



CITY COUNCIL AGENDA ITEM NO. G.3
11/14/2023

SUBJECT: Consideration and direction related to the cost-benefit analysis for the possible outsourcing of wastewater lateral repair work.

DEPARTMENT: Public Works

STAFF: Casey Wichert, Director of Public Works

TITLE/RECOMMENDATION

That the City Council receive the informal cost-benefit analysis for the possible outsourcing of new budgeted positions for the wastewater lateral repair and/or replacement work as identified in and funded by the FY 2023-24 – 2027/28 Wastewater Enterprise Rate Study, and provide direction.

FISCAL IMPACT

Fiscal impact related to this item will vary depending on Council's direction. The FY 2023/24 – 2027/28 rate study adopted in June 2023, included a placeholder of \$694,250 in annual funding and \$450,000 for personnel, equipment and supplies for a citywide wastewater lateral repair project beginning in FY 2024/25. An additional \$450,000 in one-time start-up costs was also included.

The annual estimated in-house cost is **\$877,679 - \$1,263,679**. The annual estimated cost to contract out this project is **\$1,798,500 - \$5,824,500**. Should Council direct staff to proceed with contracting out this work, the Wastewater Enterprise would need to absorb the significant additional annual costs for this project. Doing so would require the Wastewater Enterprise to expend cash reserves more quickly until a new rate study could be completed to fund the additional expense.

BACKGROUND

A city-wide wastewater lateral repair project is necessary because a high number of wastewater lateral connections have failed. Lateral connections to individual residences are four-inch pvc pipes. Over time, as land settles and compacts, the lateral pipes can become separated or disconnected. This typically happens at the property line because residential lots are not graded and compacted to the same degree the adjacent streets are. Because the streets are compacted and paved, they



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do not settle as much as the ground on a residential lot settles. When the residential lot settles more than the road, the stress on the pvc pipe causes it to break or separate. When these pipes separate, debris can get hung up on the edges of the pipes and there is an increased risk of sewage backing up and overflowing.

The State Water Board regulates and prohibits sewer overflows. The City is required to identify and repair these potential sewer overflows as part of the Sanitary Sewer Management Plan.

Options available to the City regarding separated or disconnected lateral pipes are:

- 1) do nothing, resulting in an increased risk of sewer overflows (a violation of State law) which could result in fines and penalties,
- 2) perform the necessary repairs using City staff and resources, or
- 3) contract out the work using consultants and general contractors.

In response to Council's request to prepare an informal cost-benefit analysis for the possible outsourcing of new non-essential budgeted positions, staff has researched the approximate cost to contract out the repair and/or replacement of sewer laterals throughout the City. The Wastewater Division is responsible for the maintenance and repair of 20,065 residential sewer laterals. The following analysis assumes contracting out the repair or replacement of 200 sewer laterals annually ("Project").

COST TO CONTRACT OUT THE PROJECT

In order to contract out this Project, the State Public Contract Code requires a formal bid process. The formal bid process requires insurance, bonds, bid documents, prevailing wages, and other administrative requirements. This process is significantly more involved than simply asking a contractor to provide a quote for services.

In order for a contractor to provide firm pricing, formal project plans and specifications must be prepared, certified, and stamped by an Engineer. Without detailed plans, there are simply too many unknown variables for a contractor to accurately predict, plan, and price out the work to be done. Formal plans and specifications allow the City and contractor to enter into a legally binding contract, which describes the work to be performed, and the responsibilities of each party clearly defined. Among other things, this allows the parties to avoid disputes and limit change orders to the greatest extent possible.

The engineering effort required to develop plans and specifications to the level necessary to formally bid out this project is significant. For instance, staff spent approximately 180 hours developing 13 pages of plans for this year's Pavement



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Management Program (PMP)-asphalt project. A wastewater lateral repair Project would require plans that are significantly more complicated than the PMP project, and likely result in a plan set of roughly 20 pages, which would take approximately 300 hours to produce. Given current workloads and projects, providing an additional 300 hours of Engineering staff time to prepare these plans would delay other projects. As a result, the City would likely contract out the engineering portion of this project to develop the plans. Using an hourly rate of \$200, staff estimates it would cost roughly \$60,000 to have a set of plans and bid documents prepared by a consulting engineer.

