



**DATE:** December 7, 2021

**TO:** Mayor and City Council

**FROM:** Director of Public Works

**SUBJECT** Adopt an Initial Study/Mitigated Negative Declaration and a Resolution Approving the Plans and Specifications, and Call for Bids for the Water Line Improvements Project, Project No. 07093

**RECOMMENDATION**

That Council adopts a resolution (Attachment II) that

- 1) Adopts the Initial Study/Mitigated Negative Declaration (Attachment III) prepared in compliance with the requirements of the state environmental regulations, and
- 2) Approves the plans and specifications for the Water Line Improvements Project, Project No. 07093, and calls for construction bids to be received on January 11, 2022

**SUMMARY**

The City has completed the environmental analysis for the construction of the Water and Sewer Line Improvements Project (Project) in accordance with the California Environmental Quality Act (CEQA). The current Capital Improvement Program includes funding to replace and/or improve main lines in the City’s water distribution and sewer collection systems. Combining both water and sewer projects into one analysis allows for better design efficiencies and economies of scale. A draft Initial Study and Mitigated Negative Declaration (IS/MND) has been prepared and circulated for public review. The City received no public comments upon completion of the thirty-day review period. The sewer main improvement part of the Project is currently under design and will be issued for bidding separately.

The Water Line Improvement Project will improve water supply reliability by replacing approximately 26,600 linear feet of existing cast iron, ductile iron (DIP), and asbestos cement (ACP) pipes ranging from 4 to 12-inch with new 6, 8, or 12-inch polyvinyl chloride (PVC), ductile iron (DIP), or earthquake resistant ductile iron (ERDIP) pipes. This project takes place at fourteen locations throughout the City (Attachment IV). Approximately 26,000 linear feet will be replaced by traditional open-cut method, and another approximately 600 linear feet will be replaced by trenchless technology used to cross under obstructions that prohibit open-cut installation. Design has been completed and bid documents have been prepared. Staff is requesting Council’s approval of the plans and specifications and call for bids to be received on January 11, 2022.

## **BACKGROUND**

The City's current Capital Improvement Program includes funding to replace the City's water mains to improve supply reliability and fire flow through annual water line replacement projects. The City has approximately 375 miles of water distribution pipeline, of which approximately 67% consists of asbestos cement pipe and a majority of the existing pipelines are 6 inches in diameter. The water line locations were selected by staff for a variety of reasons including being undersized, having exceeded service life, frequency of breaks, and/or upgrades needed for supply reliability and fire flow improvements.

On September 15, 2020<sup>1</sup>, Council approved Resolution No. 20-141, authorizing the City to enter into a Professional Services Agreement with HydroScience Engineers, Inc. (HydroScience), for design services and technical support during construction.

## **DISCUSSION**

In June 2021, Analytical Environmental Services (AES), subconsultant to HydroScience, started preparation of the Environmental Assessment for the combined Sewer and Water projects pursuant to CEQA. The environmental assessment includes review and analysis of the major State environmental issues that may be affected by the construction and operation of the Sewer and Water projects.

In August 2021, AES submitted a draft IS/MND for public review. Potentially significant environmental effects that were addressed in the IS/MND include, but are not limited to, aesthetics, agricultural resources, air quality, biological resources, cultural resources, hydrology/water quality, and traffic and transportation. All potential significant environmental impacts were found to be avoided or would result in less than significant impacts with the incorporation of mitigation measures.

As shown in Attachment IV, the water main improvements include replacing approximately 26,600 linear feet of existing 4, 6, 8, and 12-inch cast iron, ductile iron, and asbestos cement pipes at 14 locations throughout the City. These segments have been selected based on performance and maintenance data over the past several years. Recommended projects from the 2014 Water System Master Plan, including upsizing undersized water mains and installing new water lines, were also incorporated to address capacity deficiencies within the existing water distribution system, satisfy future capacity requirements, and provide sufficient fire flow.

