



**Madison Water Utility - 2016 Capital Budget**  
**2016-2030 Capital Improvement Budget**

Updated: **May 20, 2015**

# Cash Flow Draft

				<b>Annual Totals</b>	\$ 27,098,000	\$ 29,553,000	\$ 23,377,000	\$ 22,765,000	\$ 24,176,000	\$ 21,653,800	\$ 25,749,700
Line	Project	Date/Description/Purpose	Primary Construction Year	Tasks	2016	2017	2018	2019	2020	2021	2022
1	<b>Arbor Hills Supplemental Fire Flow Supply - BPS 118</b>		<b>2011</b>								
2	Booster Pump Station 118 was constructed and put into service in 2012. The last phase of the project, Phase 4 of the Cannonball Pipeline is budgeted to be constructed in 2016 in conjunction with bike path work.			Cannonball Pipeline	642,000						
3				<b>Project Total</b>	<b>642,000</b>	-	-	-	-	-	-
4											
14	<b>Booster Pump Station #106 Reconstruction</b>		<b>2013</b>								
19	Booster Pump Station 106 was finished in 2014. To fully benefit from the pump station upgrade, hydraulic capacity improvements to the distribution system have been budgeted and planned.			Pipeline Improvements	981,000			1,429,000			
20				<b>Project Total</b>	<b>981,000</b>	-	-	<b>1,429,000</b>	-	-	-
21											
22	<b>Paterson Street Building Remodel and Upgrade</b>		<b>2015</b>								
23	Rebuilding the Utility's Operations Center at Paterson Street is currently scheduled to start construction in the fall of 2015 and be finished and in service in early 2017. The existing facility is outdated and cramped and in need of replacement and this project has been in development for over 10 years. The vehicle maintenance area is too small for modern equipment and compromises employee safety. Building air quality and ventilation does not meet modern standards. The office space, locker rooms and other functional storage spaces do not meet current needs. The project also includes the construction of a materials handling building that will free up space in the vehicle storage building and improve efficiency during winter operations. This portion of the project will be constructed in 2017. Utility staff have been working closely with City Planning on efficient and effective use of the property considering the long term redevelopment of the area.			Public Engagement	10,000	10,000					
24				Architectural Services/Review	261,000	120,000					
25				Vehicle Storage Building		1,500,000	400,000				
26				Furnishings and Equipment	250,000	270,000					
28				Fleet Maintenance and Office Building Construction	5,000,000	1,400,000					
29				<b>Project Total</b>	<b>5,521,000</b>	<b>3,300,000</b>	<b>400,000</b>	-	-	-	-
30											
31	<b>Lakeview Reservoir Reconstruction (Res 113)</b>		<b>2015</b>								
32	Construction of the Lakeview Reservoir started in 2015. <i>Reconstructing the Lakeview Reservoir</i> will replace an aging storage tank for Pressure Zone 5 and provide much needed additional gravity fed water storage in Zone 6E on the north side of the City. Storage is needed in Zone 6E to provide additional operational flexibility and emergency backup. The reservoir is being developed as a two zone facility to optimize the use of the site. This project is justified in the Water Master Plan and will improve fire fighting capacity and reliability to both Pressure Zone 5 and Pressure Zone 6E. The foundation will be complete in the summer of 2015, the tank complete in the spring of 2016, and painting will be complete in the summer of 2016.			Public Engagement	5,000	5,000	5,000				
33				Engineering Services	90,000	50,000					
34				Construct Two Zone Lakeview Reservoir	2,200,000						
35				System Hydraulic Water Main Improvements			695,000				
36				Upgrade Booster Pumps @ Res. 113			920,000				
37				Water Main Improvements @ Res 113		796,000					
38				<b>Project Total</b>	<b>2,295,000</b>	<b>851,000</b>	<b>1,620,000</b>	-	-	-	-
39											
40	<b>UW 29 Filter Capacity Expansion</b>		<b>2018</b>				<b>Start Const</b>				
41	The filter system at Unit Well 29 was constructed with 50% capacity of the well. The filters are rated at 1,100 gpm due to a concern with contaminants under the Sycamore Landfill. A sentinel well was installed between the landfill and the well to monitor water quality. Current pumping and water quality data show no indication of a problem with the Sycamore Landfill with regard to Well 29 operation at the sentinel well. It is proposed to increase the capacity of the filtration system to 2,200 gpm to match the capacity of the well while maintaining the annual pumping at no more than 560 million gallons. This provides improved operational flexibility and peak demand supply capacity on the east side.			Engineering Services				54,000			
42				Increase Filter Capacity				<b>450,000</b>			
44				<b>Project Total</b>	-	-	<b>504,000</b>	-	-	-	-



