

Water Utility

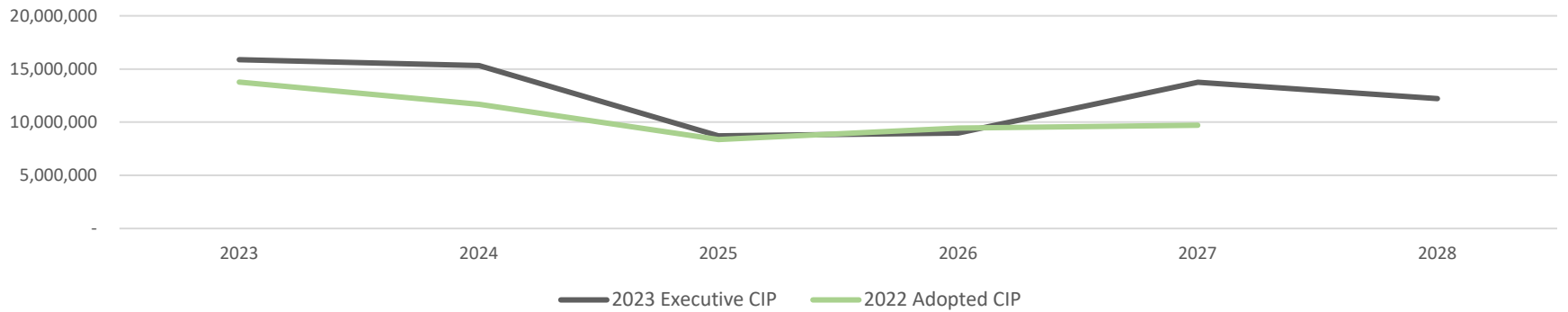
Capital Improvement Plan

Project Summary: Executive

	2023	2024	2025	2026	2027	2028
Atwood Avenue	390,000	-	-	-	-	-
Booster Pump Station #213 Lakeview Reconstruction	-	-	-	188,000	1,161,000	877,000
Booster Pump Station 128 Upgrade	-	-	-	-	-	92,500
Chlorinators & Florinators Program	95,000	95,000	95,000	95,000	35,000	35,000
High Point/Raymond/MidTown	25,000	-	-	-	-	303,000
Olin Building Improvements	500,000	-	-	-	-	-
Outer Capitol Loop Southeast	-	193,000	-	-	-	-
Park Street, South (Olin to RR)	21,000	-	437,000	-	-	-
Pleasant View Road - Phase 1	120,000	-	-	-	-	-
Unit Well 12 Conversion to a Two Zone Well	-	-	-	263,000	3,754,000	41,000
Unit Well 14 - Sodium and Chloride Mitigation	150,000	1,500,000	-	-	-	-
Unit Well 15 - PFAS Treatment Facility	433,000	5,085,000	-	-	-	-
Unit Well 8 - Reconstruction	-	-	-	-	-	88,000
Unit Well Rehab Program	360,000	371,000	382,000	393,000	405,000	417,000
Water Hydrants Program	400,000	412,000	424,000	437,000	450,000	464,000
Water Mains - New	20,000	768,000	108,000	228,000	454,000	454,000
Water Mains Replace Rehab Improve - Pavement Management	1,576,000	467,000	1,485,000	681,000	1,370,000	1,133,000
Water Mains Replace Rehab Improve - Pipe Lining	524,000	1,065,000	1,172,000	1,459,000	1,458,000	1,054,000
Water Mains Replace Rehab Improve - Reconstruct Streets	124,000	1,995,000	1,564,000	2,531,000	1,739,000	2,077,000
Water Meter and Fixed Network Program	526,000	539,000	552,000	566,000	580,000	595,000
Water Utility Facility Improvements	1,513,000	1,857,000	1,638,000	1,405,000	1,447,000	1,490,000
Water Utility Vehicles & Equipment	754,000	701,000	813,000	690,000	702,000	681,000
Water Valve Cut-In Program	40,000	42,000	44,000	46,000	47,000	48,000
Well 19 Iron and Manganese Filter	8,116,000	81,000	-	-	-	-
Well 27 Iron & Manganese Mitigation	63,000	-	-	-	-	-
Well 28 Iron & Manganese Mitigation	63,000	-	-	-	-	-
Well 30 Iron & Manganese Mitigation	63,000	-	-	-	-	-
Westside Water Supply	-	-	-	-	153,000	2,370,000
Wilson St (MLK to King)	-	157,000	-	-	-	-
	\$ 15,876,000	\$ 15,328,000	\$ 8,714,000	\$ 8,982,000	\$ 13,755,000	\$ 12,219,500

