Metropolitan's Foothill Pump Station Intertie to Improve Regional Drought Resilience and Reliability

Applicant Name: Metropolitan Water District of Southern California
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Executive Summary

Applicant Information

Applicant Name: Metropolitan Water District of Southern California
Location: 700 North Alameda Street Los Angeles, CA 90012-2944
County: Los Angeles County
State: California
Applicant Eligibility: Metropolitan Water District (Metropolitan) is a public water district.
Applicant Task Area and Category: Task A, Category A.
Applicant Background: Metropolitan was incorporated in December 1928, with a mission to provide its service area with adequate and reliable supplies of high–quality water to meet present and future needs in an environmentally and economically responsible way. Metropolitan is a voluntary cooperative of 26 member agencies that purchase some or all of their water from Metropolitan. The 26 member agencies include 14 cities, 11 municipal water districts, and one-county water authority. Metropolitan is governed by a Board of Directors made up from its member agencies. These member agencies and their sub-agencies provide water for 19 million people across six Southern California counties. A map of the communities served by Metropolitan is shown in **Attachment ES-1.**
Applicant Water Supplies: About 25 percent of Metropolitan's water comes from the Colorado River and 30 percent from the California State Water Project (SWP). The remaining 45 percent comes from a mix of local supplies including groundwater, recycled water, and desalination. In an unconstrained year (100 percent of contract amount), Metropolitan receives 1,911,500 acre-feet (AF) per year from the SWP, which is the primary water supply of concern for this grant. On average, Metropolitan's average daily delivery is approximately 4,100 AF as of December 2021.

Project Information

Project Summary: The Rialto Pipeline serves 2.25 million people in Southern California, relying solely on raw water deliveries from the East Branch of the SWP. The recent statewide drought, and resulting low allocation of SWP supplies, directly impacted Metropolitan's ability to deliver water to the Rialto Pipeline service area. Metropolitan's nearby Diamond Valley Lake is a source of local water supplies, but infrastructure and operational constraints limit Metropolitan's ability to use this water for the Rialto Pipeline service area. The Foothill Pump Station Intertie project (Project) is a collaborative effort between Metropolitan and San Bernardino Valley Water District (SBVMWD), to support direct delivery of local water supplies to Metropolitan's Rialto Pipeline service area. The Project involves modifying the existing Foothill Pump Station with two new pipelines, an in-line booster, and valves. The resulting Project will increase water management flexibility for Metropolitan by providing an alternative water supply, yielding a redundant and drought-resilient regional system. Additionally, it will provide Metropolitan and the communities they serve a much-needed system to transfer water during drought.

Project Timeline: Project construction will be completed in two Stages. The first stage of construction will begin in January 2025, and second stage of construction will begin by spring 2026. All construction work shall be completed by July 2027. Refer to Evaluation Criterion E for more information on the Project timeline.

Federal Facilities: A portion of the project will be constructed on land being acquired from Metroplitan to the Bureau of Land Management (BLM). BLM anticipates land acquisition will be complete by the end of 2023.

General Information

Project Location Foothill Pump Station Intertie Project is located at 8650 Cone Camp Road, City of Highland, in San Bernardino County, California, with latitude 34°06'28.0"N (34.107768) and longitude 117°08'27.2"W (-117.140880).

Project Description

The goal of the Foothill Pump Station Intertie Project (Project) is to increase drought resilience and operational flexibility by accessing water supply from Diamond Valley Lake, through the Foothill Pump Station Intertie, and into the Rialto Pipeline. The Project is one of four needed to move water from Diamond Valley Lake to the Rialto Pipeline: Wadsworth Pumping Plant Bypass Pipeline, Inland Feeder-Rialto Pipeline Intertie, Badlands Tunnel Surge Tank, and the Foothill Pump Station Intertie. The Foothill Pump Station Intertie Project is the project for which Metropolitan is seeking a grant.

The Wadsworth Pumping Plant Bypass Pipeline, Inland Feeder-Rialto Pipeline Intertie and Badlands Tunnel Surge Tank are under construction and scheduled for completion in 2025. Metropolitan is fully funding these other three projects. In 2021, the Board of Directors allocated additional capital investment funding ranging from $22.5 million to $24.5 million to support the initiation of these projects. See **Figure GI-1** for a map of the system and service area.

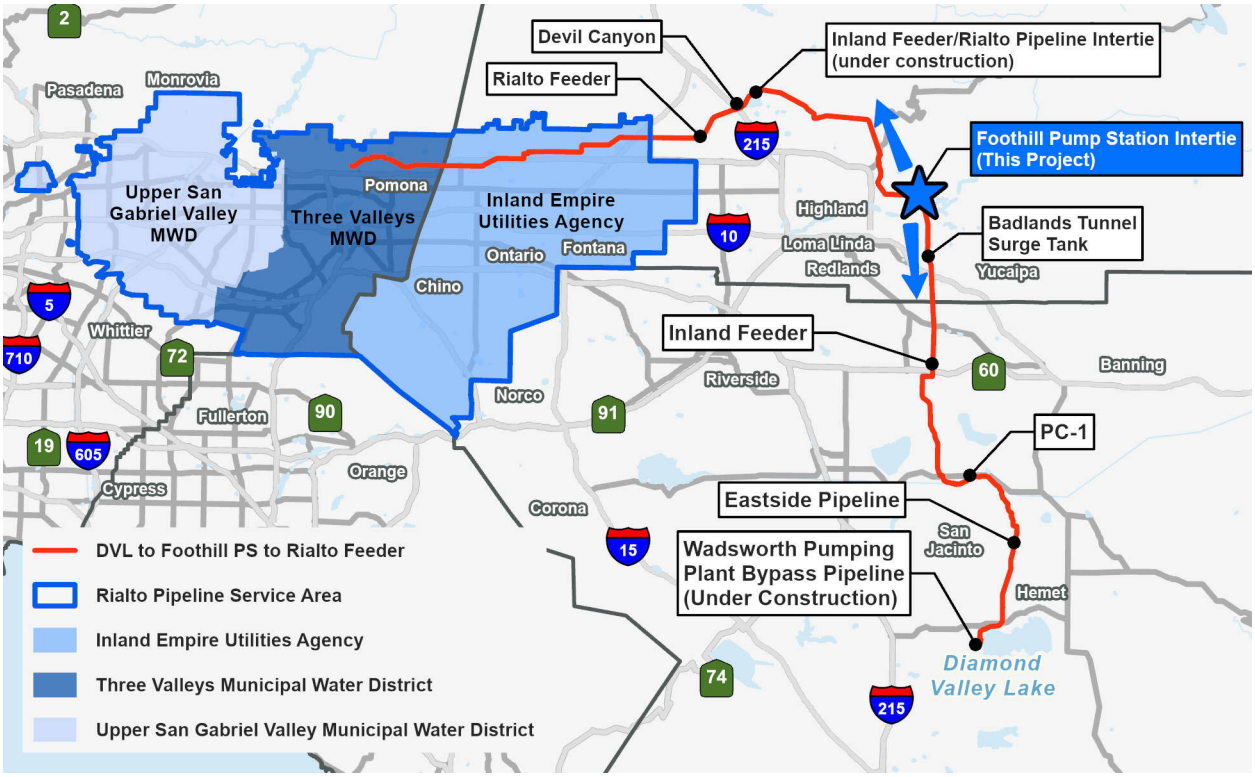

Figure GI-1. Project Map and Service Area.

