



THE CITY OF SAN DIEGO

OFFICE OF THE INDEPENDENT BUDGET ANALYST REPORT

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Analysis of the Amended and Restated Agreement with the East County Joint Powers Authority Regarding Residuals Line and the East Mission Gorge Force Main

OVERVIEW

At the City Council meeting on December 17, 2024, the Public Utilities Department (PUD) brought forward the Amended and Restated Design, Construction, and Reimbursement Agreement Between the City of San Diego and the East County Advanced Water Purification Joint Powers Authority (East County JPA) for City Council approval.¹ During Council's deliberations, Council requested our Office provide a written analysis of the item, and provide additional information on the cost methodology and whether or how the agreement is beneficial to City ratepayers.

Despite significant cost increases in this agreement, we find that it **still represents a net benefit to City ratepayers, and recommend that the Council approve staff's recommendations.**

BACKGROUND

This item is an amendment to an agreement Council previously approved in January 2023. The agreement details the costs and responsibilities associated with the construction and operation of two projects - the East County Residuals Line, and the East Mission Gorge Force Main. However, understanding the context of the agreement requires additional context and history.

Agreements with the East County JPA exist under the framework of a larger Metropolitan Wastewater Joint Powers Authority (Metro JPA) agreement. The Metro JPA agreement was

¹ The item seeks approval of a City Ordinance, which requires two readings for approval. The December meeting was the first reading, with the January meeting representing the second reading.

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initially entered into in 1998 by the City and several other participating agencies, and the Metro JPA agreement allows those participating agencies to send their wastewater to the City's Metropolitan Wastewater System for treatment. Under the Metro JPA agreement, participating agencies pay the City based on both the flows and strengths of their wastewater. All of the members of the East County JPA are also members of the larger Metro JPA.²

Additional important context includes the City's Pure Water Project, which will intercept wastewater that would otherwise flow directly to the Point Loma Wastewater Treatment Plant (WTP) and treats that wastewater up to potable standards so that it can be reused instead of being discharged into the ocean. Pure Water provides two main benefits to different groups: first, the Pure Water project allows the City to avoid the need for \$2 to \$4 billion in upgrades to the Point Loma WTP, which would be both legally required and borne by all Metro JPA wastewater ratepayers (including City ratepayers). Pure Water will also create a renewable source of water that will allow the City to buy less water from the City's water wholesaler, the San Diego County Water Authority, and thus benefit City water ratepayers.

Based on these benefits, Pure Water is funded by both the Metro Wastewater System and the City's water system. The Metro Wastewater System pays for the wastewater side of the Pure Water system (from the pump station diversion through the secondary treatment process) while the water system pays for the potable water side of the Pure Water system (including tertiary treatment, the Pure Water purification plant, and transport to reservoirs). This proportional split in costs recognizes that both groups benefit from the project.

Importantly, the initial Metro JPA agreement did not place sufficient restrictions on the characteristics of wastewater that Metro participating agencies could discharge, and the Pure Water project was not designed to treat the heavily concentrated residuals that would flow from a similar up-stream potable reuse project like that being pursued by the East County JPA. Given the impact the East County JPA project would have on the Pure Water System, in February 2021 the City and the East County JPA first entered into a residuals agreement that called for the City to pay for the entire cost of a residuals line to avoid their residuals impacting Pure Water. The agreement was amended in December 2022, and approved by Council in January 2023, and included a cost split that has the East County JPA now paying for a portion of the residuals line. The agreement before Council now retains that cost split and updates the overall costs for the project.

FISCAL/POLICY ANALYSIS

This analysis focuses on the cost splits included in the agreement, including the rationales for the payments of each entity. We also cover the main drivers for cost increases and the implications of not moving forward with the updated agreement.

Cost Allocations

Each of the two projects covered by this agreement have specific cost allocation methodologies applied to them to determine which entity and fund pays for which project. Beginning with the residual brine line project, the City's water customers will pay \$69.6 million (87%), the Metro JPA

² The members are Padre Dam Municipal Water District, the City of El Cajon, and the County of San Diego.

\$1.3 million (2%), and the East County JPA \$9.1 million (11%). However, these costs are being allocated in the context of the entire brine line system for Pure Water as a whole, which includes additional brine lines for both phases of Pure Water. The tables below provide additional detail.

There are three entities that will receive benefits from the brine line projects – the City’s water system (water ratepayers), the Metro JPA (wastewater dischargers), and the East County JPA. Cost allocations in the agreement are based on the proportional benefit of each party, and also take into account the overall costs and benefits of the Pure Water program. The majority of costs for both projects are allocated to the City’s water system, though meaningful cost proportions are also allocated to the Metro JPA and the East County JPA.

To determine cost allocations, the City determined flows for all residual systems, including brine flows from Pure Water phases 1 and 2, as well as the brine from the East County JPA’s water purification project. The Metro Pure Water Centrate includes centrate from the Metro Biosolids Center, which is considered part of the Metro System’s costs for Pure Water, as well as the centrate from the East County JPA, which is also a Metro System cost.

