

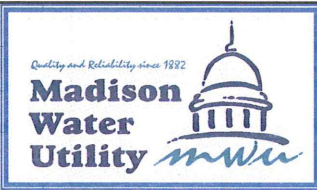
# Madison Water Utility

## 2010-2015 Long Range Capital Improvement Budget

Updated: May 21, 2009

# DRAFT

Line	Project	Date/Description/Purpose	Tasks	2010	2011	2012	2013	2014	2015	2016
1	<b>Zone 4 Fire Flow Supply Augmentation</b>									
2	This project is scheduled to start construction in 2010 and be finished and in service in 2012.			Public Participation Plan						
3	The <b>Zone 4 Fire Flow Supply Augmentation project</b> will correct a significant system deficiency identified by the Water Master Plan in the southeast corner of the system. Due to significant expansion over the years to the south, the hydraulics of the system will not adequately serve this area for fire flow supply or system reliability and redundancy. There is also significant development pressure in the southeast and this project will support further development of the area. Adding a second source of supply to the area will improve fire flow capacity and bring the water system level of service for the area up to Utility standards.			Additional Water Quality Analysis	25,000					
				Property Purchase	100,000					
				Drill Test Well	125,000					
4				Production Well and Development	601,000					
5				Consultant Design contract for design of Unit Well, Reservoir, Pump Station, and Pipelines	277,000					
6				Construct Unit Well		2,910,000				
7				Consultant Construction Administration		146,000				
8				Pipelines			1,050,000			
9				<b>Project Total</b>	<b>1,128,000</b>	<b>3,056,000</b>	-	<b>1,050,000</b>	-	-
10										
11	<b>Arbor Hills Supplemental Fire Flow Supply</b>									
12	This project is scheduled to start construction in 2010 and be finished and in service in 2011.			Public Participation Plan						
13	The <b>Arbor Hills Supplemental Fire Flow Supply</b> will correct a significant system deficiency identified by the Water Master Plan. Due to the fact that the area is fed by a single 8-inch main on the Beltline Highway frontage road, the area is vulnerable to water outages and there is a significant restriction in fire flow capacity. This project will provide the ability to transfer water from Well 18 in Zone 6. The Project includes a pipeline on the Cannonball Run Bike Trail that will link the area to the Verona Road Area.			Property Purchase						
14				Consultant Design contract for Pump Station	116,000					
15				Construction Administration Services	58,000					
16				Pipeline Construction	866,000					
17				Pump Station Construction	827,000					
18				<b>Project Total</b>	<b>1,867,000</b>	-	-	-	-	-
19										
20	<b>Unit Well No. 8 - Fe and Mn Mitigation</b>									
21	This project is scheduled to start construction in 2011 and be finished and in service by the end of the year. <b>Unit Well No. 8 - Fe and Mn Mitigation</b> will address the water quality issues that exist at Well 8 due to iron and manganese levels that exceed the EPA secondary standard. Due to the colored water that occurs when the well is run, well operation is summer only. A filter would allow the well to be operational all year long. The project will benefit existing customers in the east Isthmus area and improve the quality of the water pumped from Well 8 bringing it up to minimum Utility water quality standards.			Public Participation						
22				Pilot Study	50,000					
23				UW 8 - Filter and Facility Design Documents	260,000					
24				Construction Administration Services		227,500				
25				Construction of Unit Well No. 8 Fe and Mn Filter		3,250,000				
26				<b>Project Total</b>	<b>310,000</b>	<b>3,477,500</b>	-	-	-	-
27										
28	<b>Unit Well No. 7 - Fe and Mn Mitigation</b>									
29	This project is scheduled to start construction in 2012 and be finished and in service by the end of the year. <b>Unit Well No. 7 - Fe and Mn Mitigation</b> will address the water quality issues that exist at Well 7 primarily due to iron levels that exceed the EPA secondary standard. Due to the colored water that occurs due to the oxidized iron when the well is run, current well operation is limited to fill in only. A filter at Well 7 will benefit existing customers by bringing water quality up to minimum Utility water quality standards.			Public Participation	50,000					
30				Pilot Study	50,000					
31				UW 7 - Filter Design		300,000				
32				Construction Administration Services			262,500			
33				Construction of Unit Well No. 7 Fe and Mn Filter			3,750,000			
34				<b>Project Total</b>	<b>100,000</b>	<b>300,000</b>	<b>4,012,500</b>	-	-	-



