipeline – This project component involves the addition of a bypass pipeline at DVL's Wadsworth Pumping Plant to increase operational flexibility. Currently, water is being sent from DVL into the Inland Feeder by gravity to the Mills Water Treatment Plant. The Wadsworth Pumping Plant could also be used to pump DVL water from the DVL forebay into the Inland Feeder

toward the Rialto Feeder area, which is at a much higher elevation than the Mills Plant. However, once the forebay is emptied, pumping to Inland Feeder must stop so that the forebay can be refilled with DVL water. The bypass will allow the forebay to be filled continuously from DVL without disrupting the pumping operation. In the future, it is possible that this alternative could be used to pump Colorado River water to the Mills and Rialto areas, if quagga mussel challenges can be appropriately addressed. As currently envisioned, the bypass pipeline is approximately eight feet in diameter and 600 feet long and will connect the Wadsworth Pumping Plant discharge pipeline directly to the Inland Feeder. Once constructed, the bypass line will allow water from DVL to continuously flow in a northerly direction along the Inland Feeder to SBVMWD's/DWR's Citrus and Foothill Pump Stations near the community of Redlands. These pump stations are needed for the final lift of water into the Rialto Pipeline.

2. Inland Feeder/Rialto Pipeline Intertie – The second component of this project constructs an intertie between the Inland Feeder and Rialto Pipeline just south of DWR's Devil Canyon Afterbay (Afterbay). The intertie would be approximately eight feet in diameter and 200 feet long. This additional infrastructure will allow for the direct transfer of water supplies from the Inland Feeder to the Rialto Pipeline. With the current infrastructure configuration, water must be pumped through the Inland Feeder into the Afterbay, and then released into the Rialto Feeder. This operation requires close coordination with DWR. By eliminating the need to pump into the Afterbay, any potential operational limitations due to coordination efforts with DWR are eliminated. Additionally, the recommended project may allow for more energy-efficient deliveries of water by eliminating the need to lift the water an additional 100 feet up to the Afterbay.
3. Inland Feeder/SBVMWD Pump Station Intertie – The two improvement projects discussed above will provide a pathway for alternative water supplies to be introduced into the Rialto Feeder through a series of water exchanges with the SBVMWD and DWR. The third project component of the overall recommended improvements will permit the direct delivery of water from DVL to the Rialto Pipeline. This objective will be accomplished by connecting the Inland Feeder to either SBVMWD's/DWR's existing Citrus or Foothill pump stations. Water will then be lifted at the pump station to a hydraulic grade sufficient to supply the Rialto Pipeline. This component of the recommended improvements will require agreements with both agencies, as well as physical infrastructure, including piping, isolation valves, valve structures, and potentially surge protection devices.

The recommended improvements would be completed in two stages. Stage 1 work includes design and construction of the first two project components discussed above. Staff currently envisions that the physical implementation of these first two components is relatively straightforward as both projects consist of pipe connections between existing Metropolitan pipelines. Construction of the new infrastructure is anticipated to be completed in early 2023 and will allow for the delivery of up to 60 cubic feet per second (cfs) to the Rialto Pipeline service area. SBVMWD and DWR, through new water exchange agreements, would supply these flows by pumping local groundwater or by exchanging their SWP supplies. Metropolitan would return water to the agencies from DVL or from SWP supplies at a later date. Water exchange agreements will need to be executed in order to implement this approach.

Stage 2 work is detailed in the third project component as described above. These improvements are more complex when compared to the Stage 1 work, as they will require physical interconnections between Metropolitan's pipeline infrastructure and pump stations that are owned and operated by either SBVMWD or DWR, as well as operational agreements between the agencies. To successfully implement these improvements, detailed investigations and design and construction activities will be undertaken by Metropolitan, SBVMWD, and DWR. This collaborative effort between the agencies will include an agreement with SBVMWD and DWR to use their pump station to convey DVL supplies. Currently, staff envisions that these improvements can be completed by mid-2025. Upon completion of Stage 2 improvements, up to 160 cfs of DVL water can be delivered to the Rialto Pipeline.