Approximately 26,000 linear feet of water main will be replaced by traditional open-cut method constructed in segments to minimize the impact to customers and traffic. The work generally involves excavating a trench two to three feet in width and four to six feet deep parallel to the water main to be replaced, typically eight feet or more away from the existing water main. After a segment of new water main has been installed and tested, service connections are expeditiously transferred from the old water main to the new one such that water service is typically restored within two hours. After all services have been

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<sup>1</sup> <https://hayward.legistar.com/LegislationDetail.aspx?ID=4640098&GUID=DAAB6C51-8A86-47A4-B5D0-35F45982BD1F&Options=&Search=>

transferred to the new water main, the remaining portions of the old water main are abandoned in place.

The remaining 600 linear feet will be replaced by trenchless pipe replacement techniques including bore and jack and micro tunneling where open-cut installation is impossible. The bore and jack method generally utilizes a boring head that is driven into the ground together with a protective steel casing using jacking equipment. The boring head cuts through and extracts the soil and the steel casing allows installation of new water mains crossing under obstructions such as railroad tracks, storm culverts, and flood channels. The micro tunneling method is a newer technology similar to bore and jack and is used to install larger diameter or longer pipe runs.

Construction is anticipated to begin in spring 2022 and take approximately 12 months.

### **ECONOMIC IMPACT**

The community will enjoy the benefits of the Project, including the continued operability and serviceability of the water distribution system. Furthermore, a robust and reliable water infrastructure can help foster economic development and viability in the City.

Replacing the water mains and appurtenances are part of an effort to, pursuant to Council direction, modernize and upgrade existing infrastructure. The Project will reduce operations and maintenance costs associated with servicing the undersized and aging water mains. In addition, staff time attending to issues related to high frequency maintenance and system breaks will be reduced.

### **FISCAL IMPACT**

The estimated costs for the Water Line Improvements Project are as follows:

Construction Contract with Contingency (Estimated)	\$11,470,000
Construction Administration – City Staff (Estimated)	\$400,000
Inspection & Testing (Estimated)	<u>\$600,000</u>
Total	\$12,470,000

The adopted FY 2022 CIP includes \$10,538,000 for the Project, Project No. 07093. The construction cost is an engineer’s estimate. Given the current construction bidding climate, the City needs to go through the bidding process to determine what the Project’s budget needs will be. At that time staff would return to Council to request whether additional funds need to be appropriated to cover the total cost of the Project.

### **STRATEGIC ROADMAP**

This agenda item supports the Strategic Roadmap, which includes Improve Infrastructure as one of the strategic priorities. Specifically, this item relates to the implementation of the following project:

Project 13b: Replace 4-6 miles of water pipelines annually.

## **SUSTAINABILITY FEATURES**

The repair and replacement of deteriorating water lines would reduce potable water and energy losses.

## **PUBLIC CONTACT**

The Draft IS/MND was circulated for a thirty-day public review period, starting from August 13 through September 13, 2021. A newspaper publication was printed on August 12, 2021 informing the public about the availability of the IS/MND. Copies of the IS/MND were available for review online and posted at the Alameda County Clerk's Office as well as the State Clearing House for distribution. The City received no public comments upon conclusion of the thirty-day review period.

Prior to and during construction, notices will be provided to affected residents, property, and business owners to inform them of the nature and purpose of the work, potential impacts, work schedule and City contact for additional information. In addition, staff will separately contact any large employers and schools that may be affected by the project and coordinate work to minimize impact.

## **NEXT STEPS**

If Council approves the project, staff will advertise the construction project for public bidding and return to Council for the award of the construction contract, after construction bids have been received and reviewed.

The following schedule has been developed for this project:

Receive Bids	January 11, 2022
Award Construction Contract	February 8, 2022
Notice to Proceed	March 4, 2022
Construction Completion	March 10, 2023

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*Reviewed by:* Tay Nguyen, Senior Utilities Engineer

*Recommended by:* Alex Ameri, Director of Public Works

Approved by:



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Kelly McAdoo, City Manager