

Internal Monitoring Report

Policy: EL-2C Financial Planning/Budgeting

Frequency: Twice a year (May and August)

Date: May 22, 2018

Policy Language:

The General Manager shall not cause or allow financial planning to deviate materially from the board's Outcomes priorities, risk financial jeopardy or fail to be derived from a multiyear plan.

Accordingly, the General Manager shall not cause or allow conditions, procedures or decisions that:

1. Allow budgeting which would risk incurring those situations or conditions described as unacceptable in the Financial Condition and Activities policy (EL-2D).
2. Fail to provide the full amount established by the board according to the Agenda Planning to Achieve Board Outputs policy (BP-2C).
3. Fail to provide the board with an opportunity for one month's deliberation prior to approval of cost increases in excess of 15% of the established budget for a project.

General Manager's interpretation and its justification:

This Executive Limitations policy recognizes that financial planning and sound budgeting are necessary for the achievement of the board's Outcomes priorities and in order to avoid financial jeopardy. Sound budgeting is also necessary for the board to invest resources in improving its own governance capacity. The Utility has the responsibility to establish, manage and plan for the necessary water rates and debt to fund all expenditures to meet identified capital and operational requirements, and to budget accordingly.

The board has enumerated in this policy three specific areas: budgeting in accordance with policy EL-2D, and providing funds for board education and training as described in policy BP-2C, and providing the board with an adequate opportunity to deliberate and weigh options prior to making a decision on projects that are over the established budget.

Data directly addressing the General Manager's interpretation:

The proposed Water Utility Capital Budget and Capital Improvement Plan is aligned materially with the board's Outcomes priorities and projects capital expenditures through the year 2024. However, due to the water utility's current financial condition, facility projects to accomplish Water Quantity, Water Quality, and Reliability Outcomes have been postponed. The Capital Budget for 2019 and 2020 provides primarily for pipeline projects. A copy of this document is attached.

The utility uses a financial planning model developed by Springsted Financial to evaluate and project funding required for financing infrastructure and operating needs. This model is being used to plan the budget, revenue bond offerings, and develop future rate requirements.

The 2019 Operating Budget is a master agenda item for the August board meeting.

In the past year, the board has always been provided with a one month period of time for review and deliberation of cost increases in excess of 15% of the established budget for a project.

I report compliance.

Attachment:

2019 Capital Budget and Capital Improvement Plan

City of Madison 2019 Capital Improvement Plan

Agency Request Summary

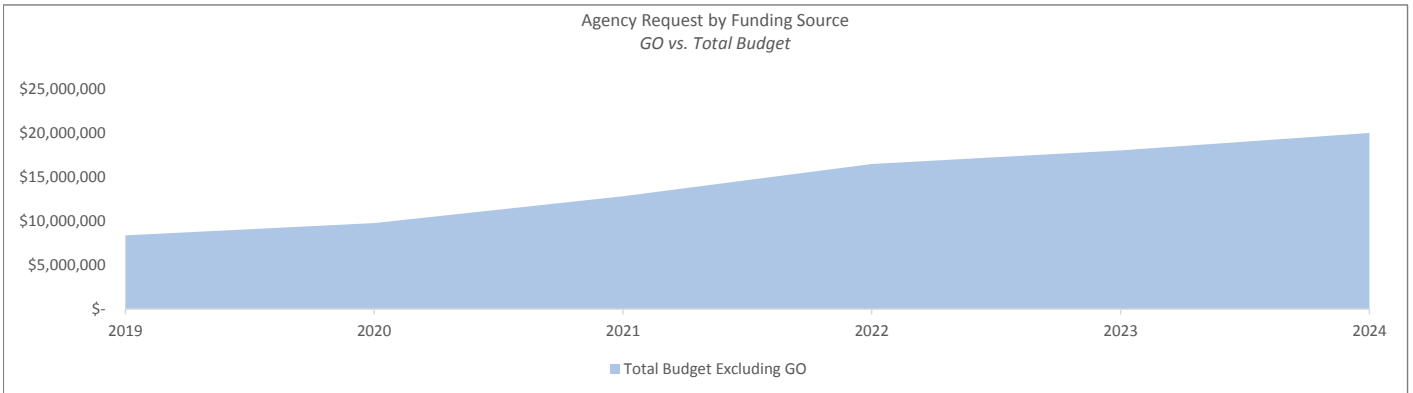
Agency : Water Utility

Agency Request by Project (All Funds)