The Project is located within the San Bernardino Valley Municipal Water District's (SBVMWD's) Foothill Pump Station facility and on Metropolitan fee property. The Project pump station modifications will provide the lift needed to permit the direct delivery of approximately 107 cubic feet per second (cfs) from Diamond Valley Lake to the Rialto Pipeline. The planned improvement includes pipeline interties and valve installations to connect Metropolitan's Inland Feeder pipeline to the existing in-line booster pumps at the Foothill Pump Station. Specific project components include construction of 450 feet of 54-inch bypass supply pipe; 800 feet of 54-inch bypass discharge line; isolation valves; temporary spool pieces and bulkheads; vaults to support the new valves; surge tanks to mitigate hydraulic surges; and associated electrical, instrumentation, piping system, and appurtenance to support the new equipment. See **Attachment GI-1** for the preliminary design report and **Attachment GI-2** for a site plan. Additional drawings, specifications, and information is available upon request.

The Project will be constructed in two stages. In the first stage, contractors will work north of a fence, outside critical habitat for the Federally endangered San Bernadino Kangaroo Rat. Contractors will add pipeline, electrical, and a vault. In the second stage, the contractors will work south of the fence to complete the pipeline and add a second vault. This portion of the work will require a permit from US Fish and Wildlife which is underway. See Section E for more information.

Performance Measures

The goal of the Project is to offset State Water Project demand at the Rialto Pipeline service area. The performance of this Project will be measured by calculating the total amount of water delivered to the Rialto Pipeline from Diamond Valley Lake in drought years. Water delivered will be tracked through SCADA. Measuring water deliveries will help determine the relative effectiveness of the Project and overall water management efforts.

Evaluation Criteria

A. Project Benefits

Sub-criterion A1.b: Water Better Managed

How will the project build long-term resilience to drought? How many years will the project continue to provide benefits?

The Foothill Pump Station Intertie Project (Project) will build long-term resilience to drought by increasing water supply reliability and operational flexibility. The Project will allow Metropolitan and San Bernardino Valley Municipal Water District's (SBVMWD) to convey water from Diamond Valley Lake to the Rialto Pipeline Service area in times of drought; specifically, when California officials reduce Metropolitan's water allocations of State Water Project (SWP) water. The Project will improve water supply reliability to a population of over 2.25 million in the Rialto Pipeline service area. The Project has a service life of 75 to 100 years and will continue to provide benefits during that time.

How will the project improve the management of water supplies? For example, will the project increase efficiency, increase operational flexibility, or facilitate water marketing (e.g., improve the ability to deliver water during drought or access other sources of supply)? If so, how will the project increase efficiency or operational flexibility?

The Project will improve the management of water supplies by increasing operational flexibility. Currently, Metropolitan does not have an alternate way to supply the Rialto Pipeline service area beyond SWP supplies. The existing Inland Feeder pipeline conveys SWP water to Diamond Valley Lake for storage during wet years via gravity flow. Water only flows in one direction. Metropolitan cannot send Diamond Valley Lake water back north, up the Inland Feeder pipeline to the Rialto Pipeline service area. Through modifications to the Foothill Pump Station Intertie, alongside other infrastructure improvements, the Project will allow bi-directional flow of the Inland Feeder pipeline. This will greatly improve system flexibility and better management of water supplies in drought conditions.

What is the estimated quantity of water that will be better managed as a result of this project? How was this estimate calculated? Provide this quantity in acre-feet per year as the average annual benefit over ten years (e.g., if the project captures flood flows in wet years, state this and provide the average benefit over ten years or longer including dry years).

The Project will better manage an average estimated 28,500 acre-feet per year (AFY) over a ten-year period. The total annual demand for the Rialto Pipeline service area is approximately 57,000 AFY, per Metropolitan data (see **Attachment A-1**). In a ten-year period, it is assumed that half of the years are wet, and half of the years are dry. In dry years, it is assumed that no SWP allocations (0 AF) are available and all of the Rialto Pipeline service area demand is met through the Diamond Valley Lake, which has a capacity of 810,000 AF. This represents the worst-case scenario but is not far off from the realities faced in 2021 and 2022 when SWP allocations were reduced to 5 percent. If the Project supports all Rialto Pipeline demand for five drought years, which the pumps have the capacity to support, that sums to 285,000 AF total. When averaged over 10 years, this equates to 28,500 AFY that is better managed because of this Project. Note, the Project has an overall capacity of 87,000 AFY, but demand is less than that.

What percentage of the total water supply does the water better managed represent? How was this estimate calculated?

The Project will provide better management to 16 percent of the Rialto Pipeline service area water supply. This was calculated by examining the imported water supply Metropolitan provides to the Rialto Pipeline service area, which consists of three member agencies, Inland Empire Utilities Agency (IEUA), Three Valleys, and Upper San Gabriel Valley Municipal Water District (Upper District). Of their total supplies, Metropolitan provided 69,752 AF to IEUA, 73,354 AF to Three Valley, and 34,642 AF to Upper District in 2020, based on each agency's Urban Water Management Plan (see **Attachment A-1**). This equals 177,748 AF in total. Of the 177,748 AF, 28,500 AF or 16 percent, will be better managed as a result of this Project.

Provide a qualitative description of the degree/significance of anticipated water management benefits.

The Project represents a significant improvement in water management benefits, providing regional drought resilience. A bi-directional pipeline system will allow Metropolitan to take advantage of its water supplies and provide operational flexibility in both wet and dry years. This improvement will allow Metropolitan to provide equitable services across all member agencies, a top priority in their water management practices.

Will the project make new information available to water managers? If so, what is that information and how will it improve water management?

No, the project will not make new information available to water managers.

Sub-criterion A2a: Climate Change
In addition to drought resiliency measures, does the proposed project include other natural hazard risk reductions for hazards such as wildfires or floods?

The Project provides risk reduction from earthquakes and wildfires. Diamond Valley Lake serves as Metropolitan's emergency reservoir in the event of a major earthquake. If SWP infrastructure is damaged during an earthquake, this Project would enable Metropolitan to use Diamond Valley Lake water for uninterrupted service.

Further, the Project provides risk reduction from wildfires by improving water supply reliability. Per CAL FIRE's hazard maps, the Rialto Pipeline service area is within a high and medium fire hazard severity zone. The region has experienced multiple wildfires over the past two decades, such as the Old Fire in 2003 and Holcomb Fire in 2017, causing billions of dollars in damage. The Project increases water supply to support critical firefighting operations and helps keep irrigated vegetation from drying out.

Will the proposed project establish and use a renewable energy source?