Changes from 2022 CIP

2023 Capital Improvement Plan
2023 Executive vs. 2022 Adopted



Major Changes

- Atwood Avenue
 - Project budget decreased by \$1.5m due to reduced pipe replacement scope
- Booster Pump Station #213 Lakeview Reconstruction
 - Project delayed from 2024-2025 to 2026-2027, and \$877k in construction funding added in 2028; project was delayed to allow for needed work on Unit Wells #15 and #19
- Booster Pump Station #128 Upgrade
 - \$93k revenue bond-supported project added to the CIP in 2028 to increase pump station capacity at the Blackhawk Booster Pumping station on the west side
- Chlorinators & Florinators
 - Program budget increased \$217k from 2023 through 2027 due to need for replacement of all chlorine analyzers over a four-year period
- High Point/Raymond/MidTown
 - Project added in 2023 and 2028 to align with the Engineering - Major Streets proposed road construction project
- Olin Building Improvements
 - \$500k reserves supported project added in 2023 to expand the parking lot at 110 East Olin Avenue; project will occur in conjunction with development of the Streets Olin drop-off site
- Outer Capitol Loop Southeast
 - Project delayed from 2023 to 2024 and budget increased \$166k to coordinate with the Judge Doyle Square Development
- Pleasant View Road - Phase 1
 - Project budget decreased \$685k to reflect reduced pipe work needs identified during design phase
- Unit Well 12 Conversion
 - Project delayed from 2023-2025 to 2026-2028 to accommodate work on Unit Wells 14, 15, and 19
- Unit Well 14 - Sodium and Chloride Mitigation
 - \$1.7m project funded by revenue bonds added to the CIP in 2023 and 2024
- Unit Well 15 - PFAS Treatment Facility
 - \$5.5m project anticipated to be funded by Safe Drinking Water loans added to the CIP in 2023 and 2024
- Unit Well 8 Reconstruction
 - Project delayed to 2028 to accommodate work on Unit Wells 14, 15, and 19
- Unit Well Rehab Program
 - Program budget increased \$458k from 2023 to 2027 to reflect supply issues and inflation
- Water Hydrants Program
 - Program budget increased \$364k from 2023 to 2027 to reflect to reflect supply issues and inflation
- Water Mains Replace Rehab Improvements - Pavement Management
 - Program budget increased \$1.3m in revenue bonds from 2023 to 2027 to reflect addition of a phase of the Hammersly Road pavement management project in 2023, as well as additional work required on the Wilson/Broom/Henry and Segoe/Sheboygan projects
- Water Mains Replace Rehab Improvements - Pipe Lining
 - Program budget decreased \$346k in revenue bonds from 2023 to 2027 to reflect adjustments to the anticipated scope of the Lake Mendota Drive cured-in-placepipe project
- Water Mains Replace Rehab Improvements - Reconstruct Streets
 - Program budget decreased \$655k in revenue bonds from 2023 to 2027 to reflect that no full replacements are included in the Engineering - Major Streets scope for 2023
- Water Utility Facility Improvements
 - Program budget increased \$3.3m, funded by reserves, from 2023 to 2027 to reflect supply chain issues and inflation, as well as replacement of soon-to-be outdated network switches for cybersecurity and increase of budget for unexpected well and booster station mechanical failures in accordance with recent trends
- Water Utility Vehicles and Equipment
 - Program budget increased \$1.7m from 2023 to 2027 to reflect increased vehicle cost as well as the acquisition of a dump truck, back hoe, and additional costs for electric vehicle charging stations
- Water Valve Cut-in Program
 - Program budget increased \$124k from 2023 to 2027 to reflect supply chain issues and inflation
- Well 19 Iron and Manganese Filter
 - Project budget increased \$1.4m to reflect supply issues and inflation
- Well 27 Iron and Manganese Mitigation
 - \$63k revenue bond-supported project added to the CIP in 2023 to determine contaminant levels and options for mitigation
- Well 28 Iron and Manganese Mitigation
 - \$63k revenue bond-supported project added to the CIP in 2023 to determine contaminant levels and options for mitigation
- Well 30 Iron and Manganese Mitigation
 - \$63k revenue bond-supported project added to the CIP in 2023 to determine contaminant levels and options for mitigation
- Westside Water Supply
 - \$2.5m revenue bond-supported project added to the CIP in 2027 and 2028 to identify options for addressing the anticipated water

Water Utility

Budget Overview

2023 CIP by Expenditure Type

	2023	2024	2025	2026	2027	2028
Building	9,186,000	2,958,000	1,175,000	1,190,000	4,708,000	1,110,000
Land Improvements	500,000	-	-	-	-	-
Machinery and Equipment	2,950,000	7,271,000	2,305,000	2,410,000	3,376,000	2,329,500
Water Network	3,240,000	5,099,000	5,234,000	5,382,000	5,671,000	8,780,000
Total Expenditures	\$ 15,876,000	\$ 15,328,000	\$ 8,714,000	\$ 8,982,000	\$ 13,755,000	\$ 12,219,500