Project	2019	2020	2021	2022	2023	2024
Lakeview Reservoir Reconstruction	-	-	2,081,000	-	-	680,000
Water Utility Facility Improvements	491,000	512,000	704,000	1,132,000	768,000	1,158,100
Booster Station 106 Reconstruction	-	-	-	-	-	813,000
Far West Elevated Reservoir	-	-	-	-	-	1,355,000
Well 19 Iron and Manganese Filter	-	-	-	-	-	665,330
Unit Well 12 Conversion to a Two Zone Well	-	-	228,960	3,816,000	804,000	-
Booster Pump Station 109 (Spaanem Ave)	-	-	-	-	345,000	2,873,000
Water Mains Replace Rehab Improve - Pipe Lining	-	1,040,000	1,082,000	1,125,000	1,170,000	1,217,000
Water Mains Replace Rehab Improve - Reconstruct Streets	4,887,000	5,180,000	5,491,000	5,820,000	6,169,000	6,539,000
Water Mains Replace Rehab Improve - Pavement Manageme	1,620,000	1,717,000	1,820,000	1,929,000	2,045,000	2,168,000
Water Mains - New	1,382,000	1,317,000	1,396,000	2,261,000	2,397,000	2,541,000
Booster Pump Station 129 Reconstruction	-	-	-	384,240	4,330,000	-
	\$ 8,380,000	\$ 9,766,000	\$ 12,802,960	\$ 16,467,240	\$ 18,028,000	\$ 20,009,430

Agency Request by Funding Source

Project	2019	2020	2021	2022	2023	2024
Revenue Bonds-Water	8,380,000	9,766,000	12,802,960	16,467,240	18,028,000	20,009,430
Total	\$ 8,380,000	\$ 9,766,000	\$ 12,802,960	\$ 16,467,240	\$ 18,028,000	\$ 20,009,430



 Madison Water Utility Final				2019	2019 Capital Budget						
					2019-2030 CIP						
				Updated:	May 10, 2018	(120,000)	586,000	802,960	467,240	748,000	1,349,430
					Budget Goal w/ Inflation	8,500,000	9,180,000	12,000,000	16,000,000	17,280,000	18,660,000
					Annual Totals	\$ 8,380,000	\$ 9,766,000	\$ 12,802,960	\$ 16,467,240	\$ 18,028,000	\$ 20,009,430
Line	Project	Description/Purpose	Primary Construction Year	Tasks	2019	2020	2021	2022	2023	2024	
1	BPS #106 Area Hydraulic Improvements		Ongoing								
2	The upgrade of Booster Pump Station 106 was finished in 2014. Piping improvements to the system have made over several years in the Sunset Hills area. Funds are budgeted for piping improvements to benefit this area on			Pipeline Improvements							813,000
3				Total	-	-	-	-	-		813,000
4											
5	Well 7 Area Hydraulic Improvements		Ongoing								
6	Well 7 was totally reconstructed in 2015. To fully benefit from the well upgrade, hydraulic capacity improvements to the distribution system have been budgeted and planned. Piping improvements on Schlingen Avenue and Mac Pherson Street will improve east west water flow.			Finalize Construction							
7				Pipeline Improvements							
8				Total	-	-	-	-	-	-	-
9											
18	Lake View Reservoir and BPS Reconstruction (Res 113)		2021				Start Const				
19	Construction of the Lake View Reservoir was completed in 2017. Reconstruction of the Lake View Reservoir and associated pipe upgrades is the first phase of a significant water supply facility upgrade on the north side of Madison. Funds are budgeted in 2020 to upgrade the existing Lake View Booster Pumping station to increase capacity. Hydraulic improvements are being made to the distribution system in 2020 along Lake View Avenue, Esch Lane, and N. Sherman Avenue to improve hydraulics within Pressure Zone 5. This will allow the Zone to be significantly expanded.			Public Engagement			5,000				
20				Engineering Services			156,000				
21				Construct 2-Zone Reservoir							
22				System Hydraulic Imp			620,000				680,000
23				Upgrade Pumps @ BPS 213			1,300,000				
24				Water Main Imp. To BPS 213							
25				Total	-	-	2,081,000	-	-	-	680,000
26											
27	Well 31 Design and Construction		Ongoing								
28	In 2015 a 1.5 MG reservoir was constructed on the Well 31 site as Phase 1 of development of the facility. The well house, filter, and booster pump station were bid in early 2017 with construction slated to start in June 2017 and complete by June 2018. Well 31 project will correct a significant system fire protection deficiency identified by the Water Master Plan Pressure Zone 4. Significant expansion of the system over the years to the south and east has resulted in a significant supply restriction in Zone 4. Adding a second source of supply south of the Beltline Highway will improve fire flow capacity. Funds are budgeted for 2019 and 2023 for distribution system improvement along Dutch Mill Road and Voges Rd extended.			Public Engagement							
29				Drill Production Well							
30				Engineering Services							
31				Construction							
32				Hydraulic Improvement							
33				Total	-	-	-	-	-	-	-
34											
35	Blackhawk Elevated Reservoir (Zone 10)		Ongoing								
36	Due to growth on the far west side, a 1.0 MG elevated reservoir is required to meet fire protection requirements. The tower will combine Pressure Zones 10 and 11 and provide additional gravity fed water storage capacity within Pressure Zone 10. The Blackhawk Reservoir is currently under construction and is scheduled to be in service by September 2018. Piping will be added along Old Sauk to connect the reservoir to the system in early 2018. To further improve north south hydraulic connectivity, piping will be added and improved as the area develops. Funds are budgeted in 2021 for anticipated needed piping improvements.			Public Engagement							
37				Engineering Services							
38				Construct 1 MG reservoir							
39				Reservoir piping improvements							
40				Water Main Improvements							1,355,000
41				Total	-	-	-	-	-	-	1,355,000
42											
43	Unit Well 12 Conversion to a Two Zone Well		2022					Start Const			
44	Well 12 will be converted to a two zone well to provide water supply capacity to both Pressure Zone 7 and			Engineering Services			228,960				