The Project does not generate or use new renewable energy source but does support the reliable production of hydroelectricity. The Rialto Pipeline is the only source that supplies water for the San Dimas Hydroelectric Power Plant, which generates 1.05 megawatts of renewable energy. In drought years when SWP allocations are low, the San Dimas Power Plant has not been able to generate renewable energy. Because of this, the plant has not been operational the past few years. With this Project, the San Dimas Power Plant will have an alternate water supply and will continue to generate renewable energy.

Will the proposed project reduce greenhouse gas emissions by sequestering carbon in soils, grasses, trees, and other vegetation?

Not applicable. The Project would not alter carbon content in soil nor vegetation.

Does the proposed project include green or sustainable infrastructure to improve community climate resilience?

Not applicable. The Project does not include green or sustainable infrastructure.

Does the proposed project seek to reduce or mitigate climate pollutions such as air or water pollution?

The Project reduces greenhouse gas (GHG) emissions associated with water conveyance. Metropolitan's GHG emissions are primarily generated from the purchase and consumption of electricity used for conveyance, treatment, and delivery of water throughout Metropolitan's Southern California service area. In periods of drought when flow is reduced, conveyance facilities work harder to move water into the far reaches of the system. The Project will enable Metropolitan and their member agencies to use local supplies from the Diamond Valley Lake, thereby reducing GHG emissions associated with importing water. Further, the Project will install state-of-the-art pumps that are energy efficient, further reducing GHG emissions. The Project supports Metropolitan's Climate Action Plan to reduce GHG emissions by 40 percent below 1990 levels and reach carbon neutrality by 2045 (see **Attachment A-2**).

Does the proposed project have a conservation or management component that will promote healthy lands and soils or serve to protect water supplies and its associated uses?

Not applicable. The Project does not have a conservation or management component that will promote healthy lands and soils.

Does the proposed project contribute to climate change resiliency in other ways not described above?

By providing the Rialto Pipeline service area with an alternative water source, the Project reduces demand for imported water from the SWP. Reduced SWP demand supports water resilience for other users and uses throughout California. Specifically, threatened and endangered environmental users in California's Sacramento-San Joaquin Delta.

Sub-Criterion A2.b: Environmental Benefits
Does the project seek to improve ecological climate change resiliency of a wetland, river, or stream to benefit to wildlife, fisheries, or habitats? Do these benefits support an endangered or threatened species? Do these benefits support an endangered or threatened species?

No, the Project does not seek to improve ecological climate change resiliency of a wetland, river, or stream to benefit wildlife, fisheries, or habitats.

What are the types and quantities of environmental benefits provided, such as the types of species and the numbers benefited, acreage of habitat improved, restored, or protected, or the amount of additional stream flow added? How were these benefits calculated?

The Project does not provide environmental benefits.

Will the proposed project reduce the likelihood of a species listing or otherwise improve the species status?

No, the Project will not reduce the likelihood of a species listing or otherwise improve the species status.

Sub-criterion A2.c: Other Benefits

In addition to benefits described above, the Project also supports groundwater recharge. Groundwater recharge is essential for replenishment of the regional aquifers, which the State of California has deemed high priority due to their regional significance to the overall water supply. The Project would support groundwater recharge in two ways. The first is through in-lieu groundwater recharge; the Project would limit groundwater extraction during dry years by providing an alternative surface water supply. The second is through moving water to the Rialto Pipeline, specifically for recharge. Member agencies rely on the Rialto Pipeline to move SWP water into regional groundwater recharge basins; service connections east of Indian Hill Boulevard are used for groundwater recharge. In dry years, the Project would enable recharge operations to continue, though minimally, using Diamond Valley Lake water.

B. Planning and Preparedness

Explain how the applicable plan addresses drought. Proposals that reference plans clearly intended to address drought will receive the most points under this criterion.

Metropolitan continuously engages in planning for various aspects of its water management, including operations, long-term reliability, and emergency response. These planning efforts include the Water Surplus and Drought Management (WSDM) Plan; the Water Supply Allocation Plan (WSAP); the Water Supply Contingency Plan (WSCP); the Emergency Storage Objective; and the Seismic Risk Assessment and Mitigation Plan; 2020 Urban Water Master Plan, and the 1996 Integrated Water Resources Plan (IRP) and its four updates in 2004, 2010, 2015, and 2020. Collectively, they provide a policy framework, operating guidelines, and resource targets for Metropolitan to ensure regional water supply reliability. However, the most applicable plan that addresses drought is the 2020 Integrated Water Resources Plan (IRP) – Regional Needs Assessment. The IRP is Metropolitan's key planning effort that establishes a long-term, comprehensive water resources strategy to provide the region with a reliable and affordable water supply. **Attachment B-1** includes excerpts of the IRP. For the full document, click here.

The 1987-1992 drought (California Department of Water Resources, 2021, pp. 4-6) exposed Southern California to significant water supply challenges across six years, prompting a change in water management, investment, and planning. In response, Metropolitan initiated regional assemblies of Metropolitan's board and senior management, member agency managers, local water agencies, and invited public officials. The assemblies established principles for agencies in the service area that would guide development and adoption of future IRPs. Since the inaugural IRP, California was faced with drought again in 2007-2009, and 2012-2016. While 2017 to 2019 brought reprieve from the drought, in both 2020 (20 percent) and 2021 (5 percent) Metropolitan was faced with low SWP allocations. This highlighted vulnerable areas within Metropolitans distribution system that are SWP dependent. The 2020 IRP Regional Needs Assessment addresses both near-term and long-term concerns.

Does the drought plan contain drought focused elements (e.g., a system for monitoring drought, drought projections that consider climate change, identification of drought mitigation projects, drought response actions, and an operational and administrative framework)?

Yes, the IRP contains drought focused elements. Through the IRP, Metropolitan, with support from their member agencies and experts, examined their water supply and demand projections. These projections consider climate change, economic trends, regulations, and demographic growth. The IRP investigates four potential future conditions, two of which consider reduced water supplies and imports associated with drought.

The analysis revealed that a large portion of Metropolitan's service area is vulnerable to drought and regulatory restrictions, especially in areas that are SWP dependent, like the Rialto Pipeline service area. These projections, which showed potential shortages of up to 1.2 MAF by 2045, came to fruition much earlier in 2021 and 2022. The 2020 IRP recommends several drought response actions, both from a supply and demand management perspective. From the supply side, the IRP recommends drought mitigation responses such as developing new storage capacity and improving operational flexibility. From the demand side, the IRP recommends drought mitigation responses such as outdoor water conservation measures.

Describe how the drought plan includes consideration of climate change impacts to water resources or drought.

The 2020 IRP considers climate change impacts to water resources through its scenario planning. Two scenarios consider gradual climate change impacts, and two scenarios consider severe climate change impacts. Metropolitan engaged with climate expert consultants to develop these climate change impacts that primarily identify changes to local precipitation, and the increase in the intensity and frequency of dry years. Findings from the IRP highlight that SWP supplies are highly susceptible to climate change, in addition to varying hydrologic conditions, and regulatory restrictions. Going forward, Metropolitan has the process and tools to evaluate specific investments and program actions under a range of future scenarios.