2023 CIP by Funding Source

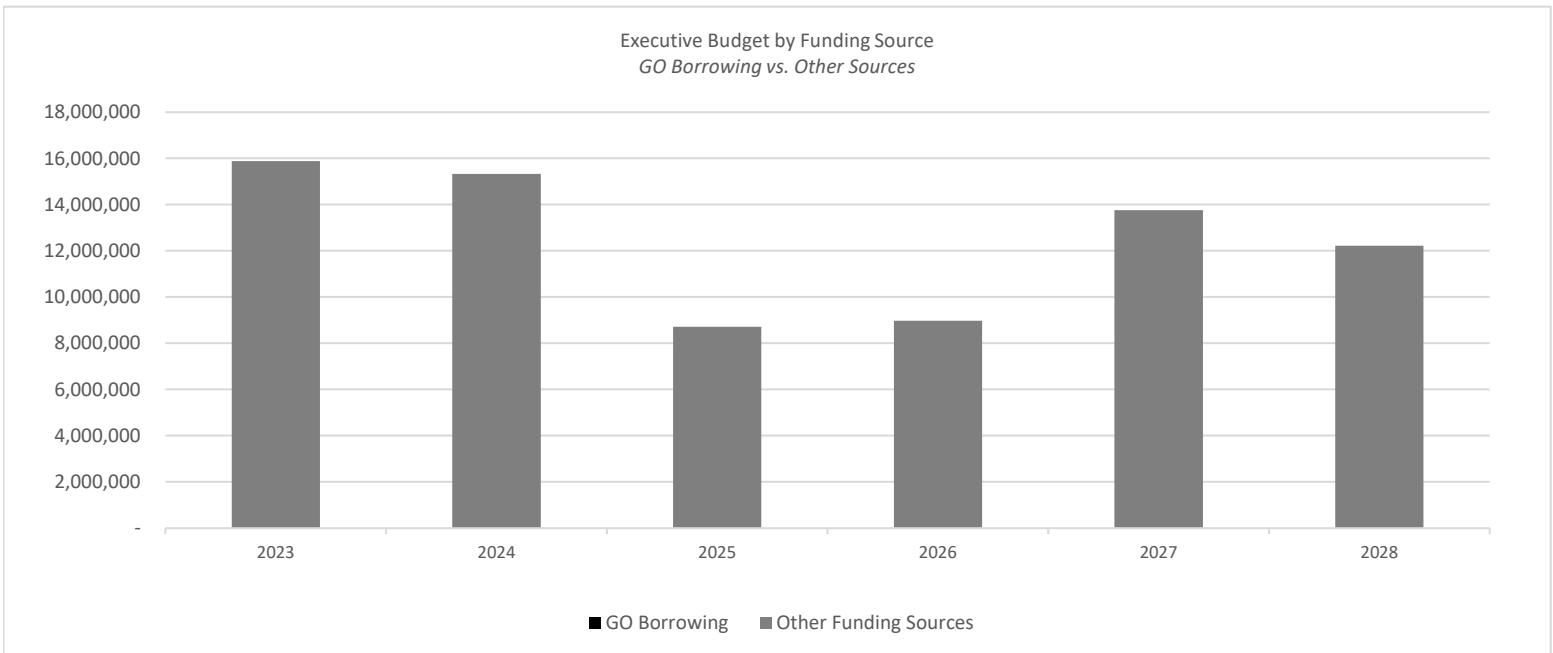
	2023	2024	2025	2026	2027	2028
Reserves Applied	4,188,000	4,017,000	3,948,000	3,632,000	3,666,000	3,730,000
Revenue Bonds	11,255,000	6,226,000	4,766,000	5,350,000	10,089,000	8,489,500
State Sources	433,000	5,085,000	-	-	-	-
Total Funding	\$ 15,876,000	\$ 15,328,000	\$ 8,714,000	\$ 8,982,000	\$ 13,755,000	\$ 12,219,500

Borrowing Summary

	2023	2024	2025	2026	2027	2028
Borrowing Schedule						
General Fund GO Borrowing	-	-	-	-	-	-
Non-General Fund GO Borrowing	-	-	-	-	-	-
Total GO Borrowing	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Annual Debt Service