				2019	2019 Capital Budget							
					2019-2030 CIP							
				Updated:	May 10, 2018		(120,000)	586,000	802,960	467,240	748,000	1,349,430
					Budget Goal w/ Inflation	8,500,000	9,180,000	12,000,000	16,000,000	17,280,000	18,660,000	
					Annual Totals	\$ 8,380,000	\$ 9,766,000	\$ 12,802,960	\$ 16,467,240	\$ 18,028,000	\$ 20,009,430	
Line	Project	Description/Purpose	Primary Construction Year	Tasks	2019	2020	2021	2022	2023	2024		
45	Pressure Zone 8. This conversion will provide operational flexibility and reliability to the west side supply system. The project will be under construction in 2018 and in service in 2019. Piping improvements along Whitney way are planned for 2023 to bolster hydraulic capacity.			Well House Construction				3,816,000				
46				Water Main Improvements					804,000			
47				Total	-	-	228,960	3,816,000	804,000	-		
48												
49	Water Treatment System at Well 19		2025									
50	Iron, manganese and radium at Well 19 require treatment. These three contaminants exceed Madison Water Utility water quality goals. A pressure filter system will remove these contaminants from the water and improve overall water quality bringing the system into compliance with Utility goals.			Public Engagement							5,000	
51				Engineering Services						660,330		
52				Filter Construction								
53				Total	-		-	-	-	665,330		
54	BPS 129 Reconstruction		2023						Start Const			
55												
56				Public Engagement					7,000			
57				Engineering Services			384,240					
58	Construction of a new and upgraded booster pump station 129 is needed to increase water transfer capacity from Zone 6E to Zone 3. This project will replace the temporary pump station constructed on the Well 29 site in 1990. Pump Station 129 will continue to transfer water from Zone 6E to Zone 3 and back again through a PRV. This operation will provide supply and fire flow capability to the far east side of the system. It will benefit customers through gained reliability and flexibility of operations.			Water Main Improvements					1,121,000			
59				Construct BPS 129					3,202,000			
60				Total	-		-	384,240	4,330,000	-		
61												
62	Booster Pump Station 109 (Spaanem Ave)		2024							Start Const		
63	With the addition of Well 31 on Tradewinds, water can be moved from Pressure Zone 4 to Pressure Zone 6E to improve overall operational flexibility and reliability. Booster Pump Station 109 is proposed to be constructed at Well 9 to fulfill that function. The pump station will move water from Pressure Zone 4 to Pressure Zone 6E and a pressure reducing valve station will allow water to move from Pressure Zone 6 E to Pressure Zone 4. Piping improvements are budgeted for Buckeye Road and Dean Avenue to improve hydraulic connectivity.			Public Engagement								
64				Engineering Services	-	-	-	-	345,000			
65				Construct BPS 109						2,873,000		
66				Water Main Improvements								
67				Total	-	-	-	-	345,000	2,873,000		
68												
69	Well 28 Iron and Manganese Filter		2026									
70	Iron and manganese concentrations at Well 28 exceed Utility water quality standards and guidelines. Construction of an Iron and Manganese Filter at Well 28 will address the water quality issues and risk of colored water events and customer complaints on the far west side. A filter will also reduce the need for flushing and will allow Well 28 to become a year around well if necessary due to increasing demands.			Public Engagement								
71				Engineering Services								
72				Filter Construction								
73				Total	-	-	-	-	-	-		
74												
75												
76	Well 30 Iron and Manganese Filter		2027									
77	Iron and manganese concentrations at Well 30 exceed Utility water quality standards and guidelines. Construction of an Iron and Manganese Filter at Well 30 will address the water quality issues and risk of colored water events and customer complaints in the Well 30 service area. A filter would improve finished water quality and reduce the need for annual flushing in the Well 30 service area.			Public Engagement								
78				Engineering Services								
79				Filter Construction								
80				Total	-	-	-	-	-	-		
81	Well 14 Mitigation		2028									