Cost Basis for Residuals Infrastructure		
Entity Responsible/Flow Sources	Flow Amounts (MGD ADF)	% of Total
<i>San Diego Water</i>		
Pure Water Phase 1 Brine	6.00	25.9%
Pure Water Phase 2 Brine	9.50	41.0%
<i>San Diego Water Subtotal</i>	<i>15.50</i>	<i>66.9%</i>
<i>Metro System</i>		
Metro Pure Water Centrate Phase 1 & Phase 2	6.90	29.8%
Metro East County Centrate	0.10	0.4%
<i>Metro System Subtotal</i>	<i>7.00</i>	<i>30.2%</i>
East County AWP Brine	0.68	2.9%
Total	23.18	100.0%

MGD ADF: Millions of Gallons per Day and Average Daily Flows

The agreement allocates costs for the various brine systems based on these allocations. The total cost for each residuals line, including the cost per entity, is presented below. When all costs are added together, the percentage of each entity’s costs is equal to their total percentage of flows shown above.

Payer Responsibility by Project (\$ in millions)				
Projects	Costs	San Diego Water	Metro System JPA	East County JPA
North City Pure Water Residuals Line	\$ 95.4	\$ 57.3	\$ 38.2	\$ -
East County Residuals Line	\$ 80.0	\$ 69.6	\$ 1.3	\$ 9.1
Pure Water Phase 2 Residuals Line	\$ 135.4	\$ 81.1	\$ 54.4	\$ -
Total Residuals Infrastructure Costs	\$ 310.9	\$ 207.9	\$ 93.9	\$ 9.1
<i>Percentage of Cost</i>		<i>66.9%</i>	<i>30.2%</i>	<i>2.9%</i>

Ultimately, costs are allocated in proportion to each entity's benefit from the various water recycling projects, and taking into account their proportion of flow. As San Diego water customers are the financial beneficiaries of the potable water created by Pure Water, they are responsible for a portion of the costs of all the brine lines. Similarly, the East County JPA benefits from water produced by its purification system, and is responsible for a portion of costs for the East County residuals line. The Metro System benefits by avoiding costly upgrades to the Point Loma WTP and is responsible for a portion of all brine lines.

The other project in this agreement is the East Mission Gorge Force Main project, which is necessary to keep wet weather flows from inundating the City's wastewater system and is in need of repairs as well as additional upgrades due to the impact of the East County JPA water purification project. This project, which totals \$101.3 million, is being split 60%/40% between the East County JPA (\$60.8 million) and the City's Municipal Sewer Fund (\$40.5 million). This cost allocation split is consistent with historical agreements for how all costs for the force main have been split.

Cost Escalations

While allocations are based on both flows and beneficiaries of the system, and are not changing from what was adopted in January 2023, the amendments presented to the Council update the costs for the projects now that they have reached 90% design. Together, costs for these projects have increased by \$54.3 million, to a total of \$111.4 million. Of that increase, \$37.4 million is associated with the residuals line and \$16.8 million with the force main.

Based on our discussions with both PUD and the East County JPA, most of the cost escalation is due to a combination of scope changes that were unforeseen during a conceptual phase, and inflation that has continued throughout the construction market. Some of the significant scope changes leading to increased costs include:

- Ensuring the force main remains operational throughout the repairs and upgrades made to it (\$12 million);
- Requirements to tunnel under SR-52 (\$10 million);
- New design features for the residuals line to improve operational efficiency and reduce ongoing maintenance costs (\$5 million);
- Meeting the requirements of the City's new Street Preservation Ordinance which was not in effect at the time of the conceptual design (\$2.5 million); and
- A longer timeline (increasing from 18 to 34 months) to minimize impacts to environmentally sensitive areas (Mission Trails Regional Park) and safety considerations, which increase overall labor, equipment, and materials costs.

We note that our Office is currently preparing an analysis of construction inflation trends more generally, including an examination of the differences between engineering cost estimates and


actual construction bids, to determine any root causes or areas of specific concern. We plan to present that analysis to Council or Committee, along with potential recommendations, in the first half of 2025.

That noted, for these particular projects, even with these significant cost escalations, the new total costs for these projects remain lower than the costs that would be associated with abandoning the agreement altogether. Absent these projects, the residuals that the East County JPA project will produce will flow to the Morena Pump Station and jeopardize operations of Pure Water Phase 1, which is currently moving towards completion. If the East County’s residuals are not diverted from Pure Water, the City will have to pause construction or operation of Phase 1 and seek costly reengineering to allow Phase 1 to process the residuals of the East County project. Provided an engineering solution could be found, the redesign and additional construction of Pure Water Phase 1 would likely be more expensive than costs of the line and force main contemplated in this agreement. It is also possible that no feasible engineering solution could be found, in which case the City would be jeopardizing the over \$1 billion investment it has made for Pure Water to date. As such, the contributions of the City towards these projects should be considered in the larger context of the costs to build, operate, and maintain the overall Pure Water system, as well as the larger system of several residual lines as a whole.

CONCLUSION

Our Office recommends Council approve the amended agreement during its second reading on January 14th. While costs associated with the agreement have increased significantly since it was initially adopted by the Council, the actual proportional splits in the agreement remain the same those approved in 2023, and considering alternatives – such as reengineering of Pure Water or the need to make \$2 to \$4 *billion* in upgrades to the Point Loma WTP if Pure Water is not completed, this agreement – and its costs – represent a net benefit to City ratepayers.

We would like to thank PUD for meeting with us and answering all of our questions in regard to this agreement, and we remain available to the City Council if additional questions should arise.



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