When was the plan developed and how often is it updated?
The IRP is adaptive – as regional water resource issues evolve, so does the IRP. Since the inaugural IRP in 1996, Metropolitan routinely monitors conditions and measures progress in achieving the plan's objectives. As such, the IRP has been periodically updated to expand Metropolitan's strategy to address changing conditions that affect water resource reliability. IRP updates have been completed in 2004, 2010, 2015, and most recently in 2020 (adopted in April 2022).

Was the drought plan developed through a collaborative process? Describe who was involved in preparing the plan and whether the plan was prepared with input from stakeholders with diverse interests (e.g., water, land, or forest management interests; and agricultural, municipal, Tribal, environmental, and recreation uses)? Describe the process used for interested stakeholders to provide input during the development of the plan.

Yes, the IRP was developed through a collaborative process. At its core, the IRP process is a collaborative effort between key interested parties – Metropolitan, its Member Agencies, other local water agencies, and community, business, environmental, and agricultural interests – to identify preferred solutions to long-term water resource reliability challenges and develop strategies to address those challenges. For the 2020 IRP, Metropolitan held focused workshops

with the member agencies to gain insights on the challenges facing local supplies and the potential impact on water reliability. These workshops discussed the drivers of change that affect water supply (economic conditions, climate change, and regulatory restrictions). Through these workshops, the effect of the drivers on existing local supplies and the timing and implementation of future local supply projects was considered.

If the plan was prepared by an entity other than the applicant describe whether and how the applicant was involved in the development of the plan. If the applicant was not involved in the development, explain why.

All planning activities were initiated, prepared, and carried out by Metropolitan, with collaboration of all stakeholders.

Describe how your proposed drought resiliency project is supported by an existing drought plan. Does the drought plan identify the proposed project as a potential mitigation or response action? How is the proposed project prioritized in the drought plan?

Yes, the IRP identifies drought resiliency actions that the Project addresses. In April 2022 the Metropolitan Board of Directors adopted the 2020 IRP Regional Needs Assessment. The IRP assessment included numerous findings that called for enhanced accessibility to core supplies and storage, and also new storage accessible to the SWP-dependent areas. This Project specifically addresses the call for enhanced accessibility to core storage, the Diamond Valley Lake, to the SWP-dependent Rialto Pipeline service area.

Further, the IRP provides a technical foundation for Phase 2 One Water Implementation. The forthcoming One Water Implementation Plan will identify policies, programs, and projects to address the IRP findings. Metropolitan staff anticipate that this Project will be included as part of that implementation plan.

Does the proposed project implement a goal or need identified in the drought plan? Is the supported goal or need prioritized within the plan?

Yes, the Proposed project supports a need identified in the IRP. The IRP demonstrates vulnerabilities in the SWP-dependent areas, such as the Rialto Pipeline Service Area. These vulnerabilities are more severe given reduced reliability of SWP supplies and Metropolitan distribution system constraints. This Project provides greater access to existing core supplies and improves overall reliability. The Project also supports Metropolitan's goal of equitable service to its member agencies.

C. Severity of Actual or Potential Drought or Water Scarcity Impacts to be addressed by the Project

Describe recent, existing, or potential drought or water scarcity conditions in the project area. Is the project in an area that is currently suffering from drought, or which has recently suffered from drought or water scarcity? Please describe existing conditions, including when and the period of time that the area has experienced drought or water scarcity conditions. Include information to describe the frequency, duration, and severity of current or recent conditions. You may also provide information relating to historical

conditions. Please provide supporting documentation (e.g., Drought Monitor, droughtmonitor.unl.edu).

Southern California has a dry, Mediterranean climate with frequent droughts. The most recent drought was from 2020 through 2022. **According to drought.gov,** the past three water years (2020, 2021, and 2022) have been the driest in the California record. See **Attachment C-1** for the drought monitor map of California on September 28, 2021, which shows 87 percent of the state in extreme drought. The driest water year on record was previously held by another recent drought in 2014, indicating a drying and aridifying climate.

In August 2021, the state's primary State Water Project (SWP) reservoir, Lake Oroville, reached its lowest level since it was first filled in the 1970s. These conditions culminated in December 2021 when the California Department of Water Resources announced a zero percent allocation of SWP water for 2022, the lowest initial allocation recorded in its history. That amount was later increased to a mere 5 percent. As the drought conditions continued, communities largely dependent on the SWP for their water supplies only received a very limited amount from the system for basic human health and safety. Over 6 million people in Southern California were severely impacted by this reduction, in addition to countless environmental and agricultural water users.

Metropolitan, its member agencies, and partners responded with extraordinary operational drought actions to limit the use of, and stretch, SWP supplies. In October 2021, Gov. Gavin Newsom expanded his Executive Order declaring a statewide drought emergency to include all of California. Metropolitan's Board declared a Drought Emergency and called for increased efforts to maximize conservation, especially in communities dependent on SWP deliveries that face the greatest challenges (see **Attachment C-2**).

Describe any projected increases to the severity or duration of drought or water scarcity in the project area resulting from changes to water supply availability and climate change. Provide support for your response (e.g., reference a recent climate informed analysis, if available).

According to California's Climate Adaptation Strategy (see **Attachment C-3**), there is high confidence in projections that drought severity and the number of dry years will increase throughout California in the future. Specifically in the Los Angeles region, there is a potential doubling in frequency of extremely dry years by late century. Drought length and severity will be exacerbated by higher temperatures. Average maximum temperatures in the Los Angeles region are expected to increase 4-5°F by mid-century and 5-8°F by late century.

Hotter and drier weather could diminish existing water supply by up to 10 percent statewide by 2040 (see **Attachment C-4**). This is due to less snowfall, more evaporation, and greater consumption of water by vegetation, soil, and the atmosphere itself. Changing climatic and hydrologic conditions, paired with environmental regulations, can have a significant impact on Metropolitan's imported water supply from the SWP.

What are the ongoing or potential drought or water scarcity impacts to specific sectors in the project area if no action is taken (e.g., impacts to agriculture, environment, hydropower, recreation, tourism, forestry, etc.), and how severe are those impacts? Impacts should be quantified and documented to the extent possible.

If no action is taken, and the Project is not built, the region would continue to rely heavily on the SWP, where supply is becoming increasingly uncertain. A glimpse of that future with no action condition was evident in 2021 and 2022, when Metropolitan received only 5 percent of its SWP allocation. These two years highlighted the infrastructure and water supply vulnerabilities within Metropolitan's system. Because of these infrastructure and operational limitations, Metropolitan could not provide equivalent supply reliability to its member agencies. The three agencies served by the Rialto Pipeline, Inland Empire Utilities Agency (IEUA), Three Valleys, and Upper San Gabriel Valley Municipal Water District, were forced to take significant mandatory water cuts between 35 and 73 percent. If they did not make these cuts, they would incur volumetric penalties of $2,000 per AF or the first-ever total ban on outdoor irrigation (see **Attachment C-5** for the Board Action).