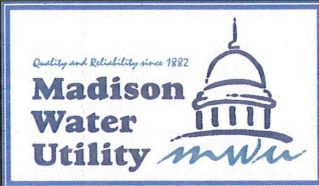
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35										
36		<b>Pressure Zone 9 Storage</b>								
37		This project is scheduled to start construction in 2011 and be finished by the end of the year.	Public Participation Plan							
38		The <b>Pressure Zone 9 Storage</b> project will correct a significant system storage deficiency in	Reservoir Property Purchase		250,000					
39		the Zone 9 area identified by the Water Master Plan. Pressure Zone 9 has developed	Consultant Design Services		153,000					
40		significantly with not only residential but commercial and institutional facilities. The fire flow	Construct 750,000 gallon elevated reservoir			1,914,000				
41		requirements have increased due to this development to the point that current facilities do	Construction Contract Administration			115,000				
42		not meet minimum standards. The Master Plan proposes to construct storage on the west	Reservoir Pipeline Construction			260,000				
43		side of the zone to hydraulically balance the system.	<b>Project Total</b>	-	<b>403,000</b>	<b>2,289,000</b>	-	-	-	-
44										
45		<b>Rebuild Booster Pump Station #106</b>								
46		This project is scheduled to start construction in 2011 and be finished and in service by the	Public Participation Plan	50,000						
47		end of the year. The <b>Rebuilt Booster Pump Station #106</b> project is necessary to bring the	Consultant Design contract	110,000						
48		pump station up to current safety standards and codes and to improve reliability of operation	Construction of Pump Station		1,100,000					
49		to the station. This facility allow the Utility to transfer water from Zone 6 to Zone 7.	Construction Contract Administration		77,000					
50			<b>Project Total</b>	<b>160,000</b>	<b>1,177,000</b>	-	-	-	-	-
51										
52		<b>East Isthmus Unit Well</b>								
53		This project is scheduled to start construction in 2011 and be finished and in service by late	Public Participation Plan							
54		2012. Utility Well #3 was abandoned in early 2008 due to elevated levels of Carbon	Property Costs for E. Isthmus Well	150,000						
55		Tetrachloride. This project is intended to replace that lost supply capacity. The <b>East</b>	Drill test well for E. Isthmus Well	123,000						
56		<b>Isthmus Unit Well</b> will restore lost supply redundancy and reliability to the east Isthmus	Drill new E. Isthmus Well		615,000					
57		area.	Consultant Design contract for E. Isthmus Well Reservoir and Pump Station			316,000				
58			Construction of E. Isthmus Well Reservoir and Pump Station				3,160,000			
59			Pipeline Improvements					1,000,000		
60			Consultant Contract Administration				237,000			
61			<b>Project Total</b>	<b>273,000</b>	<b>615,000</b>	<b>316,000</b>	<b>3,397,000</b>	<b>1,000,000</b>	-	-
62										
63		<b>Unit Well No. 10 - Fe and Mn Mitigation</b>								
64		This project is scheduled to start construction in 2012 and be finished and in service by the	Public Participation			50,000				
65		end of 2013. <b>Unit Well No. 10 - Fe and Mn Mitigation</b> will address the water quality issues	Pilot Study				50,000			
66		that exist at Well 10 due to iron and manganese levels that exceed the EPA secondary	Deep Well reconstruction				681,000			
67		standard. The well has been placed on supply reserve status. A filter would allow the well to	UW 10 - Filter Design				300,000			
68		be returned to year around service. The project will benefit existing customers in the Zone 7	Construction Administration Services					262,500		
69		service area and bring the water quality at Well 10 up to minimum Utility water quality	Construction of Unit Well No. 10 Fe and Mn Filter					3,750,000		
70		standards.	<b>Project Total</b>	-	-	<b>50,000</b>	<b>1,031,000</b>	<b>4,012,500</b>	-	-