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Line	Project	Date/Description/Purpose	Primary Construction Year	Tasks	2016	2017	2018	2019	2020	2021	2022
45											
46	<b>Zone 4 Fire Flow Supply Augmentation - Well 31</b>		<b>2015</b>								
47		Unit Well 31 will start in 2015 with the construction of the site ground reservoir. The well house, filter, and booster pump station will be constructed in 2017. <i>Well 31</i> project will correct a significant system deficiency identified by the Water Master Plan in the southeast corner of the system. Due to significant expansion of the system over the years to the south and east, the hydraulics of the system will not adequately serve this area for fire flow supply or system reliability and redundancy. 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.		Public Engagement							
48				Drill Production Well							
49				Engineering Services			123,000	123,000			
50				Construction		200,000	2,940,000	1,160,000			
52				Hydraulic Improvement Pipelines					744,000		
53				<b>Project Total</b>	<b>200,000</b>	<b>3,063,000</b>	<b>1,283,000</b>	<b>744,000</b>	-	-	-
54											
55	<b>Unit Well 12 Conversion to a Two Zone Well</b>		<b>2015</b>								
56		The Water Master Plan recommended that Well 12 be converted to a two zone well. This conversion will provide operational flexibility and reliability to the west side supply system. Pumps and a pressure reducing valve will be added to the Well 12 facility to move water from Pressure Zone 7 to Pressure Zone 8 or from Pressure Zone 8 to Pressure Zone 7.		Engineering Services	10,000						
58				Well House Construction	750,000						
59				Water Main Improvements	620,000						
60				<b>Project Total</b>	<b>1,380,000</b>	-	-	-	-	-	-
61											
62	<b>Upgrade of BPS 115</b>		<b>2015</b>								
63		The upgrade of Booster Pump Station 115 will mitigate a long standing low pressure problem in the Bunker Hill Reservoir area. The station will also provide the Utility with operational flexibility and an supplemental water supply point to the east side of I-90. The station will transfer water from Zone 6E to Zone 3 and back again through a PRV. UW Hospital is building a new facility in the American Family area and requires a redundant water supply. This project will provide Pressure Zone 3 with a redundant feed from Zone 6.		Engineering Services							
64				Upgrade BPS 115 to a 2 Zone facility with Generator							
65				Water Main Improvements							
66				<b>Project Total</b>	-	-	-	-	-	-	-
67											
68	<b>Iron and Manganese Filter at Well 19</b>		<b>2016</b>								
69		Construction of an <i>Iron and Manganese Filter at Well 19</i> will address the water quality in the Well 19 service area due to elevated levels of iron and manganese. The Well 19 iron and manganese levels exceed Madison Water Utility water quality goals. Accumulation of iron and manganese solids in the distribution system results in a need for additional flushing to minimize the risk of colored water reaching customers. Removing the iron and manganese from the water using a filter improves finished water quality and reduces the need for frequent flushing. The project will benefit existing customers in the west campus area in Pressure Zone 6W. The budget anticipates starting construction of a filter in 2016 with the facility in full operation in 2017.		Public Engagement	10,000						
70				Engineering Services	195,000	180,000					
71				Filter Construction	800,000	2,900,000					
72				<b>Project Total</b>	<b>1,005,000</b>	<b>3,080,000</b>	-	-	-	-	-
73											
74	<b>Far West Elevated Reservoir</b>		<b>2017</b>								
75		A Far West Side 1.0 MG elevated reservoir is needed due to additional grow on the west side. The tower will combine Pressure Zones 10 and 11 and supplement the storage at High Point Road. The Far West Side Elevated Reservoir project will provide additional gravity fed water storage capacity within Pressure Zone 10 and will add needed storage capacity to current Zone 11. The 250,000 gallon High Point Road reservoir is reaching its capacity and does not provide sufficient emergency reserve capacity. Providing minimum fire flow requirements to this area of the distribution system is necessary to meet minimum Utility standards. The project also provides a second feed to the area by using BPS 128 improving reliability. This 2006 Water Master Plan identified two elevated reservoirs for the far west side and this project will combine those two projects into a single facility.		Public Engagement	15,000	5,000	5,000				
76				Engineering Services	175,000	125,000	90,000				
77				Construct 1 MG reservoir		2,650,000	650,000				
78				Reservoir piping improvements			510,000				
79				Water Main Improvements			694,000		736,000		
80				<b>Project Total</b>	<b>190,000</b>	<b>2,780,000</b>	<b>1,949,000</b>	-	<b>736,000</b>	-	-