General Fund GO Borrowing	-	-	-	-	-	-
Non-General Fund GO Borrowing	-	-	-	-	-	-



Water Utility

Budget Overview

Carry Forward GO Borrowing

	Unused Appropriation Authority	Reauthorized GO Borrowing
11984 ATWOOD AVE RECONSTRUCTION	26,723	-
13838 BLAIR ST	35,918	-
12386 CHLORINATORS & FLORINATORS PROGRAM	19,365	-
11574 COTTAGE GROVE ROAD	10,783	-
13835 CTH M	192,568	-
11130 GAMMON ROAD, SOUTH	99,531	-
10245 MCKEE RD (CTH PD) IMPROVEMENTS	68,790	-
10540 PAVEMENT MANAGEMENT	1,794,936	-
10284 PLEASANT VIEW ROAD	30,675	-
14004 PRESSURE ZONE RESILIENCY	224,969	-
10226 RECONSTRUCTION STREETS	2,151,936	-
10944 UNIT WELL NO. 8 RECONSTRUCTION	215,000	-
11168 UNIVERSITY AVE (SHOREWOOD-UNIV BAY)	135,956	-
12443 UW15 PFAS MITIGATION	122,000	-
10448 UW19 IRON & MANGANESE FILTER	69,485	-
12440 UW8 SENTINEL WELL	53,897	-
11894 WATER MAIN REPLACE PAVEMENT MGMT	532,205	-
11892 WATER MAIN REPLACE PIPE LINING	377,934	-
11893 WATER MAIN REPLACE RECNRCT STREET	143,435	-
12507 WATER MAINS NEW	72,800	-
10440 WATER UTILITY FACILITY IMPROVEMENTS	949,813	-
12385 WATER UTILITY HYDRANTS PROGRAM	247,013	-
12340 WATER UTILITY METER PROGRAM	295,166	-
12341 WATER UTILITY UW REHAB PROGRAM	412,951	-
12339 WATER UTILITY VEHICLE PROGRAM	253,676	-
12387 WATER VALVE CUT-IN PROGRAM	679	-
11900 WELL 14 MITIGATION	67,000	-
11459 WILSON ST (MLK - S HAMILTON)	23,437	-
	\$ 8,628,641	\$ -

Water Utility

Project Overview

Project	Atwood Avenue	Project #	11127
Citywide Element	Green and Resilient	Project Type	Project

Project Description

This project funds the reconstruction of Atwood Avenue from Fair Oaks Avenue to Cottage Grove Road to a three-lane boulevard with multi-use paths. Median and crosswalk enhancements are proposed for safe pedestrian crossing to Olbrich Gardens and Olbrich Park. The multi-use path will be utilized for the Lake Loop route around Lake Monona. A new pedestrian and bicycle bridge over the Starkweather Creek is included in the project. The goal of the project is to improve the facilities for pedestrians, bicyclists, motor vehicles and transit. Funding shown reflects the Water Utility component of the project.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Revenue Bonds	390,000	-	-	-	-	-
TOTAL	\$ 390,000	\$ -	\$ -	\$ -	\$ -	\$ -

Project	Booster Pump Station #213 Lakeview Reconstruction	Project #	12441
Citywide Element	Green and Resilient	Project Type	Project

Project Description

This project is for reconstructing the Lake View Booster Pumping Station. The goal of the project is to meet fire fighting requirements and expansion in Zone 5. A generator will also be added to ensure reliability of the pumping station in the event of a power outage. Pump capacity will be increased to 1200 gallons per minute.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Revenue Bonds	-	-	-	188,000	1,161,000	877,000
TOTAL	\$ -	\$ -	\$ -	\$ 188,000	\$ 1,161,000	\$ 877,000

Project	Booster Pump Station 128 Upgrade	Project #	12442
Citywide Element	Green and Resilient	Project Type	Project

Project Description

Pressure Zone 11 on the far west side is experiencing development pressure and growing. The Blackhawk elevated tank was completed and put into service in December 2018 and will support projected growth in the area. Pump station capacity at the Blackhawk Booster Pumping Station is a limiting factor and the pumps and electrical systems require upgrade. This proposal will increase firm pumping capacity from 1,000 gpm to 1,400 to 2,100 gpm. Design development is scheduled to start in 2028.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Revenue Bonds	-	-	-	-	-	92,500
TOTAL	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 92,500

Project	Chlorinators & Florinators Program	Project #	12386
Citywide Element	Green and Resilient	Project Type	Program

Project Description

This program rebuilds and replaces chlorinator and florinator equipment on a 10 year replacement cycle. The goal of this program is to reduce failures and service interruptions for safe and reliable water. Progress will be measured by the frequency of equipment failure.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Reserves Applied	95,000	95,000	95,000	95,000	35,000	35,000
TOTAL	\$ 95,000	\$ 95,000	\$ 95,000	\$ 95,000	\$ 35,000	\$ 35,000

Project	High Point/Raymond/MidTown	Project #	12454
Citywide Element	Green and Resilient	Project Type	Project

