

	Madison							
Water Utility Final								
Proiect	Description/Purpose	Primary Construction Year						
UW #19 Water Quality Mitig		2023						
be addressed. Well 19 is a uw2ma	, and radium at Well 19 exceed Water Ut or supply point on the west side and prov	rides water to the University of						

Primary Construction Project Description/Purpose Year	Tasks	2021	2022	2023	2024	2025	2026
UW #19 Water Quality Mitigation 2023	74376			Start Const			
Elevated levels of iron, manganese, and radium at Well 19 exceed Water Utility Board standards and need to be addressed. Well 19 is a uw2major supply point on the west side and provides water to the University of	Public Engagement		5,000				
Wisconsin campus and the near west side. This project will examine alternatives to mitigate contaminate	Utility Labor Costs		27,000	81,000	81,000		
levels to bring the well into compliance with WUB water quality policy. A pilot study was completed in 2018 that demonstrated filtration will reduce the contaminates to below Utility goals. Other options will also be	Engineering Services		859,000				
considered to include but not be limited to blending with Well 6, drilling a new well, and modifying the Wel 1	9 Filter Construction			6.610.000			
bore hole. Work on the project will commence in 2021 and is scheduled to be complete by 2024.	Total	-	891.000	6,691,000	81.000	-	
			, , , ,				
Unit Well No. 8 - Re-Construction 2028	Public Engagement				10.000	10.000	
Elevated levels of iron and manganese at Well 8 exceed Water Utility Board standards and need to be addressed. The facility was constructed in 1945 and is in need of renewal. The facility will be demolished and	Well 8 Rehab				10,000	500,000	
rebuilt. Geographically, the well is located in a well developed area in the near east side of the system. This	Sentinel Well	120,000				-	
location provides is in proximity of Zones 6e, 6w, and 4. This would allow the well to serve these three zones, transferring water from the isthmus to the SE side of the service area. Challenges and limitations exists from	Cullty Labor Costs				28,000 50.000	81,000 987,000	81,000
the Kipp Corporation site, Olbrich Park and Lake Monona. Coordination with neighborhood groups and the	Engineering Services Property Acquisition and Permitting				50,000	200,000	
Parks Department will be critical to project success. Preliminary planning work will commence in 2025.	Pipeline Improvements					200,000	2,211,000
	Well 8 Re-Construction						
	Total	120,000	-	-	88,000	1,778,000	2,292,000
Lake View BPS Reconstruction (BPS 213)						Start Const	
Pressure Zone 5 in the north end of the service area has long been restricted by the size of the reservoir and	Public Engagement				5,000	5,000	
the associate booster pumping station. Fire protection capacity is limited and currently does not meet Utility standards. With the construction of the Lake View Reservoir, Zone 5 has 300,000 gallons of available storage	Utility Labor Costs				54,000 129.000	81,000	
capacity and requires an upgrade of the booster pumping station to support this reservoir. The existing	Engineering Services Upgrade Pumps @ BPS 213				129,000	500,000	
reservoir will be upgraded to a firm capacity of 1,000 gpm with generator backup for reliability. This allows	Generator					575,000	
Zone 5 to expand improving pressure for local residents and development of unimproved land. Design development is scheduled to start in 2025.	Water Main Imp. To BPS 213						
	Total	-	-	-	188,000	1,161,000	
Unit Well 12 Conversion to a Two Zone Well					Start Const		
Well 12 is located on the boarder between Zone 7 and Zone 8. This location provides the opportunity to	Utility Labor Costs			41,000	54,000	41,000	
convert Well 12 to a two zone supply point that would also provide booster pumping capacity from Zone 7 to Zone 8. This project has been developed during 2017/2018 and is ready for implementation. Currently no	Engineering Services			222,000			
pumping capacity exists between Zone 7 and Zone 8. This condition puts the Utility at risk in event of a	Well Reconstruction and Upgrade				3,700,000		
mechanical failure in Zone 8. The ability to transfer water from Zone 7 to Zone 8 would be an important operational benefit to the system. Work on the project is expected to start in 2023.	Water Main Improvements						
operational benefit to the system. Work on the project is expected to start in 2023.	Total	-	-	263,000	3,754,000	41,000	-
Well 15 PFAS Mitigation ??	•						
The contaminant, PFAS, has been detected at Well 15. While PFAS is not regulated at this time, there is	Public Engagement	5.000					
significant concern about it's potential health impacts. To prepare for a change in the PFAS regulatory	Utility Labor Costs	27,000					
requirements, a project is established to investigate and study potential treatment options. Starting in 2021, alternatives will be developed and evaluated for the mitigation of PFAS at Well 15. Recomendations from this	Engineering Services	50,000				-	
study could result in future work.	Property Purchase Mitigation	40.000					
	Total	122,000	-	-	-	-	-
Well At New and Ot Midwestern							-
Well 14 Na and Cl Mitigation ??	Public Engagement		5.000				
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 (CI). Efforts are underway to reduce the quantity of road salt	Utility Labor Costs		27.000				
used, however the levels currently in the groundwater will eventually reach the well. If the level of Na and CI	Engineering Services		50,000				
continues to rise, mitigation will be required. This project will fund a project to evaluate and develop alternatives for reducing the Na and CI entering the drinking water system. Recomendations from this study	Property Purchase						
could result in future work.	Mitigation Total		82.000	_		_	
	Total	-	02,000	-		-	
	Total Pipe Rehab Budget	4,166,000	2,961,000	2,990,000	3,033,000	2,608,000	4,714,000
Pipeline Replacement/Rehab/Improvements Ungoing						470.000	185,000
Madison Water Utility has a planned piping system replacement and upgrade program that provides for annual	Water Mains - New	152,000	159,000	166,000	1,429,000	178,000	
Pipeline Replacement/Rehab/Improvements Madison Water Utility has a planned piping system replacement and upgrade program that provides for annual main replacement and rehabilitation to keep the system at an acceptable service level. Lining pipe instead of replacing it saves money and extends the useful life of existing assets. The Utility's Water Master Plan also	Water Mains - New Pavement Management Water Main Rehab-(Lining)	152,000 1,208,000 1,110,000	159,000 1,586,000 983.000	1,286,000 1,286,000 1,111,000	335,000 1,036,000	362,000 1.077,000	378,000 1,419,000