 Madison Water Utility				2019	2019 Capital Budget 2019-2030 CIP							
				Updated:	May 10, 2018	(120,000)	586,000	802,960	467,240	748,000	1,349,430	
				Budget Goal w/ Inflation	8,500,000	9,180,000	12,000,000	16,000,000	17,280,000	18,660,000		
				Annual Totals	\$ 8,380,000	\$ 9,766,000	\$ 12,802,960	\$ 16,467,240	\$ 18,028,000	\$ 20,009,430		
Line	Project	Description/Purpose	Primary Construction Year	Tasks	2019	2020	2021	2022	2023	2024		
82	Well 14 provides an excellent source of water to the west side of Madison and it is in the Utility's best interests to maintain the water supply point in the system. Due to winter road salt operations on University Avenue and the surrounding neighborhoods chloride levels in the water pumped from Well 14 have been rising for several years. A project is proposed for 2018 to investigate alternatives to reduce the Cl concentrations at Well 14.			Public Engagement								
83				Engineering Services								
84				Property Purchase								
85				Well 14 Facility and Well Modifications								
86				Total	-	-	-	-	-	-		
87												
88	Well 18 VOC Air Stripper		2029									
89	Water Quality monitoring at Well 18 has indicated an upward trend in the VOC levels. Construction of a VOC Air Stripper at Well 18 will address regulatory issues due to these increasing VOC levels at the well. Well 18 provides an excellent source of water to the south side of Madison within Pressure Zone 6W and it is in the Utility's best interests to maintain the well.			Public Engagement								
90				Engineering Services								
91				VOC Treatment Construction								
92				Total	-	-	-	-	-	-		
93												
94	Well 24 Iron and Manganese Filter		2030									
95	Iron and manganese concentrations at Well 24 exceed Utility water quality standards and guidelines. Construction of an Iron and Manganese filter will address the water quality issues and risk of colored water events and customer complaints in the service area.			Public Engagement								
96				Engineering Services								
97				Filter Construction								
98				Total	-	-	-	-	-	-		
99												
100	New Well - Zone 7 & 8		2031									
101	The 2006 Water Master Plan recommends an additional well to serve both Pressure Zones 7 and 8. The proposed well will improve operational flexibility and system reliability. From Zones 7 and 8 water can be moved to Zones 9 and 10 through existing pumping stations. Water can also be moved to Zone 6W through existing pressure reducing stations. This facility will provide significant operational flexibility to the Utility on the west side of the system and ultimately benefit 5 different pressure zones. Projected development and growth on the west side and the Utility stated policy of limiting average well pumping to 50% of capacity for long term groundwater management make this an important water supply project.			Public Engagement								
102				Site Selection & Property Purchase								
103				Drill test well								
104				Drill production Well								
105				Well Siting Eng Services								
106				Unit Well Engineering Services								
107				Construct Facility								
108				Pipeline Improvements								
109				Total	-	-	-	-	-	-		
110												
111	Unit Well No. 8 - Re-Construction		2032									
112	Unit Well No. 8 Re-Construction will totally upgrade and replace the reservoir and pumping station at Well 8. The project will install an iron and manganese filtration system to address current water quality issues. Due to the colored water resulting from the iron and manganese, well operation is currently severely limited to summer only and a total annual production of less than100 million gallons. The need for this project was verified by the East Side Water Supply project, however, due to concerns about the nearby KIP Corporation VOC contamination, the project has been delayed. The Utility will continue to study the KIP contamination and monitor groundwater quality and flow patterns. Flexibility will be designed into the project to allow the addition of an air stripper if VOC contamination from the KIP site were to reach the well. Funds are included in the budget for a sentinel well in 2019 to allow the water quality to be monitored before it reaches Well 8.			Public Engagement								
113				Groundwater Study								
114				Sentinel Well								
115				Engineering Services								
116				Property Acquisition and Permitting								
117				Well 8 Re-Construction								
118				Total	-	-	-	-	-	-		