Without a set of plans and bid documents, it is impossible to get an exact price per lateral repair from a contractor, as several factors influence the price of the work for each lateral. For example, laterals that are less than five feet below grade do not require shoring, which makes the work considerably easier to perform, and thus less expensive than repairs to lines deeper than five feet. Another factor is how much of the pipe needs to be replaced. If the repair can be completed without disturbing the asphalt roadway, curb, and gutter, the cost is significantly reduced. Repairs requiring significant roadwork escalate costs.

Staff reached out to multiple contractors and received estimates ranging from \$7,500 to \$25,800 per lateral. Without a set of plans and bid documents, there is no way to narrow down this price range, so the cost analysis is presented with a high and low range.

Contracting out this Project would also require additional work for inspection and management of the project. Stormwater regulations, construction inspection, and contract administration would be additional costs to the Project. The cost to contract out construction inspection services for this project is estimated to be \$75,000. Additionally, when contracts are awarded, a 10% contingency is included to address any changes or unforeseen issues that may arise during the course of the project.

The table below summarizes the estimated cost to contract out for 200 sewer lateral repairs and/or replacements annually.

Preparation of Engineering Documents	\$60,000
Price per Lateral:	
Low-end Estimate: \$7,500 * 200	\$1,500,000
High-end Estimate: \$25,800 * 200	\$5,160,000
Construction Inspection and Administration	\$75,000
Contract Contingency (10%)	\$163,500 - \$529,500
Total Annual Cost:	\$1,798,500 - \$5,824,500



COST TO PERFORM THE PROJECT IN-HOUSE

If this Project is performed in-house by City staff, no engineering, inspection, contingency, or additional administrative costs associated with managing a public works project contract would be required to perform this work. This additional work and its associated cost are not needed when the work is performed by in-house staff for several reasons including: field staff’s intimate knowledge of the system; no legal contract documents to follow; no regulatory requirements associated with construction projects; no potential breach of contract claims; and no change-order negotiations. Staff can simply do the work as necessary without additional administrative burdens associated with Public Contract Code requirements.

Material costs will range from \$700 - \$2,000 per lateral. The majority of the cost is in the labor. Staff’s recommendation to hire three Wastewater Collection System Workers and two Street Maintenance Workers would be sufficient to perform 200 sewer lateral repairs annually.

The table below summarizes the estimated cost to hire additional personnel and perform 200 sewer lateral repairs annually. The approved rate study included placeholder funding for costs shown in the table below.

Preparation of Engineering Documents	N/A
Price per Lateral (Materials):	
Low-end Estimate: \$700 * 200	\$14,000
High-end Estimate: \$2,000 * 200	\$400,000
Construction Inspection and Administration	N/A
Contract Contingency (10%)	N/A
Annual Salary and Benefits	\$784,278
Annual Vehicle Maintenance & Replacement Costs	\$79,401
Total Annual Cost:	\$877,679 - \$1,263,679

Unaccounted for in these cost comparisons are one-time costs associated with vehicle and equipment purchases necessary to perform this work in-house. Vehicle and equipment purchase costs of \$450,000 are necessary if additional staff are hired. This one-time cost was included in the rate study adopted in June, and estimated ongoing maintenance and replacement costs for this equipment is included in this comparison.



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STAFF RECOMMENDATION

Staff's recommendation is to perform this Project in-house based on the cost implications. Staff are planning to include Project costs in the draft 2024/25 – 2025/26 Operating Budget for consideration of approval by the City Council in June of 2024. The draft Operating Budget would include requests for approval for the addition of the new positions necessary to perform the lateral maintenance (three Wastewater Collection System Workers and two Street Maintenance Workers), associated salary and benefit costs, and the cost for purchasing the necessary equipment and materials. The adopted FY 2023/24 – 2027/28 rate study included an annual cost placeholder in the amount of \$694,250 for the estimated costs of the Project commencing in FY 2024/25. Additionally, \$450,000 was included in the study for one-time vehicle and equipment purchases.

CITY COUNCIL STRATEGIC INITIATIVE

Focus Area 1: Goal 2 Water, Wastewater, and Solid Waste Services: Provide safe and sustainable water, wastewater, and solid waste services for the build-out of the City per the City's General Plan.

PREVIOUS ACTION

Previous Action by the City Council is included on Attachment 1.

ENVIRONMENTAL DETERMINATION

Not Applicable.

ATTACHMENT(S)

1. Previous Action