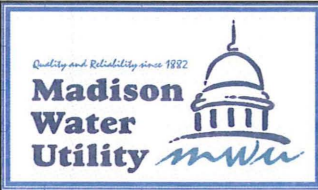
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71											
72	<b>Zone 7 &amp; 8 Supplemental Supply - Whitney Way</b>										
73	This project is scheduled to start construction in 2011 and be finished and in service by the end of 2013. The <b>Zone 7 &amp; 8 Supplemental Supply</b> project provide additional water supply capacity to both Zones 7 & 8. This well was identified in the Water Master Plan to address system supply issues projected in the future.		Public Participation Plan								
74			Additional Water Quality Analysis and Investigation	50,000							
75			Drill test well	123,000							
76			Drill production Well				633,000				
77			Consultant Design contract for Unit Well Reservoir and Pump Station				294,000	3,130,000			
78			Construction of Reservoir and Pump Station					235,000			
79			Consultant Contract Administration					600,000			
80					<b>Project Total</b>	<b>173,000</b>	<b>-</b>	<b>927,000</b>	<b>3,965,000</b>	<b>-</b>	<b>-</b>
81											
82	<b>Near West Side Water Supply Project - Glenway</b>										
83	This project is scheduled to start construction in 2017 and be finished and in service by the end of 2019. The <b>Near West Side Water Supply Project</b> project provide additional water supply capacity to both Zones 6 & 7. This well was identified in the Water Master Plan to address system supply issues projected in the future.		Public Participation Plan						50,000		
84			Additional Water Quality Analysis and Investigation								60,000
85			Drill Test Well								147,000
86			Drill production Well								
87			Consultant Design contract for Unit Well, Reservoir and Pump Station								
88			Construction of Unit Well, Reservoir and Pump Station								
89			Construction Contract Administration								
90			Water Main Hydraulic Improvements								
91			<b>Project Total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>50,000</b>	<b>207,000</b>	
92											
93	<b>Pump Station 220 - Raymond Road PS</b>										
94	This project is scheduled to start construction in 2014 and be finished and in service by the end of the year. The <b>Pump Station 220 - Raymond Road Pump Station</b> project will setup operational flexibility within Pressure Zones 9 and 10. The station will transfer water from Zone 9 to Zone 10 and back again through a PRV. This operation will provide the ability to share water supply resources between zones and fully use existing facilities.		Public Participation Plan			50,000					
95			Dual Zone Pump Station Design				120,000				
96			Dual Zone Pump Station Construction					1,000,000			
97			PRV station					75,000			
98			Booster Station Piping Upgrade							1,000,000	1,100,000
99					<b>Project Total</b>	<b>-</b>	<b>-</b>	<b>50,000</b>	<b>120,000</b>	<b>1,075,000</b>	<b>1,000,000</b>