 Madison Water Utility Final				2019	2019 Capital Budget							
				2019-2030 CIP								
			Updated:	May 10, 2018	(120,000)	586,000	802,960	467,240	748,000	1,349,430		
				Budget Goal w/ Inflation	8,500,000	9,180,000	12,000,000	16,000,000	17,280,000	18,660,000		
				Annual Totals	\$ 8,380,000	\$ 9,766,000	\$ 12,802,960	\$ 16,467,240	\$ 18,028,000	\$ 20,009,430		
Line	Project	Description/Purpose	Primary Construction Year	Tasks	2019	2020	2021	2022	2023	2024		
119	for a Schmitz well in 2010 to allow the water quality to be monitored before it reaches well 6.											
120				Pipe Replacement Reinvestment Budget Goal	13,610,000	14,020,000	14,440,000	14,880,000	15,320,000	15,780,000		
121	Pipeline Replacement/Rehab/Improvements		Ongoing	Total Pipe Rehab Budget	6,507,000	7,937,000	8,393,000	8,874,000	9,384,000	9,924,000		
122	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. Assessment of an aging infrastructure indicates the Utility needs to replace or rehabilitate over 400 miles of pipe in the next 40 years to renew and maintain the system. Madison Water Utility will continue to develop and expand the pipe lining program that was started in 2011. Lining pipe instead of replacing it saves money and extends the useful life of existing assets. The Utility's Water Master Plan also recommends hydraulic improvements to the system to correct hydraulic bottlenecks, fire protection limitations, and other identified issues.			Reconstruction Pipe Projects	4,887,000	5,180,000	5,491,000	5,820,000	6,169,000	6,539,000		
123				Pavement Management	1,620,000	1,717,000	1,820,000	1,929,000	2,045,000	2,168,000		
124				Water Main Rehabilitation		1,040,000	1,082,000	1,125,000	1,170,000	1,217,000		
125				Water Mains - New	1,242,000	1,317,000	1,396,000	1,480,000	1,569,000	1,663,000		
126				Hydraulic Improvement Projects	140,000			781,000	828,000	878,000		
127				Total	7,889,000	9,254,000	9,789,000	11,135,000	11,781,000	12,465,000		
128				Pipe Hydraulic Improvements	1,382,000	1,317,000	1,396,000	2,261,000	2,397,000	2,541,000		
129	Water Utility Facility Improvements		Annually									
130	SCADA System Upgrade and Expansion				22,000	23,000	24,000	25,000	26,000	26,700		
131	Fiber Optic system installation and upgrade				20,000	20,000	20,000	20,000	20,000	20,400		
132	Flow Meter and VFD Conversion					-						
133	Addition of separate Chemical Feed Rooms at Well 6, Well 11, Well 13 & Well 14							329,000		356,000		
134	Development of 2 PRV sub zones. One near Pflaum Rd and one in the Nakoma neighborhood							68,000				
135	Various Facility Upgrade Projects				50,000	53,000	200,000	210,000	221,000	232,000		
136	Meter and fixed network Program				379,000	394,000	410,000	426,000	443,000	461,000		
137	Facility Safety Additions, Olin Roof fall protection system					-	-	-	-	-		
138	Various Olin and Paterson Upgrades and Improvements				20,000	22,000	50,000	54,000	58,000	62,000		
	Retrofit Chlorine Shutoff Valves at 4 Wells											
	HMI Install at Well 29											
	Security Upgrades											
139												
140				Total	491,000	512,000	704,000	1,132,000	768,000	1,158,100		
141					112,000	118,000	294,000	706,000	325,000	697,100		
142				Total Estimated Annual Costs	8,380,000	9,766,000	12,802,960	16,467,240	18,028,000	20,009,430		
143				Facility Reinvestment and Renewal Goal	3,780,000	3,890,000	4,010,000	4,130,000	4,260,000	Facility Reinvestment ar		
144				Facility Reinvestment and Renewal Actual	20,000	22,000	50,000	54,000	58,000	Facility Reinvestment an		