Reductions in water use and the possibility of fines also exerted financial pressure on the member agencies, as well as forced member agencies and their customers to draw down local supply reserves, at least in the shorter term. Further, Metropolitan was required to purchase expensive additional water from the Californina Department of Water Resources because their supplies and infrastructure were insufficient to meet human health and safety needs in the Rialto Pipeline service area. Thus, if the project is not built, there will continue to be uncertainty in Metropolitan's water supply to the Rialto Pipeline service area, deepening inequities in service, and placing unnecessary financial burdens on customers, 50 percent of whom are disadvantaged.

D. Presidential and DOI Priorities

Please use the White House Council on Environmental Quality's interactive Climate and Economic Justice Screening Tool, available online at Explore the map – Climate & Economic Justice Screening Tool (https://screeningtool.geoplatform.gov) to identify the disadvantaged communities that will benefit from your project.

Based on the Climate & Economic Justice Screening Tool and overlaying the data with the Rialto Pipeline service area, nearly 50 percent (specifically, 48.67 percent) of the Project beneficiaries are disadvantaged communities. This was calculated based on three member agencies: Inland Empire Utilities Agency (IEUA), Three Valleys and Upper San Gabriel Valley Municipal Water District (Upper District) and their respective service area (**see Attachment D-1**). A summary of disadvantaged communities (DACs) breakdown is as follows:

36% of IEUA's service area is comprised of disadvantaged communities.

- (DAC population estimate = 315,038; total population estimate = 879,485; % DAC = 36%)

39% of Three Valley's service area is comprised of disadvantaged communities.

- (DAC population estimate = 199,858; total population estimate = 513,626; % DAC = 39%)

71% of Upper District's service area is comprised of disadvantaged communities.

- (DAC population estimate = 608,596; total population estimate = 856,626; % DAC = 71%)

Further, Metropolitan initiated an effort to increase water efficiency within disadvantaged communities (DACs) in Metropolitan's service area through the Disadvantaged Communities Program as part of the initiatives under Urban Water Management Plan 2021.

If applicable, describe how the proposed project will serve or benefit a disadvantaged or underserved community, identified using the tool described above. For example, will the project improve public health and safety by addressing water quality, add new water supplies, provide economic growth opportunities, or provide other benefits in a disadvantages or underserved community?

The Project will directly benefit 1.1 million disadvantaged community members within the Rialto Pipeline service area by increasing water supply resilience. These communities will benefit from additional water supply during droughts so there is no interruption to their water service. Further, it will help keep water rates lower and more affordable, as imported water during times of drought is expensive. By using local water from Diamond Valley Lake, rate increases will be minimized.

Does the proposed project directly serve and/or benefit a Tribe? Benefits can include, but are not limited to, public health and safety by addressing water quality, new water supplies, economic growth opportunities, or improving water management.

No, the Project does not directly serve and/or benefit a Tribe.

Does the proposed project support Reclamation's Tribal trust responsibilities or a Reclamation activity with a Tribe?

No, the Project does not support Reclamation's Tribal trust responsibilities.

E. Readiness to Proceed and Project Implementation

Describe the implementation plan of the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates. Milestones may include, but are not limited to, the following: design, environmental and cultural resources compliance, permitting, construction/installation.

The Project design is well underway. No delays are expected from an engineering aspect, and design work is expected to be completed before end of 2023 for Stage 1, and by early 2024 for Stage 2. With final design and environmental compliance complete, Metropolitan expects to award a Stage 1 bid by August 2024 and finish submittal review by November 2024. Stage 1 construction will begin in January 2025 and last about one year.

Long-lead equipment, such as large diameter valves, typically takes approximately two years to procure. Due to recent supply chain disruption and shortage in raw materials throughout the market, the market trend is that procurement and shipping would take longer than two years. To allow timely preparation of these materials, and ensure readiness for construction, large equipment was pre-purchased through separate procurement contracts that have already been

awarded. As of November 2023, equipment is now being manufactured and are scheduled to be on-site for Stage 2 construction by mid-2025.

Once the equipment is on-site and Stage 2 environmental compliance is complete, Metropolitan's awarded contractors can begin the final stage of construction around May 2026. The Project is anticipated to conclude in July 2027, within the three-year window for this grant. See Table E-1 for a simplified project schedule and **Attachment E-1** for a detailed project schedule.

Table E-1. Simplified Project Schedule

Milestone / Task / Activity	Planned Start Date	Planned Completion Date
Pre-Award Activities		
Stage 1 Design	August 2023	December 2023
Stage 2 Design	January 2024	April 2024
Task 1 Project Management	August 2023	October 2027
Task 2 Environmental Compliance	April 2024	October 2025
Task 3 Stage 1		
Construction Procurement	April 2024	September 2024
Submittal Review	September 2024	November 2024
Equipment Procurement	November 2024	May 2025
Construction Mobilization	January 2025	January 2025
Construction	February 2025	November 2025
Task 4 Stage 2		
Construction Procurement	October 2025	April 2026
Submittal review	April 2026	July 2026
Construction Mobilization	May 2026	December 2026
Construction	September 2026	July 2027

Describe any permits or approvals that will be required (e.g., water rights, water quality, stormwater, or other regulatory clearances). Include information on permits or approvals already obtained. For those permits and approvals that need to be obtained, describe the process, including estimated timelines for obtaining such permits and approvals.
This Project includes two construction stages, specifically to address permitting. Stage 1 does not require permits. Work is expected to occur within either Metropolitan's existing or acquired easements or fee property and not in existing public right-of way. No permits beyond the ones held by Metropolitan are needed to construct Stage 1 of the Project.

Stage 2 will require several permits from US Fish & Wildlife Services (USFWS) and California Department of Fish & Wildlife (CDFW) as it relates to the Endangered Species Act (ESA), National Environmental Policy Act (NEPA), and the California Environmental Quality Act (CEQA). The CEQA process will determine which State permits are necessary. Metropolitan has already begun the CEQA process, which is anticipated to conclude in April 2024. Metropolitan has also established communications with USFWS. Metropolitan staff have met with USFWS about the Project three times over 2023, to discuss the approach and permit strategy. During these meetings, USFWS recommended surveys which Metropolitan has since completed (see

Attachments E-2 and **E-3**). Further, the Project location is pre-disturbed or within an existing footprint. Metropolitan expects the potential impacts to be limited to biological. See Section H Environmental and Cultural Resources Compliance (**Attachment H**) for more information.

There are no permits needed for water rights, water quality, or stormwater (the project will disturb less than one acre and is therefore exempt). The construction contractor will be responsible for obtaining construction related permits such as air quality compliance.

Identify and describe any engineering or design work performed specifically in support of the proposed project.

Metropolitan has done extensive engineering and design work for this Project. In April 2022, Metropolitan consultants completed a feasibility study and alternative analysis to determine the best approach. Metropolitan consultants built upon that feasibility analysis and have completed 90% final design (see **Attachment GI-1** for the Preliminary Design Report). As part of this effort, Metropolitan consultants conducted a geotechnical survey, performed a surge analysis, developed a preliminary design plan set, developed an opinion of probable construction costs, and manufacturer data sheets. These additional documents were not included as attachments due to their size but are available upon request.