Project Description

This project funds the connection of water mains in the Marty Road area. When the project to complete the street and path network (as outlined in the High Point - Raymond Neighborhood Development Plan) goes forward, water infrastructure will be built to connect piping between Pressure Zones 8 and 9. This connection will increase operational resiliency in an area that is currently more isolated within the system than desirable.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Revenue Bonds	25,000	-	-	-	-	303,000
TOTAL	\$ 25,000	\$ -	\$ -	\$ -	\$ -	\$ 303,000

Project	Olin Building Improvements	Project #	14023
Citywide Element	Land Use and Transportation	Project Type	Project

Project Description

This project funds the Water Utility fleet and employee parking lot expansion along the southern end of the Water Utility property at 119 East Olin Avenue. This work will coincide with a City Engineering-led effort to create a new public access road to the drop off site adjacent to the Water Utility parcel. Both agencies will collaborate on proper grading; contaminated soil disposal; and storm water management requirements.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Reserves Applied	500,000	-	-	-	-	-
TOTAL	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -

Project	Outer Capitol Loop Southeast	Project #	10303
Citywide Element	Green and Resilient	Project Type	Project

Project Description

This project is for reconstructing the southeast section of the Outer Capitol Loop. The goal of this project is to improve the roadway's pavement quality rating and pedestrian experience. The pavement quality rating for the roadway is currently 4 of 10. The project's scope includes reconstruction of East Doty Street from Martin Luther King Jr. Boulevard to South Webster Street and South Pinckney from East Doty Street to East Wilson Street. Funding in 2023 is for construction. Funding shown reflects the Water Utility component of the project.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Revenue Bonds	-	193,000	-	-	-	-
TOTAL	\$ -	\$ 193,000	\$ -	\$ -	\$ -	\$ -

Project	Park Street, South (Olin to RR)	Project #	11133
Citywide Element	Green and Resilient	Project Type	Project

Project Description

This project is for reconstructing South Park Street. The goal of the project is to improve the pavement quality of the roadway. The current pavement rating is 4 of 10. The project's scope includes South Park Street from the railroad to Olin Avenue. Design is planned for 2023 and construction is planned for 2025. This timeline aligns with the Wisconsin Department of Transportation timeline.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Revenue Bonds	21,000	-	437,000	-	-	-
TOTAL	\$ 21,000	\$ -	\$ 437,000	\$ -	\$ -	\$ -

Project	Pleasant View Road - Phase 1	Project #	10284
Citywide Element	Green and Resilient	Project Type	Project

Project Description

This project is for reconstructing Pleasant View Road from US-14 to Old Sauk Road. The goal of this project is to expand the existing roadway and improve the pavement quality. The current pavement rating is 4 of 10. The project's scope includes construction of a four-lane roadway with multi-use path and sidewalk to replace the existing two-lane roadway. Construction is planned for 2022 and 2023. Funding shown reflects the Water Utility component of the project.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Revenue Bonds	120,000	-	-	-	-	-
TOTAL	\$ 120,000	\$ -	\$ -	\$ -	\$ -	\$ -

Project **Unit Well 12 Conversion to a Two Zone Well** Project # **10452**
 Citywide Element **Green and Resilient** Project Type **Project**

Project Description

This project is for rebuilding and expanding Well #12 located on South Whitney Way. The goal of the project is to provide water supply capacity to five existing pressure zones, which represents the majority of the City’s west side. The system flexibility provided by this project will improve service reliability and maximize water supply. Funding in 2026 is for design with construction to begin in 2027.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Revenue Bonds	-	-	-	263,000	3,754,000	41,000
TOTAL	\$ -	\$ -	\$ -	\$ 263,000	\$ 3,754,000	\$ 41,000

Project **Unit Well 14 - Sodium and Chloride Mitigation** Project # **11900**
 Citywide Element **Green and Resilient** Project Type **Project**

Project Description

Due to decades of road salt use on Madison city streets and in particular University avenue, Well 14 has elevated levels of sodium (Na) and Chloride (Cl). Efforts are underway to reduce the quantity of road salt used, however the levels currently in the groundwater will eventually reach the well. If the level of Na and Cl continues to rise, mitigation will be required. This project will fund a project to evaluate and develop alternatives for reducing the Na and Cl entering the drinking water system. Recommendations from this study could result in future work. The Water Utility intends to apply for State Safe Drinking Water Loans for this project.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Revenue Bonds	150,000	1,500,000	-	-	-	-
TOTAL	\$ 150,000	\$ 1,500,000	\$ -	\$ -	\$ -	\$ -

Project **Unit Well 15 - PFAS Treatment Facility** Project # **14092**
 Citywide Element **Green and Resilient** Project Type **Project**

