



**BUSINESS OF THE CITY COUNCIL
CITY OF MERCER ISLAND**

**AB 6151
September 20, 2022
Consent Agenda**

AGENDA BILL INFORMATION

TITLE:	AB 6151: 2023 Water System Improvements Design – Budget Appropriation	<input type="checkbox"/> Discussion Only <input checked="" type="checkbox"/> Action Needed: <input checked="" type="checkbox"/> Motion <input type="checkbox"/> Ordinance <input type="checkbox"/> Resolution
RECOMMENDED ACTION:	Appropriate the required funds to complete design work for the 2023 Water System Improvements.	

DEPARTMENT:	Public Works
STAFF:	Jason Kintner, Chief of Operations/Public Works Director Clint Morris, Capital Division Manager George Fletcher, CIP Project Manager
COUNCIL LIAISON:	n/a
EXHIBITS:	1. 2023 Water System Improvements – Vicinity Map
CITY COUNCIL PRIORITY:	n/a

AMOUNT OF EXPENDITURE	\$ 489,400
AMOUNT BUDGETED	\$ 229,000
APPROPRIATION REQUIRED	\$ 260,400

EXECUTIVE SUMMARY

The purpose of this agenda bill is to outline the scope of the 2023 Water System Improvements project and to request an appropriation to fully fund the design costs.

- The approved 2021-2022 Capital Improvement Program (CIP) includes funding the design for the anticipated 2023 Water System Improvements. This project (WU0109) will replace approximately 8,000 linear feet of undersized water mains in several neighborhoods on the north end of Mercer Island.
- It is normal practice to design next year’s project in the current year to be able to construct the project during the late spring to summer months, as well as put the project out to bid before the “busy” summer season to get the best pricing possible.
- During the 2023-2028 CIP planning and budgeting process, the need to accelerate replacement of aging water infrastructure was deemed a priority and integrated into the preliminary Six-Year CIP.
- The proposed 2023 Water System Improvements Project scope has expanded from replacing 2,700 linear feet of water main to approximately 8,000 linear feet due to aging infrastructure.
- An appropriation of \$260,400 is requested from the Water Fund Balance to cover the additional costs of design work in 2022 due to the increased amount of work to be constructed in 2023.

BACKGROUND

Providing safe and reliable drinking water for the community is a top priority for the City of Mercer Island and for the Public Works Department. The 2022 Limited Water System Plan Update of the 2015 Water System Plan establishes the following goals:

1. Preserve public health and safety,
2. Maintain adequate water volume for firefighting,
3. Maintain adequate water volume for basic sanitation, and
4. Maintain consumptive value and water quality.

The City's water distribution system includes over 113 miles of water mains of varying age, size, material, and condition. Most of the system is composed of cast iron and ductile iron pipe, but there are nearly five miles of asbestos cement (AC) pipe and one mile of steel pipe. Pressurized AC pipe is a material known for developing leaks and breaks as it nears the latter part of its expected life. The AC pipe in the Mercer Island water system was mostly installed in the late 1950's and early 1960's, making it the oldest piping within the distribution system. There is also a significant amount of undersized cast iron pipe (4" and 6" size) within the system, which also dates to the early 1960's. A key priority in the City's Water CIP is to replace aging water mains.

As part of the CIP budget development process, staff evaluate and rank water main replacements using a scoring matrix, which includes pipe condition, material type and age, maintenance history (i.e., watermain breaks), fire flow, and water quality to prioritize water mains for replacement. This priority replacement list is then compared against other planned City utility and street projects and adjusted when necessary, so utility work occurs one to two years ahead of planned street improvements.

ISSUE/DISCUSSION

During the 2023-2028 CIP budget development process, staff expanded planned water system replacements into two programs: the replacement of aging and undersized cast iron water mains, and the replacement of asbestos cement (AC) water mains. Staff also recommended the replacement of all AC pipe be completed by 2028 as a risk reduction measure. This expanded plan essentially doubles the annual amount of water mains to be replaced over the next six years.

The current project limits for the proposed 2023 Water System Improvements have been divided into three work schedules as follows (refer to Exhibit 1):

Schedule A will replace approximately 3,000 linear feet of undersized 6" cast iron water mains with new 8" ductile iron water mains on portions of 60th and 62nd Avenues in the East Seattle neighborhood.

Schedule B will replace approximately 2,800 linear feet of undersized 4" and 6" cast iron water mains with new 8" ductile iron water mains near the 7400 block of North Mercer Way and in the 2200 to 2700 blocks of 73rd and 74th Avenues.

Schedule C will replace approximately 2,300 linear feet of undersized 4" cast iron water mains with new 8" ductile iron water mains on portions of SE 37th Place, SE 41st Street, and SE 42nd Street in the 7600 to 7800 blocks.

The scope of work also includes replacing all fire hydrants, water services, and air/vacuum valve assemblies. In total, approximately 8,000 linear feet of water mains are planned to be replaced. The old water mains and service lines will be abandoned in place and left in the ground.

Design Budget

The scope increase exceeds the available budget planned in 2022. To proceed with a design contract for the proposed 2023 construction in its entirety, an appropriation from the Water Fund is needed. A breakdown of the design costs including survey contract, design contract, and project management are summarized in the following table.

2023 WATER SYSTEM IMPROVEMENTS	TOTAL
Survey Contract	\$106,500
Design Contract	\$262,900
Project Management/Utility Team Coordination	\$120,000
Total Design Costs	\$489,400
Total Approved Design Budget (2021-2022)	\$229,000
Additional Budget Needed	\$260,400

NEXT STEPS

City staff is finalizing a contract with Axis Surveying and Mapping for site surveying work, which is required before any detailed design work can begin. Upon approval of additional funds for design, staff will proceed with contracting with an engineering firm for project design. The project's current timeline calls for design work to be completed by April 2023 and the project to be advertised for construction bids in May 2023. Construction is anticipated from June to December 2023.

RECOMMENDED ACTION

Appropriate \$260,400 from the Water Fund balance to fully fund design work on the 2023 Water System Improvements Project.