Describe any land purchases that must occur before the project can be implemented.

No land purchase is necessary for the Project to be implemented. A small portion of the project area is pending easement/right-of-way acquisition from Metropolitan to BLM. Metropolitan staff have been in constant communication with BLM and have completed the right-of-way application. As soon as title transfer to BLM is completed, negotiation and agreement for permanent right-of-way will be begin. For expedited implementation of the Project, a temporary construction permit may be required if right-of-way acquisition takes longer than expected.

Describe any new policies or administrative actions required to implement the project.

No new policies or administrative actions are required to implement the Project. In December 2021, the Metropolitan Board voted to amend the previously approved Capital Investment Plan to include Rialto Pipeline Reliability Improvement projects, including Foothill Pump Station Intertie, and allocated additional capital investment funding ranging from $22.5 million to $24.5 million to support the initiation of this series of project (link to Board Action).

F. Nexus to Reclamation

Describe the nexus between the proposed project and a Reclamation project or Reclamation activity. Does the applicant have a water service, repayment, or O&M contract with Reclamation?

Metropolitan holds Priority 4 water rights from the Colorado River. The recently conducted Protection Volume Analysis completed by Reclamation shows that it would take approximately 600,000 acre-feet to 4.2 million acre-feet per year to maintain critical elevations in Lake Powell and Lake Mead. This Project will indirectly help reduce demand for Colorado River water imported supplies and will support Reclamation's projects and activities managing the water resources of the Colorado River Basin.

Is the applicant a Tribe? No.

G. Stakeholder Support for Proposed Project

Describe the level of stakeholder support for the proposed project. Are letters of support from stakeholders provided? Are any stakeholders providing support for the project through cost-share contributions or through other types of contributions to the project?

Metropolitan engaged its member agencies and the public about this Project through Board meetings on December 14, 2021, August 12, 2022, May 9, 2023, and at special drought mitigation committee meetings on March 28, 2023, June 27, 2023, and September 26, 2023. Metropolitan's Board consists of representative members from all 26 member agencies. This Project was approved by Metropolitan's Board in December 2021. Further, Metropolitan hosted more than 20 muti-agency meetings and workshops to develop drought solutions, one of which is this Project.

Additionally, SBVMWD is Metropolitan's partner in construction and future operations of Foothill Pump Station. Though not a Metropolitan member agency who directly receives water from Metropolitan's system, SBVMWD and their Board approved and supported the implementation of the Project. SBVMWD is allowing usage of Foothill Pump Station, owned by SBVMWD, to support the regional benefit brought upon by this Project. See **the attached** (titled Letter of Support) for a letter of support from SBVMWD.

Explain whether the project is supported by a diverse set of stakeholders, as appropriate, given the types of interested stakeholders within the project area and the scale, type, and complexity of the proposed project. For example, is the project supported by entities representing agricultural, municipal, Tribal, environmental, or recreation uses?

The Project is supported by representatives from Metropolitan's 26 member agencies. These member agencies represent diverse stakeholders, including residential, commercial, industrial, agricultural, and environmental water users. Further, the three agencies who will benefit directly from this project, Inland Empire Utilities Agency, Three Valleys, and Upper San Gabriel Valley Municipal Water District, represent over 2.25 million people, nearly half of whom meet the Federal definition of disadvantaged.

Budget Narrative

Budget Summary

The Metropolitan Water District of Southern California (Metropolitan) is applying for $5,000,000 in Category A Group III funding from the Bureau of Reclamation's (Reclamation) WaterSMART: Drought Response Program: Drought Resiliency Projects for Fiscal Year 2024 to support the Foothill Pump Station Intertie to Improve Regional Drought Resilience and Reliability project.

Metropolitan will provide $23,000,000 in funding to support the total cost for this project. They are requesting $5,000,000 in funding from Reclamation to cover the remaining 17.86%, exclusively for construction.

The tables below indicate the match sharing as well as budget breakdown of initial estimates for personnel, contracts, and construction costs. Metropolitan is actively pursuing a comprehensive funding strategies for the crucial first and second stages of construction. This proactive financial planning is critical, especially considering the increasing frequency and severity of drought conditions. Metropolitan is aware of the urgent need to secure these funds to prevent any delays in project implementation, which could otherwise lead to a compromised ability to manage water resources effectively during drought.

Table 1 - Summary of Non-Federal and Federal Funding Sources

FUNDING SOURCES	AMOUNT
Non-Federal Entities	
1. Metropolitan Water District	$23,000,000
2.	$
3.	$
Non-Federal Subtotal	$23,000,000
REQUESTED RECLAMATION FUNDING	$5,000,000

Table 2: Budget Summary

Budget Object Category	Total Cost	Federal Estimated Amount	Non-Federal Estimated Amount
a. Personnel	**$1,150,000**		
b. Fringe Benefits	**$0**	**$0**	
c. Travel	**$0**		
d. Equipment	**$0**		
e. Supplies	**$0**		
f. Contractual	**$3,100,000**		
g. Construction	**$23,750,000**		
h. Other Direct Costs	**$0**		
j. Total Direct Costs	**$0**		
i. Indirect Charges	**$0**		
Total Costs	**$28,000,000**	**$5,000,000**	**$23,000,000**
Cost Share Percentage		**17.86%**	**82.14%**

a. Personnel

Project Manager

Task 1:	125 hrs Y1 + 125 hrs Y2 + 125 hrs Y3 + 125 hrs Y4 x $280hr =	$140,000
Task 2:	0 hrs Y1 + 500 hrs Y2 + 0 hrs Y3 + 0 hrs Y4 x $280hr =	$140,000
Task 3:	0 hrs Y1 + 500 hrs Y2 + 0 hrs Y3 + 0 hrs Y4 x $280hr =	$140,000
Task 4:	0 hrs Y1 + 0 hrs Y2 + 250 hrs Y3 + 250 hrs Y4 x $280hr =	$140,000
Total: $35,000 Y1 + $315,000 Y2 + $105,000 Y3 + $105,000 Y4		**$560,000**

Eugenia Lin, PE, LEED AP BD+C, Env SP, has been appointed as the primary project manager for the multi-year construction initiative. Her responsibilities span across various tasks:

For Task 1, managing the project from August 2023 to October 2027, she's allocated 125 hours each year, culminating in a total budget of $140,000. Meanwhile, her dedication to Task 2, focusing on environmental compliance from April 2024 to October 2025, will see 500 hours in Y2, with an associated cost of $140,000. Eugenia's commitment shifts to Task 3 in Y2, and Task 4 across Y3 and Y4, each task accounting for $140,000.

In summary, Eugenia's comprehensive involvement over the project's timeline amounts to a financial commitment of $560,000, spread as $35,000 in Y1, $315,000 in Y2, and $105,000 each in Y3 and Y4. These figures not only represent her labor rates but are consistently upheld for both Federal and non-Federal activities.