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81												
82	<b>Zone 7 &amp; 8 Supplemental Supply - Whitney Way</b>		<b>2024</b>									
83	The 2006 Water Master Plan recommends an additional well to serve both Pressure Zones 7 and 8 to improve operational flexibility and system reliability. This recommendation was verified in 2009 in an analysis of the water demand in Zone 7. Adding a well to the area with the ability to pump water to either Zones 7 or 8 will provide additional water supply capacity the west side and improve system reliability and redundancy. This facility will provide significant operational flexibility to the Utility within this portion of the system and ultimately benefit 5 different pressure zones across the entire west side. 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. This new well is projected to be under construction in 2024.			Public Engagement				15,000	10,000			
84		Site Selection and Property Purchase							321,000			
85		Drill test well							135,000			
86		Drill production Well								1,077,000		
87		Well Siting Eng Services						30,000	75,000	25,000		
88		Unit Well Engineering Services										
89		Construct Facility										
90		Pipeline Improvements										
91				<b>Project Total</b>	-	-	-	<b>45,000</b>	<b>541,000</b>	<b>1,102,000</b>	-	
92												
93	<b>Unit Well No. 8 - Re-Construction</b>		<b>2021</b>							<b>Start Const</b>		
94	<u>Unit Well No. 8 Re-Construction</u> will totally upgrade and replace Well 8. The project will install a filter for iron and manganese to address current water quality issues at Well 8. Due to the colored water resulting from the iron and manganese, well operation is currently limited to summer only and a total production of approximately 100 million gallons per year. The need for this project was verified by the East Side Water Supply project and a public engagement process has started. Due to concerns about the nearby KIP Corporation contamination and neighborhood concerns about the facility in the park, the project has been delayed. The Utility will continue to study the KIP contamination and monitor groundwater quality and flow patterns. Installation of an iron and manganese filter would allow the well to be operational all year long. Space will be included in the project for the future addition of an air stripper if VOC contamination from the KIP site were to reach the well. The project will benefit existing customers in the East Isthmus area and improve the quality of the water pumped from Well 8. Construction is currently scheduled to start in 2021.			Public Engagement	10,000	5,000	10,000	5,000	10,000	10,000	5,000	
95		Groundwater Study			50,000							
96		Sentinel Wells					100,000					
97		Engineering Services							448,000	300,000	150,000	
98		Property Acquisition and Permitting						50,000	300,000	50,000		
99		Well 8 Re-Construction									2,410,000	4,490,000
100		Hydraulic Improvement Pipelines										
101				<b>Project Total</b>	<b>60,000</b>	<b>5,000</b>	<b>110,000</b>	<b>55,000</b>	<b>758,000</b>	<b>2,770,000</b>	<b>4,645,000</b>	
102												
103	<b>VOC Air Stripper at Well 18</b>		<b>2019</b>							<b>Start Const</b>		
104	Construction of a <u>VOC Air Stripper at Well 18</u> will address the pending water quality and regulatory issues due to increasing VOC levels at the well. Recent Water Quality monitoring at the well has indicated an increasing trend in the VOC levels. Additionally, regulatory changes may result in lower VOC limits dictating the need to treat the water at Well 18. 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. The proposed budget anticipates starting construction of an air stripper at Well 18.			Public Engagement		10,000	10,000	10,000				
105		Engineering Services					250,000	150,000	100,000			
106		VOC Treatment Construction							1,500,000	2,300,000		
107				<b>Project Total</b>	-	<b>10,000</b>	<b>260,000</b>	<b>1,660,000</b>	<b>2,400,000</b>	-	-	
108												
109	<b>Iron and Manganese Filter at Well 30</b>		<b>2023</b>									
110	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. Annual system flushing is required in the Well 30 service area to minimize the risk of colored water events due to the accumulation of iron and manganese solids in the system. A filter would improve finished water quality and reduce the need for annual flushing in the Well 30 service area. The budget anticipates construction of a filter starting in 2023.			Public Engagement							15,000	
111		Engineering Services									325,000	
112		Filter Construction										
113				<b>Project Total</b>	-	-	-	-	-	-	<b>340,000</b>	