Benefits of Current and Future Actions

In collaboration with member agencies, staff identified 132 actions to mitigate the impact of current and future regional droughts. Staff evaluated the feasibility of these actions and recommends proceeding with the subject projects, which have near and long-term benefits. As the Stage 1 components of the subject projects consist of

relatively short pipe connections between existing Metropolitan pipelines, the project can be implemented in the near term to provide alternate sources of water (DVL or Colorado River Aqueduct) to the Rialto Pipeline service area. This improvement in the Eastern Region will leave more of Metropolitan's limited allocation of SPW available to the Western Region, so the current action benefits SWP reliant service areas in both Metropolitan's Eastern and Western Regions. The current action will expedite completion of the most critical work, reduce the impact of the current drought, and provide future system flexibility. Staff recommends amending the CIP at this time to include the Rialto Pipeline water supply reliability improvements.

Metropolitan staff is also progressing study-level evaluations of several other potential infrastructure improvement options to enhance water reliability for SWP reliant service areas in Metropolitan's Western and Eastern Regions. In the Western Region, staff is evaluating new pump stations at Venice and Sepulveda pressure control facilities or expansion of the Greg Avenue Pump Station. In the Eastern Region, staff is evaluating new pump stations at the Etiwanda Reservoir, the Inland Feeder Pressure Control Facility (PC-1), and Live Oak Reservoir. The new pump station could pump Colorado River Aqueduct or DVL water to the Rialto Pipeline service area and utilize the current action Stage 1 improvements. However, these long-term projects could not be designed and constructed in time for the ongoing drought. A new pump plant requires rigorous environmental documentation, long lead time equipment procurement, negotiation, construction of a dedicated power supply from the local power supplier, and extensive engineering analysis. Staff will return to the Board at a later date for authorization to include additional selected infrastructure improvements in the CIP.

In April 2020, the Board appropriated funds and authorized the General Manager to initiate or proceed with work on all capital projects identified in the CIP, subject to any limits on the General Manager's authority and CEQA requirements. This action amends the CIP to include the Rialto Pipeline Water Reliability Improvements. It is not anticipated that the addition of this project to the CIP will increase CIP expenditures in the current biennium beyond those which have been previously approved by the Board. Funds required for work to be performed pursuant to the subject contract after fiscal year 2021/22 will be budgeted within the Capital Investment Plan Appropriation for Fiscal Years 2022/23 and 2023/24. This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and were approved by Metropolitan's CIP Evaluation Team to be included in the System Reliability Program.

Rialto Pipeline Water Supply Reliability Improvements – Design Activities

Planned design activities include: field investigations including geotechnical analyses and aerial topographic survey; hydraulic analysis; establishing design criteria; evaluation of the connection pipeline alignments; preparation of drawings and specifications for procurement of pipe and valves; preparation of drawings and specifications for construction package; shutdown planning with member agencies; acquiring temporary right-of-way for the contractor staging and work areas; preparation of environmental documentation and permitting; development of a construction cost estimate; receipt of bids; and all other activities in advance of award of the procurement and construction contracts. Staff will return to the Board at a later date to award construction contracts or report on the award of any contracts by the General Manager pursuant to his authority under the Drought Emergency Resolution adopted November 9, 2021.

A total of \$2,960,000 is required for these activities. Allocated funds for Metropolitan staff activities include \$532,000 for engineering studies and investigations, including utility investigations; \$1,432,000 for engineering design; \$120,000 for hydraulic analysis to be performed by a specialty firm under a contract planned to be executed under the General Manager's Administrative Code authority to award contracts of \$250,000 or less; \$73,000 for preparation of temporary right-of-way acquisition documentation needed for the contractor staging and work areas; \$350,000 for environmental permitting, contracts bidding, project controls and project management; and \$453,000 for remaining budget.

As described above, all work will be performed by Metropolitan staff and specialized consultants. Engineering Services' performance metric target range for final design with construction greater than \$3 million is 9 to 12 percent. For this project, the performance metric goal for final design is 8.3 percent of the total construction costs. The total estimated cost of construction for the first and second components of this project is anticipated to range from \$17.0 million to \$18.5 million.