Project Description

The contaminant, PFAS, has been detected at Well 15. While PFAS is not regulated at this time, there is significant concern about potential health impacts. To prepare for a change in the PFAS regulatory requirements, this project will investigate and study potential treatment options. A study that was performed on Well 15 gave guidance on how to proceed with improving the PFAS levels at Well 15. The Water Utility intends to apply for State Safe Drinking Water Loans for this project. The Water Utility intends to apply for Bipartisan Infrastructure Loan forgiveness for this project.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
State Sources	433,000	5,085,000	-	-	-	-
TOTAL	\$ 433,000	\$ 5,085,000	\$ -	\$ -	\$ -	\$ -

Project **Unit Well 8 - Reconstruction** Project # **10944**
 Citywide Element **Green and Resilient** Project Type **Project**

Project Description

This project will address elevated levels of iron and manganese at Well 8 that exceed Water Utility Board standards. Geographically, the well is located in a well developed area on the near east side of the system. This location is in proximity of Zones 6e, 6w, and 4. The facility was constructed in 1945 and will be demolished and rebuilt, allowing the well to serve these three zones, transferring water from the isthmus to the south east side of the service area. Challenges and limitations exists from the Kipp Corporation site, Olbrich Park and Lake Monona. Coordination with neighborhood groups and the Parks Department will be critical to project success. Preliminary planning work will commence in 2028.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Revenue Bonds	-	-	-	-	-	88,000
TOTAL	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 88,000

Project **Unit Well Rehab Program** Project # **12341**
 Citywide Element **Green and Resilient** Project Type **Program**

Project Description

This program is for the 10 year unit well upgrade projects as recommended by the Wisconsin Department of Natural Resources. The goal of this program is to ensure that all unit wells are functioning at an efficient level and to reduce annual maintenance costs. Progress will be measured by reduction of maintenance costs, fewer unit well failures, and compliance with the 10 year schedule.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Reserves Applied	360,000	371,000	382,000	393,000	405,000	417,000
TOTAL	\$ 360,000	\$ 371,000	\$ 382,000	\$ 393,000	\$ 405,000	\$ 417,000

Project **Water Hydrants Program** Project # **12385**
 Citywide Element **Neighborhoods and Housing** Project Type **Program**

Project Description

This program is for the annual raising, replacing and moving of water hydrants. The goal of this program is to maintain reliable service for fire suppression.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Reserves Applied	400,000	412,000	424,000	437,000	450,000	464,000
TOTAL	\$ 400,000	\$ 412,000	\$ 424,000	\$ 437,000	\$ 450,000	\$ 464,000

Project **Water Mains - New** Project # **12507**
 Citywide Element **Green and Resilient** Project Type **Program**

Project Description

This program is for installing new water mains throughout the City. The goal of the program is to strengthen and expand the existing distribution system, improve water pressure, improve fire protection, allow transfer of water between pressure zones, and to serve the growing areas of the City. Newly installed mains include hydraulic improvements consistent with the Water Utility Master Plan.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Revenue Bonds	20,000	768,000	108,000	228,000	454,000	454,000
TOTAL	\$ 20,000	\$ 768,000	\$ 108,000	\$ 228,000	\$ 454,000	\$ 454,000

Project **Water Mains Replace Rehab Improve - Pavement Management** Project # **11894**
 Citywide Element **Green and Resilient** Project Type **Program**

Project Description

This program is for replacing existing water mains in conjunction with the repaving of roads as part of the City’s Engineering-Major Streets Pavement Management program. The goal of the program is to update the water infrastructure, reducing the risk of pipe failure. The program aligns with the Water Utility’s goal to replace or rehabilitate over 400 miles of aging pipe within the City over a 40-year period to renew and maintain the system. Planned projects in 2023 include: Hammersley; South Broom Street/South Henry Street/ West Wilson Street; North Segoe Road/Sheboygan Avenue, 21C3B UW Madison-Engineering Drive/Randall Avenue/Dayton Street; and hydraulic improvements.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Revenue Bonds	1,576,000	467,000	1,485,000	681,000	1,370,000	1,133,000
TOTAL	\$ 1,576,000	\$ 467,000	\$ 1,485,000	\$ 681,000	\$ 1,370,000	\$ 1,133,000

Project **Water Mains Replace Rehab Improve - Pipe Lining** Project # **11892**
 Citywide Element **Green and Resilient** Project Type **Program**

Project Description

This program is for cured-in-place-pipe lining (CIPP) to improve the quality of existing pipes in the water network throughout the City. The goal of the program is to lengthen the useful life of the pipes at a lower cost than replacing the pipe. The program measures the miles of pipe rehabilitated using the lining method. Locations for CIPP lining are evaluated on an annual basis.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Revenue Bonds	524,000	1,065,000	1,172,000	1,459,000	1,458,000	1,054,000
TOTAL	\$ 524,000	\$ 1,065,000	\$ 1,172,000	\$ 1,459,000	\$ 1,458,000	\$ 1,054,000