2021 Capital Budget 2020-2025 CIP

Water Utility Final

Madison

June 10, 2020

mwu		Primary Construction		2021	2022	2023	2024	2025	2026
Project	Description/Purpose	Year	Tasks						
nd other identified issues.			Hydraulic Improvement Projects						
			Total	4,318,000	3,120,000	3,156,000	4,462,000	2,786,000	4,899,00
/ell 23 - Well Abandonment		77	 						
			•	50,000					
			Total	50,000					
Vater Utility Facility Improvements		Annually							
	Water Supply Water Supply		SCADA System Upgrade and Expansion Fiber Optic system installation and upgrade	25,000 32,000	26,000 33,000	27,000 34.000	28,000 35.000	29,000 36.000	30,00 37,00
	Water Supply Water Supply		Control & Instrumentation Replacement/Upgrade	84,000	122,000	92,000	95,000	98,000	101,0
	Water Supply			70,000	72,000	74,000	76,000	78,000	80,00
	Water Supply		Deep Well VFD Installs	106,000	117.000	104.000	40.000	41,000	42.00
	Water Cupply	100	Total Supply	317,000	370,000	331,000	274,000	282,000	290,00
		•							
	Maintenance Maintenance		Various Building/Site Improvements	-	403,000 268,000	415,000 276,000	427,000	440,000	453,00
	Maintenance Maintenance		expected Well and Booster Station Mechanical Failures Facility Safety and Security Upgrades	50,000	52.000	54,000	284,000 56,000	293,000 58,000	302,00 60,00
	Maintenance		Miscellaneous Facility Upgrade Projects	50,000	74,000	76,000	78,000	80,000	82,00
	Walliteriance	, 140	Total Maintenance	100,000	797,000	821,000	845,000	871,000	897,00
		!			101,000		0.10,100		
			Total WU Facility Improvements Program	417,000	1,167,000	1,152,000	1,119,000	1,153,000	1,187,00
Meter and Fixed Network Program		Annually							
	Meter Shop)	Meter and fixed network Program	500,000	513,000	526,000	539,000	552,000	566,00
			Total Meter & Fixed Network Program	500,000	513,000	526,000	539,000	552,000	566,00
Vehicles & Equipment Program		Annually							
	Fleet and Equipment		Dump Truck Replacement		168,000	-	173,000	-	178,00
	Fleet and Equipment	t	Service Truck Replacement	125,000		129,000	-	133,000	-
	Fleet and Equipment	t	Small Vehicle Replacement		109,000	-	112,000	-	115,00
	Fleet and Equipment		Lawn Tractor Replacement	35,000		36,000	-	37,000	-
	Fleet and Equipment		Used Bucket Truck	30,000			-		-
	Fleet and Equipment		Backhoe Replacement		153,000	-	158,000		163,00
	Fleet and Equipment		Mapping and Survey Equipment Replacement	46,000	12,000	13,000	14,000	15,000	16,00
	Fleet and Equipment		Small Equipment Replacement	-	12,000	-	12,000	-	12,00
	Fleet and Equipment Fleet and Equipment		RP Valve Complete/Parts/Testing/Registration	26,000 19,000	27,000 20,000	27,000 20.000	28,000 21.000	28,000 21,000	29,00 22.00
	Fleet and Equipment		Speed Shore Replacement Box; Parts and Supplies Tools	20,000	20,000	21,000	21,000	22,000	22,00
	Fleet and Equipment		Lifts	43,000	20,000	21,000	21,000	22,000	22,00
	r leet and Equipment	Walliterlance	Total Fleet & Equipment	344,000	521,000	246,000	539,000	256,000	557,00
IW Rehab Program		Annually			,	,			
TO NOTION I TOGICALLI	Maintenance	_	Annual Well Rehabs	240,000	330,000	247,000	340,000	254,000	350,00
	wainenance		Ailliuai Well Reliaus	240,000	330,000	271,000	3-0,000	207,000	330,00
ydrant Program		Annually							
	Operations		Water Hydrant Replacement/Move/Remove Program	350,000	350,000	350,000	350,000	350,000	350,00
ew Valve Cut-In Program		Annually							
	Operations		New Water Valve Cut-Ins	16,000	16,000	17,000	18,000	19,000	20,0
hlorinators & Floridators Program		Annually							
	Maintenance	· · · · · · · · · · · · · · · · · · ·	Chlorinators & Floridators	31,000	35.000	35.000	40.000	40.000	41.0
	Mainterlance	•	Total Estimated Annual Costs	6.508.000	7.025.000	12.683.000	11.518.000	8.390.000	10.262.0