Attachment 1 provides the allocation of the required funds for this work. The total estimated cost of the Rialto Pipeline Water Supply Reliability Improvements, including the funds allocated for the work described in this action and future construction costs for Stage 1 components, is anticipated to range from \$22.5 million to \$24.5 million.

Summary

This action amends the current CIP to include necessary supply availability improvements to the Rialto Pipeline that depends exclusively on raw water deliveries from the East Branch of the SWP.

These projects have been evaluated and recommended by Metropolitan's CIP Evaluation Team, and funds are available within the fiscal year 2020/21 capital expenditure plan. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Location Map.

Project Milestones

April 2022 – Completion of design of Rialto Pipeline Water Supply Reliability Improvements - Stage 1

June 2022 – Completion of preliminary investigations of Rialto Pipeline Water Supply Reliability Improvements Stage 2

Policy

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

By Minute Item 51963, dated April 14, 2020 the Board appropriated a total of \$500 million for projects identified in the Capital Investment Plan for Fiscal Years 2020/21 and 2021/22.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

Amending the Capital Investment Plan (CIP) and authorizing work to proceed under the CIP, subject to the limits described above, is not defined as a project and is not subject to the CEQA, because it involves the creation of a general funding mechanism and general policy and procedure making with no commitment to proceed with any specific project at this time (Sections 15378(b)(2) and 15378(b)(4) of the State CEQA Guidelines). Furthermore, the proposed action involves feasibility or planning studies for possible future actions which the agency, commission or board has not yet approved, adopted or funded. Accordingly, the proposed action qualifies as a Statutory Exemption (Section 15262 of the State CEQA Guidelines). In addition, the proposed actions also involve basic data collection and resource evaluation activities that do not result in a serious or major disturbance to an environmental resource. This may be strictly for information gathering purposes, or as part of a study leading to an action, which a public agency has not yet approved, adopted, or funded. Accordingly, the proposed action qualifies as a Class 6 Categorical Exemption (Section 15306 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

Amend current CIP to include projects to improve water supply reliability in the Rialto Pipeline service area.

Fiscal Impact: Expenditure of \$2.96 million in capital funds. Approximately \$2.96 million will be incurred in the current biennium and has been previously authorized. It is not anticipated that the addition of the project listed above to the CIP will increase CIP expenditures in the current biennium beyond those which have been previously approved by the Board. The remaining funds from this action and for future construction costs will be accounted for and appropriated under the next biennial budget.

Business Analysis: These projects will enhance the reliability of water deliveries to member agencies with connections to the Rialto Pipeline.

Option #2

Do not proceed with the project at this time.

Fiscal Impact: None

Business Analysis: This option would forego improving the reliability of service to those member agencies with connections to the Rialto Pipeline.

Staff Recommendation

Option #1



John V. Bednarski
Manager/Chief Engineer
Engineering Services

11/29/2021
Date



Adel Hagekhalil
General Manager

12/1/2021
Date

Attachment 1 – Allocation of Budgeted Funds

Attachment 2 – Location Map

Ref# es12679016

Allocation of Funds for Rialto Pipeline Water Supply Reliability Improvements

	Current Board Action (Dec. 2021)
Labor	
Studies & Investigations	\$ 532,000
Final Design	1,432,000
Owner Costs (Program mgmt., contract admin., envir. monitoring)	350,000
Real Property	73,000
Submittals Review & Record Drwgs.	-
Fabrication Inspection & Support	-
Metropolitan Force Construction	-
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	120,000
Equipment Use	-
Contracts	-
Remaining Budget	453,000
Total	<u>\$ 2,960,000</u>

This is the initial action for the Rialto Pipeline Water Supply Reliability improvements. The total estimated cost to complete Stage 1 improvements, including the amount appropriated to date, and funds allocated for the work described in this action, is anticipated to range from \$22.5 million to \$24.5 million.

Distribution System