Design Manager

Task 1:	125 hrs Y1 + 125 hrs Y2 + 125 hrs Y3 + 125 hrs Y4 x $280hr =	$140,000
Task 2:	0 hrs Y1 + 500 hrs Y2 + 0 hrs Y3 + 0 hrs Y4 x $280hr =	$140,000
Task 3:	0 hrs Y1 + 500 hrs Y2 + 0 hrs Y3 + 0 hrs Y4 x $280hr =	$140,000
Task 4:	0 hrs Y1 + 0 hrs Y2 + 250 hrs Y3 + 250 hrs Y4 x $280hr =	$140,000
Total: $35,000 Y1 + $315,000 Y2 + $105,000 Y3 + $105,000 Y =		**$560,000**

Fraser Wyatt, PE, has been appointed as the design manager for the project. His role includes overseeing all design functions, guiding the engineering aspects, and coordinating all technical tasks connected to the project. He'll earn $140,000 each budget year, with an expected commitment of 2000 hours spread across the four tasks. The budgeted rates represent the actual labor rates for the identified personnel and positions and are consistently applied to Federal and non-Federal activities.

b. Fringe Benefits

This project does not intend to use federal funds to cover any expenses related to fringe benefits.

c. Travel

This project does not intend to use federal funds to cover any personnel-related expenses.

d. Equipment

This project does not intend to use federal funds to cover any equipment-related expenses.

e. Supplies

All supplies are associated with construction and are included in the construction cost breakdown.

This project does not intend to use federal funds to cover any expenses related to additional supplies.

f. Contractual

Consultants were hired to assist with the final design and pre-planning activities as needed. Based on the authorized final design agreement between Metropolitan Water District and HDR, a cost of $3,100,000 for project management, investigations, permitting support, long lead item procurement evaluation, preliminary design report, and preliminary design drawings is assumed which ensured the project met the technical requirements. The cost breakdown is provided below.

Preliminary Design	$480,000
Final Design	$1,300,000
Revised Final Design	$410,000
Stage 2 Design	$250,000
Total Design	$2,440,000
Construction Support (2.5%)	
STAGE 1	$480,000
STAGE 2	$180,000
Total Construction	$660,000

This project does not intend to use federal funds to cover any contractual-related expenses.

g. Construction

Construction Material: Below is a detailed breakdown of all materials and supplies required for the project, organized by major categories such as unit price, quantity, and intended use. Table 3 details the materials for Stage 1, while Table 4 outlines the materials for Stage 2. These costs are based on the Final Design Report from HDR and estimated according to the standards of the American Association of Cost Engineers (AACE). They are prepared in line with the preliminary design and 30 percent completed plans.

The construction cost estimates are based on the following assumptions:

- The costs account for labor, materials, and equipment.
- An Administration and Engineering Allowance is set at 10 percent of the total construction cost.
- Construction Administration and Management costs represent 4 percent of the total construction cost.
- A Construction Contingency of 25 percent is included.
- Field construction expenses, labeled as Construction, encompass various aspects:
    - Mobilization/Demobilization: 1 percent
    - Field Overhead: 3 percent
    - General Conditions: 2.5 percent
    - Bonds and Insurance: 2 percent
    - Contractor’s Fee: 8 percent

This totals to 16.5 percent for field construction costs.

- An allowance of $450,000 is allocated for Surge Mitigation Equipment.
- An allowance of $400,000 is set aside for Inland Feeder shutdown costs.

Table 3: Metropolitan - Inland Feeder - Foothill Pump Station Intertie - STAGE 1

Major Category	**Unit Price $**	**Quantity**	**Total Cost $**
Supply Pipeline			
54" Supply Pipe - CML&C Steel	700	355	248,472
54" Supply Fitting - CML&C Steel - 90 deg Bend	10,000	2	20,000
78" Supply Tee Connection	20,000	1	20,000
54" x 36" Supply Surge Tank Tee Connection	20,000	1	20,000
54" Wye Outlet Suction Connection	20,000	1	20,000
30,000 Gallon Surge Tank System	450,000	1	450,000
36" Supply Surge Tank Pipe and Fittings	30,000	1	30,000
36" Triple Offset Butterfly Valve	112,000	1	112,000
Supply Surge Tank Support (Reinforced Concrete)	600	104	62,667
ARVV Manhole with 7' Cover	25,000	1	25,000
1" Air Release and 8" Vaccum Valve Assembly	12,000	1	12,000
Discharge Pipeline			
54" Discharge Pipe - CML&C Steel	550	712	391,474
54" Discharge Fitting - CML&C Steel - 90 deg Bend	10,000	1	10,000
54" Discharge Surge Tank Tee Connection	20,000	3	60,000
54" Wye Outlet Discharge Connection	20,000	1	20,000
50,000 Gallon Surge Tank System	750,000	3	2,250,000
30" Discharge Surge Tank Pipe and Fittings	75,000	1	75,000
30" Triple Offset Butterfly Valve	94,000	3	282,000
Discharge Surge Tank Support (Reinforced Concrete)	600	508	304,800
ARVV Manhole with 7' Cover	25,000	2	50,000
1" Air Release and 8" Vacuum Valve Assembly	12,000	2	24,000
Combined Valves Vault			
Excavation, Shoring, Backfill	80	3360	268,800
51.5' x 45' x 32.1' Combined Valves Vault Structure (Reinforced Concrete)	600	269	161,400
Structural Platform	80	2286	182,910
Dual Aluminum Roof Access Cover - Equipment (22'-10"x15'-5")	14	190	2,666
3.5' x 3.5' CLR Opening Hatch	1,979	1	1,979
5' x 5' CLR Opening Hatch	6,500	4	26,000
5' Fixed Ladder	2,000	3	6,000
54" Bypass Supply Pipe - CML&C Steel	550	40	22,022
54" Bypass Discharge Pipe - CML&C Steel	550	40	22,022
54" Valve Support	10,000	2	20,000
30" Pipe - E&C Steel	350	18	6,370
16" Pipe - E&C Steel	250	14	3,485
12" Pipe - E&C Steel	210	3	595