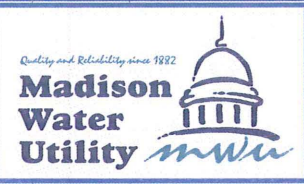
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100											
101	<b>Reconstruct the Lakeview Reservoir</b>										
102	This project is scheduled to start construction in 2014 and be finished and in service by the end of the year. <b>Reconstructing the Lakeview Reservoir</b> will replace an aging storage tank and provide needed water storage in Zone 6 on the north side of the City. This project is justified in the Water Master Plan and would improve fire fighting capacity within the system.		Public Participation Plan	50,000							
103			Consultant Design contract		183,000						
104			Construction Services	Construct Two Zone Lakeview Reservoir			188,000				
105							1,779,000				
106				Water Main Improvements			900,000				
107				Upgrade Booster Pumps @ Res. 113		250,000					
108				Water Main Improvements @ Res 113		350,000					
109			<b>Project Total</b>	<b>50,000</b>	<b>783,000</b>	<b>2,867,000</b>	-	-	-	-	
110											
111	<b>North End Supplemental Water Supply - Hoepker Rd</b>										
112	This project is scheduled to start construction in 2015 and be finished and in service by the end of 2016. The <b>North End Supplemental Water Supply - Hoepker Rd</b> project provide additional water supply capacity to the north end of Zone 6. This well was identified in the Water Master Plan to address system supply issues projected in the future.		Public Participation Plan				50,000				
113			Drill test well					134,000			
114			Drill Production Well						731,000		
115			Consultant Design contract	Construction of Unit Well, Reservoir and Pump Station						173,000	
116											3,695,000
117				Consultant Contract Administration							277,000
118			<b>Project Total</b>	-	-	-	<b>50,000</b>	<b>134,000</b>	<b>904,000</b>	<b>3,972,000</b>	
119											
120	<b>Booster Station 129</b>										
121	This project is scheduled to start construction in 2015 and be finished and in service by the end of the year. The <b>Booster Station 129</b> project will replace the tempary pump station constructed on the Well 29 site. The station will transfer water from Zone 6 to Zone 123 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.		Public Participation Plan				50,000				
122			Design					168,000			
123			Construction Services						84,000		
124			Water Main Improvements						900,000		
125			Construct BPS 129						1,200,000		
126			<b>Project Total</b>	-	-	-	<b>50,000</b>	<b>168,000</b>	<b>2,184,000</b>	-	
127											
128	<b>Paterson Street Building Remodel and Upgrade</b>										
129	This project is scheduled to start construction in 2013 and be finished and in service in early 2014. The <b>Paterson Street Building Remodel and Upgrade</b> will rebuild the Utility's Operations Center. The existing facility is outdated and cramped and in need of replacement. A new space will make vehicle maintenance operations more efficient and safe for Utility employees.		Public Participation Plan			50,000					
130			Architectural Services/Review			330,000					
131			Materials Storage Building				900,000				
132			Furnishings and Equipment					250,000			
133			Construction Admin				248,000				
134			Vehicle Maintenance Building Construction					3,230,000			
135			<b>Project Total</b>	-	-	<b>380,000</b>	<b>4,378,000</b>	<b>250,000</b>	-	-	



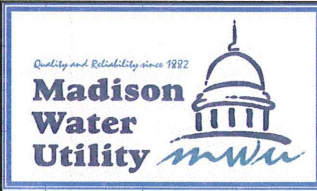
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Line	Project	Date/Description/Purpose	Tasks	2010	2011	2012	2013	2014	2015	2016
136										
137	<b>Zone 10 Far West Elevated Reservoir</b>									
138	Construction of the Zone 10 Far West Side Elevated Reservoir is scheduled for 2016. The							50,000		
139	<b>Zone 10 Far West Elevated Reservoir</b> project will provide additional water storage							-	150,960	
140	capacity to Zone 10. As pressure zone 10 has developed with not only residential but									132,090
141	commercial and institutional facilities, the existing elevated tank on High Point Road no									1,687,000
142	longer provides sufficient capacity. Providing minimum fire flow requirements to this									200,000
143	development is necessary to meet minimum standards. This project is identified in the									500,000
144	Master Plan							50,000	150,960	2,519,090
145										
146	<b>Blackhawk Elevated Reservoir</b>									
147	Construction of the Blackhawk Elevated Reservoir is scheduled for the year 2015. The						50,000			
148	<b>Blackhawk Elevated Reservoir</b> project will provide the planned water storage capacity to							140,800		
149	Zone 11 and upgrade the service from pumped to gravity. This project will provide reliable								123,000	
150	service and minimum fire flow pressure zone 11. This project is identified in the Master Plan.								1,460,000	
151									200,000	
152									500,000	
153							50,000	140,800	2,283,000	-
154										
155	<b>SCADA System Upgrade</b>									
156	This project is the upgrade and modernization of the Utility's Supervisory Control and Data									
157	Acquisition system. This is a critical control system that has reached the end of its life.			300,000	300,000	50,000	50,000	50,000	150,000	150,000
158										
159										
160	<b>Infrastructure System Plan Improvements</b>									
161	Madison Water Utility has a planned system replacement and upgrade program that provides			4,410,000	4,564,000	4,724,000	4,889,000	5,060,000	5,237,000	5,420,000
162	for annual main replacements. The Utility needs to replace over 400 miles of pipe in the next			2,363,000	2,446,000	2,532,000	2,621,000	2,713,000	2,808,000	2,906,000
163	40 years to renew the system. A planned annual increase in spending to accomplish this				1,500,000					
164	goal by 2050 will be continued.			750,000	780,000	811,000	843,000	877,000	912,000	948,000
165				184,000	193,000	203,000	213,000	224,000	235,000	241,000
166										
167										
168	<b>Booster Pump Station 114</b>							50,000		
169	This project is scheduled to start construction in 2016 and be finished and in service by the								75,000	
170	end of the year. The <b>Booster Station 114</b> project will provide the Utility with operational									60,000
171	flexibility on the west side. The station will transfer water from Zone 6 to Zones 7 and 8 and									750,000
172	back again through a PRV. This operation will provide flexibility in source of supply to the									900,000
173	west side of the system. It will benefit customers through gained system reliability.							50,000	75,000	1,710,000