Project **Water Mains Replace Rehab Improve - Reconstruct Streets** Project # **11893**
 Citywide Element **Green and Resilient** Project Type **Program**

Project Description

This program is for replacing existing water mains in conjunction with the reconstruction of roads as part of the City's Engineering-Major Streets Reconstruct Streets program. The goal of the program is to update the water infrastructure, diminishing the risk of pipe failure. The program aligns with the Water Utility's goal to replace or rehabilitate over 400 miles of aging pipe within the City over a 40-year period to renew and maintain the system. Planned projects in 2023 include: Lake Mendota Drive; Blue Harvest Lane/Treetops Drive/Feather Edge Drive; Eastwood Drive/Winnebago Street; and hydraulic improvements.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Revenue Bonds	124,000	1,995,000	1,564,000	2,531,000	1,739,000	2,077,000
TOTAL	\$ 124,000	\$ 1,995,000	\$ 1,564,000	\$ 2,531,000	\$ 1,739,000	\$ 2,077,000

Project **Water Meter and Fixed Network Program** Project # **12340**
 Citywide Element **Green and Resilient** Project Type **Program**

Project Description

This program is for water meter and fixed network advanced metering infrastructure (AMI) improvements. The goal of the program is to provide accurate consumption data for billing purposes. Progress will be measured by comparing the meter accuracy testing results against the Public Service Commission of Wisconsin rules and regulations as well as monitoring the total non-revenue water volume.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Reserves Applied	526,000	539,000	552,000	566,000	580,000	595,000
TOTAL	\$ 526,000	\$ 539,000	\$ 552,000	\$ 566,000	\$ 580,000	\$ 595,000

Project **Water Utility Facility Improvements** Project # **10440**
 Citywide Element **Green and Resilient** Project Type **Program**

Project Description

This program is for repairing and upgrading Water Utility facilities. The goal of the program is to maintain the facilities for reliable service and reducing emergency repairs. Progress is measured by tracking the number of emergency calls, facility outages, and accidents each year. Funding in 2023 is for fiber optic system installations and upgrades, control and instrumentation replacements and upgrades, cybersecurity upgrades, and other miscellaneous upgrades.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Reserves Applied	1,513,000	1,857,000	1,638,000	1,405,000	1,447,000	1,490,000
TOTAL	\$ 1,513,000	\$ 1,857,000	\$ 1,638,000	\$ 1,405,000	\$ 1,447,000	\$ 1,490,000

Project **Water Utility Vehicles & Equipment** Project # **12339**
 Citywide Element **Green and Resilient** Project Type **Program**

Project Description

This program is for the annual vehicle and equipment replacements and additions. Replacement schedules are based on age and mileage of the vehicles and equipment. The goal of this program is to provide reliable vehicles and equipment for Water Utility's operations. Progress will be measured by the frequency of vehicle breakdowns and actual useful life obtained. In 2023, funds will be used for a maintenance utilimaster, a tri-axle dump truck, a backhoe, and other miscellaneous equipment.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Reserves Applied	754,000	701,000	813,000	690,000	702,000	681,000
TOTAL	\$ 754,000	\$ 701,000	\$ 813,000	\$ 690,000	\$ 702,000	\$ 681,000

Project **Water Valve Cut-In Program** Project # **12387**
 Citywide Element **Green and Resilient** Project Type **Program**

Project Description

This program is for installing new valve cut-ins to the existing water infrastructure. The goal of this program is to eliminate areas of the city where water service is negatively impacted during water system maintenance and repair. Success is measured by a reduction in complaints from customers for impacted service.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Reserves Applied	40,000	42,000	44,000	46,000	47,000	48,000
TOTAL	\$ 40,000	\$ 42,000	\$ 44,000	\$ 46,000	\$ 47,000	\$ 48,000

Project **Well 19 Iron and Manganese Filter** Project # **10448**
 Citywide Element **Green and Resilient** Project Type **Project**

Project Description

This project is for a new iron, manganese, and radium treatment system at Well 19 located on Lake Mendota Drive on the City's west side. The goal of this project is to improve water quality in the area. Progress will be measured by the change in iron, manganese, and radium concentrations, which currently do not meet Madison Water Utility standards. Funding in 2023 is for construction. The Water Utility intends to apply for State Safe Drinking Water Loans for this project.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Revenue Bonds	8,116,000	81,000	-	-	-	-
TOTAL	\$ 8,116,000	\$ 81,000	\$ -	\$ -	\$ -	\$ -