30" x 16" Eccentric Flanged Reducer - E&C Steel	20,000	4	80,000
16" x 12" Eccentric Flanged Reducer - E&C Steel	12,000	4	48,000
54" Motor Operated Butterfly Valve Installation (MFE)		2	-
54" Split Coupling w/ Restraint Harness	3,228	2	6,456
36" Manway	10,000	4	40,000
Comb 8" Vacuum and 1" Release Valve w Piping	31,815	4	127,260
12" Eccentric Plug Valves	8,202	2	16,404
16" High Performance Butterfly Valve w/ Manual Actuator	46,076	4	184,304
16" Split Coupling w/ Restraint Harness	3,133	2	6,266
16" Pipe Supports	1,739	6	10,431
24" x 24" Sump w/ Grate	1,500	1	1,500
4" Bottom Drain	3,200	4	12,800
2" Bottom Drain	2,500	4	10,000
10" Vent Intake Ducting	4,000	1	4,000
10" Air Exhaust Fan and Ducting	7,500	1	7,500
Pressure Transmitter with Capillary Sensing Tube	1,500	4	6,000
Pressure Transmitter with Capillary Sensing Tube	1,500	1	1,500
1" Pressure Sensing Connection	87	4	348
Flood Alarm Level Switch	473	1	473
Electrical Panels	25,000	4	100,000
200A Siemens HFXD6 breaker	1,800	1	1,800
Conduit, Wiring, Junction Box	50,000	1	50,000
Intrusion Switch	250	2	500
Receptacle	200	4	800
Light Fixture	1,200	6	7,200
Grounding System	5,000	1	5,000
Dry Type Transformer	5,000	1	5,000
Valve Control Panel	15,000	2	30,000
Disconnect Switch	800	1	800
PLC-TC (Termination Cabinet)	45,000	1	45,000
Lighting and Exhaust Fan Control Panel	5,000	1	5,000
Air Compressor Yard/Surge Tanks			
Site Grading - CMB	4	26000	104,001
Chainlink Fencing	15	295	4,421
Foundation Slab on Grade (Reinforced Concrete)	600	40	24,000
CMU Block Enclosure	10	361	3,609
1.5" Metal Roof Deck	30	529	15,868
Equipment Pads (Reinforced Concrete)	100	1	90
Double Swing Custom Metal Gate	8,500	1	8,500
1" Compressed Air Filter	80	2	159
40 hp Air Compressor	12,300	2	24,600
1" Air Drain Filter	98	2	197
80 Gallon Air Receiver	7,172	2	14,344
1" Air Compressor Piping, Valves, and Fittings	10,000	1	10,000

Yard Lighting	15,000	3	45,000
Electrical Panels	25,000	3	75,000
Conduit, Wiring, Junction Box	50,000	1	50,000
Receptacle	200	4	800
Light Fixture	1,200	6	7,200
Site lighting & pole	2,500	3	7,500
Grounding System	5,000	1	5,000
Dry Type Transformer	5,000	1	5,000
Wall mount pullbox	1,000	1	1,000
Underground pullbox	2,000	1	2,000
Trenching and Underground ductbank	50,000	1	50,000
Pressure Transmitter with Capillary Sensing Tube	1,500	4	6,000
Catch Basin Grate	2,000	1	2,000
18" HDPE DR 26 Pipe	50	130	6,500
Rip-Rap Energy Dissipator	75	2.5	188
Concrete Headwall	2,000	1	1,792
Catch Basin	5,000	1	5,000
2" Sump Pump	900	1	900
Total Material Cost			**6,506,671**

Table 4: Metropolitan - Inland Feeder - Foothill Pump Station Intertie - STAGE 2

Major Category	**Unit Price $**	**Quantity**	**Total Cost $**
Discharge Pipeline			
54" Discharge Pipe - CML&C Steel	800	70	56,000
54" Supply Fitting - CML&C Steel - 90 deg Bend	45,000	1	45,000
78" Supply Tee Connection	31,815	1	31,815
Sectionalizing Valve Vault			
Excavation, Shoring, Backfill	100	2200	220,000
CMB Site Grading	4	4374	17,497
Chainlink Fencing	15	275	4,118
45' x 40' x 28' Sectionalizing Valve Vault Structure (Reinforced Concrete)	600	361	216,875
Aluminum Roof Access Cover - Equipment (30'-4"x25-5")	25	771	19,275
Aluminum Roof Access Cover - Equipment (30'-4"x8'-11")	25	270	6,750
Structural Platform	80	1412	112,951
3.5' x 3.5' CLR Opening Hatch	3,000	2	6,000
5' Fixed Ladder	2,000	2	4,000
24" x 24" Sump w/ Pump	1,500	1	1,500
144" Pipe - CML&C Steel	1,000	23	23,210
132" Pipe - CML&C Steel	1,000	52	52,380
12" Pipe - E&C Steel	210	1	302
16" Pipe - E&C Steel	250	22	5,390

30" Pipe - E&C Steel	350	45	15,796
30" x 16" Eccentric Flanged Reducer - E&C Steel	20,000	2	40,000
16" x 12" Eccentric Flanged Reducer - E&C Steel	12,000	2	24,000
144" x 132" Reducer - CML&C Steel	75,000	2	150,000
132" Hydraulic Operated Butterfly Valve (MFE)	0	1	-
132" Non-Restrained Flexible Coupling	28,423	1	28,423
16" Split Coupling w/ Restraint Harness	3,133	1	3,133
16" High Performance Butterfly Valve w/ Manual Actuator	46,076	2	92,152
12" Eccentric Plug Valve	8,202	1	8,202
36" Manway	10,000	2	20,000
Comb 10" Vacuum and 1" Release Valve w Piping	31,815	2	63,630
2" Bottom Drain	2,500	2	5,000
6" Bottom Drain	4,000	2	8,000
6" Pipe Supports	1,121	2	2,243
16" Pipe Supports	1,739	7	12,170
10" Grooved Coupling	2,454	2	4,908
10" Vent Intake Ducting	4,000	1	4,000
10" Air Exhaust Fan and Ducting	7,500	1	7,500
36 Pressure Transmitter with Capillary Sensing Tube	1,500	1	1,500
37 1" Pressure Sensing Connection	87	2	174
38 Flood Alarm Level Switch	473	1	473
39 Sump Pump	1,500	1	1,500
40 Electrical Panels	25,000	4	100,000
Total Material Cost			**1,415,867**

Other Construction-related Costs: The budget includes $250,000 for construction related CEQA and permits required by law. The estimate is based on the environmental costs for a similar project from previous years.

Contractual services: The following was provided in HDR's preliminary final design report:

STAGE 1		
Labor Crew Cost	$1,040.45/hr. x 3,018 =	$3,140,078
Equipment Cost	$975.00/hr. x 2,242 =	$2,185,950
Field Construction Costs		$3,119,100
Construction Cost Factors and Allowances		$3,838,901
Total		**$12,284,042**
STAGE 2		
Labor Crew Cost	$1,040.45/hr. x 1,052 =	$1,094,553
Equipment Cost	$975.00/hr. x 822 =	$801,450
Field Construction Costs		$873,009
Construction Cost Factors and Allowances		$1,362,521
Total		**$4,131,533**

Total Construction Expenses: Total Construction Expenses: The overall expenses for constructing Stage 1 amount to $18,790,700, encompassing both material costs of $6,506,671

and contractual services fees of $12,284,042. For Stage 2, the total construction expenditure is $5,547,400, which includes material costs of $1,415,867 and contractual services fees of $4,131,533. The Metropolitan will provide its design manager and project manager to oversee the development of bidding documents for the construction contract, as well as to supervise and inspect the construction process. The Metropolitan has already funded all initial costs.

The combined construction cost for both Stage 1 and Stage 2 amounts to $23,750,000. The Metropolitan is pursuing $5,000,000 in federal funding, specifically for use towards construction expenses.

h. Other Direct Costs

This project does not plan to utilize federal funds for covering other direct costs.

j. Indirect Costs

This project does not plan to utilize federal funds for covering indirect costs.