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174											
175	<b>Booster Pump Station 320</b>										
176	This project is scheduled to start construction in 2017 and be finished and in service by the end of the year. The <b>Booster Station 320</b> project will provide the Utility with operational flexibility on the west side. The station will transfer water from Zone 6 to Zones 7 and 8 and back again through a PRV. This operation will provide flexibility in source of supply to the west side of the system. It will benefit customers through gained system reliability.		Public Participation Plan						50,000		
177			Consultant Design contract								80,000
178			Construction Services								
179			Construct BPS 114								
180			Water Main Improvements								
181			<b>Project Total</b>	-	-	-	-	-	<b>50,000</b>	<b>80,000</b>	
182											
183	<b>Misc. Pump Station/PRV/Facility Projects</b>										
184	The Water Master Plan identified various minor improvement projects that are necessary to sustain the established level of service. For budgeting purposes, these projects are itemized under a single heading.		PRV Station Vondron Rd			80,000					
185			PRV Station Gammon Rd			80,000					
186			Upgrade Booster Pumps @ UW 25	<b>260,000</b>							
187			Upgrade Booster Pumps @ UW 20							500,000	
188			Water Main Improvements @ BPS 125								
189			Upgrade Booster Pumps @ Res. 115			125,000					
190			Water Main Improvements @ BPS 115								
191			PRV @ 115			40,000					
192			PRV @ 126								
193			Generator @ UW 26	<b>125,000</b>							
			Long Range BPS and Reservoir Prjts								
			Long Range Well Projects								
			Long Range Master Plan Pipelines								
			Misc. Upgrade Projects				250,000	258,000	266,000	274,000	
194			Consultant Services	<b>31,200</b>	19,800	19,200	30,000	31,000	32,000	93,000	
195			<b>Project Total</b>	<b>416,200</b>	<b>184,800</b>	<b>179,200</b>	<b>280,000</b>	<b>289,000</b>	<b>298,000</b>	<b>867,000</b>	
196											
197	<b>System Wide</b>										
198	Several system wide tasks are included in the Capital Budget that cover a variety of repair, rehabilitation, and upgrade projects. For budgeting purposes, these projects are itemized under a single heading.		Lead Service Replacement	<b>200,000</b>							
199			Meter Program	<b>339,000</b>	346,000	353,000	360,000	367,000	374,000	381,000	
200			Automated Meter Reading	<b>5,370,000</b>	5,530,000						
201			Safety Additions to the Plant	<b>16,100</b>	17,300	18,600	20,000	21,500	23,100	24,800	
202			Olin Admin Office Rehab	<b>15,800</b>	16,600	17,400	18,300	19,200	20,200	21,200	
203			Unit Well Rehab	<b>100,000</b>	108,000	116,000	125,000	134,000	144,000	155,000	
204			Consultant Services	<b>50,000</b>	51,500	53,000	54,600	56,200	57,900	59,600	
205			Paterson Vehicle Storage Bldg Repair	<b>800,000</b>							
206			Paterson Office and Shop Rehab	<b>50,000</b>	53,000	56,000	59,000	62,000	65,000	68,000	
207					<b>Project Total</b>	<b>6,940,900</b>	<b>6,122,400</b>	<b>614,000</b>	<b>636,900</b>	<b>659,900</b>	<b>684,200</b>
208											
209			<b>Total Estimated Annual Costs</b>	<b>\$ 19,425,100</b>	<b>\$ 25,901,700</b>	<b>\$ 20,004,700</b>	<b>\$ 23,623,900</b>	<b>\$ 16,753,200</b>	<b>\$ 17,021,160</b>	<b>\$ 20,829,690</b>	