Project
Citywide Element

**Well 27 Iron & Manganese Mitigation
Green and Resilient**

Project # **14025**
Project Type **Project**

Project Description

This project will address elevated levels of iron and manganese at Well 27 which exceed Water Utility Board Standards. In addition, radium levels periodically exceed the EPA Safe Drinking Water limit. The goal of the project is to identify strata causing the elevated contaminant levels and determine whether well reconstruction is a viable alternative to wellhead treatment.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Revenue Bonds	63,000	-	-	-	-	-
TOTAL	\$ 63,000	\$ -	\$ -	\$ -	\$ -	\$ -

Project
Citywide Element

**Well 28 Iron & Manganese Mitigation
Green and Resilient**

Project # **17604**
Project Type **Project**

Project Description

This project will address elevated levels of iron and manganese at Well 28 which exceed Water Utility Board standards. The goal of the project is to identify strata causing the elevated contaminant levels and determine whether well reconstruction is a viable alternative to wellhead treatment.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Revenue Bonds	63,000	-	-	-	-	-
TOTAL	\$ 63,000	\$ -	\$ -	\$ -	\$ -	\$ -

Project
Citywide Element

**Well 30 Iron & Manganese Mitigation
Green and Resilient**

Project # **17603**
Project Type **Project**

Project Description

This project will address elevated levels of iron and manganese at Well 30 which exceed Water Utility board Standards. The goal of the project is to identify strata causing the elevated contaminant levels and determine whether well reconstruction is a viable alternative to wellhead treatment.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Revenue Bonds	63,000	-	-	-	-	-
TOTAL	\$ 63,000	\$ -	\$ -	\$ -	\$ -	\$ -

Project	Westside Water Supply	Project #	12439
Citywide Element	Green and Resilient	Project Type	Project

Project Description

This project will investigate ways of addressing a future water supply shortage on the far west side. The City Planning Department is projecting significant development pressure on the far west side of the City over the next 20 years. Development projections indicate the west side water supply deficiency will grow to the point it becomes critical by the year 2040. Alternative solutions may include a new well, pumping water from other areas of the system, and optimization of operation. Planning and investigation will begin in 2027 with the project completion by 2032.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Revenue Bonds	-	-	-	-	153,000	2,370,000
TOTAL	\$ -	\$ -	\$ -	\$ -	\$ 153,000	\$ 2,370,000

Project	Wilson St (MLK to King)	Project #	11543
Citywide Element	Green and Resilient	Project Type	Project

Project Description

This project is for replacing the pavement on Wilson Street from Martin Luther King Jr. Boulevard to King Street. The goal of this project is to improve the pavement rating, which is currently 4 of 10, and enhance the pedestrian and bicycle facilities along the corridor. The project's scope will construct a new cycle track along Wilson Street. Construction is planned for 2024. Funding shown reflects the Water Utility component of the project.

Project Budget by Funding Source

	2023	2024	2025	2026	2027	2028
Revenue Bonds	-	157,000	-	-	-	-
TOTAL	\$ -	\$ 157,000	\$ -	\$ -	\$ -	\$ -

Water Utility

2023 Appropriation Schedule

2023 Appropriation

Executive Budget

	Request	GO Borrowing	Other	Total
Atwood Avenue	390,000	-	390,000	390,000
Chlorinators & Florinators Program	95,000	-	95,000	95,000
High Point/Raymond/MidTown	25,000	-	25,000	25,000
Olin Building Improvements	500,000	-	500,000	500,000
Park Street, South (Olin to RR)	21,000	-	21,000	21,000
Pleasant View Road - Phase 1	120,000	-	120,000	120,000
Unit Well 14 - Sodium and Chloride Mitigation	150,000	-	150,000	150,000
Unit Well 15 - PFAS Treatment Facility	433,000	-	433,000	433,000
Unit Well Rehab Program	360,000	-	360,000	360,000
Water Hydrants Program	400,000	-	400,000	400,000
Water Mains - New	20,000	-	20,000	20,000
Water Mains Replace Rehab Improve - Pavement Management	1,576,000	-	1,576,000	1,576,000
Water Mains Replace Rehab Improve - Pipe Lining	524,000	-	524,000	524,000
Water Mains Replace Rehab Improve - Reconstruct Streets	124,000	-	124,000	124,000
Water Meter and Fixed Network Program	526,000	-	526,000	526,000
Water Utility Facility Improvements	1,513,000	-	1,513,000	1,513,000
Water Utility Vehicles & Equipment	754,000	-	754,000	754,000
Water Valve Cut-In Program	40,000	-	40,000	40,000
Well 19 Iron and Manganese Filter	8,116,000	-	8,116,000	8,116,000
Well 27 Iron & Manganese Mitigation	63,000	-	63,000	63,000
Well 28 Iron & Manganese Mitigation	63,000	-	63,000	63,000
Well 30 Iron & Manganese Mitigation	63,000	-	63,000	63,000
	\$ 15,876,000	\$ -	\$ 15,876,000	\$ 15,876,000