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113	<b>Booster Pump Station 129 Reconstruction</b>		<b>2024</b>									
114	Construction of a new and upgraded booster pump station 129 is scheduled for 2017. 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.			Public Engagement								
115				Engineering Services								
116				Water Main Improvements								
117				Construct BPS 129								
118				<b>Project Total</b>				-	-	-	-	-
120	<b>East Side Replacement Well (Well 3)</b>		<b>2025</b>									
121	Utility Well #3 was abandoned in early 2008 due to elevated levels of Carbon Tetrachloride. This project is intended to replace that lost supply capacity in Pressure Zone 6E. The need for a replacement well was verified by the East Side Water Supply project in 2012. A new well will restore lost supply redundancy and reliability to Zone 6E. It is expected that the well will need a filter for iron and manganese removal and this is included in the budget for the project. One site identified for this well during the East Side Water Supply Project was at the Felland Road Reservoir. This site would have the distinct advantage of filling in a gravity reservoir and for providing the ability to pump to Zone 3 providing additional supply redundancy and operational flexibility.			Public Engagement								
122				Drill test well and WQ analysis								
123				Well Siting Consultant								
124				Property Purchase								
125				Drill new production Well								
126				Engineering Services								
127				Construction of well and filters								
128	<b>Project Total</b>				-	-	-	-	-	-		
130	<b>Booster Pump Station/PRV 124 Construction</b>		<b>2026</b>									
131	Construction of a new booster pump station 124 to transfer water across the Yahara River and provide operational flexibility to the system. Pump Station 124 will transfer water from Zone 6W to Zone 6E and back again through a PRV. This operation will benefit customers through gained reliability and flexibility of operations. The pump station will allow the transfer of water from multiple wells if needed during a water shortage or equipment maintenance period.			Public Engagement								
132				Engineering Services								
133				Property Procurement								
134				Water Main Improvements								
135				Construct BPS 124								
136	<b>Project Total</b>				-	-	-	-	-	-		
137	<b>Reconstruct Well 14 with Na and Cl Project</b>		<b>2029</b>									
138	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, the sodium and chloride levels in the water pumped from Well 14 have been rising for several years. This project will investigate alternatives to reduce the Na and Cl concentrations at Well 14.			Public Engagement								
139				Engineering Services								
140				Property Purchase								
141				Well 14 Facility and Well Modifications								
142	<b>Project Total</b>				-	-	-	-	-	-		
143	<b>Pressure Zone 9 Storage</b>		<b>2030</b>									
144	Storage capacity within Pressure Zone 9 was identified in the Water Master Plan as being deficient. With the replacement of the elevated reservoir on Prairie Road in 2011 and 2012 with a 400,000 gallon tank, this situation was partially mitigated. A second reservoir with a capacity of 750,000 gallons will resolve the remainder of the Zone 9 storage deficiency. An elevated reservoir in the western portion of Zone 9 will provide hydraulic balance to the system. Pressure Zone 9 has developed significantly with not only residential but commercial and institutional facilities. The fire flow			Public Engagement								
145				Reservoir Property Purchase								
146				Engineering Services								
147	<b>Project Total</b>				-	-	-	-	-	-		



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Line	Project	Date/Description/Purpose	Primary Construction Year	Tasks	2016	2017	2018	2019	2020	2021	2022
		requirements have increased due to this development to the point that current facilities do not meet minimum standards.		Reservoir Pipeline Construction							
148											
149				<b>Project Total</b>	-	-	-	-	-	-	-
150											
151	<b>Pump Station 220 - Raymond Road PS</b>		<b>2030</b>								
152		A booster pumping station in conjunction with the Pressure Zone 9 elevated reservoir is proposed on the west side to move water between Zones 7, 9 and 10 and back again through a pressure reducing valve. The proposed pumping station will setup operational flexibility within Pressure Zones 7, 9 and 10. The station will transfer water from Zone 7 to Zones 9 and 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 in providing operational flexibility. The project will also provide supply redundancy to the far west side.		Public Engagement							
153				Engineering Services							
				Property Procurement							
154				Dual Zone Pump Station Construction							
156				Booster Station Piping Upgrade							
157				<b>Project Total</b>	-	-	-	-	-	-	-
158											
159	<b>Booster Pump Station 109 (Spaanem Ave)</b>		<b>2024</b>								
160		With the addition of Well 31 on Tradewinds, Pressure Zone 4 will have additional capacity. This additional capacity can benefit the SE corner of Zone 6E through the proposed booster pumping station. Booster Pump Station 109 provides the east side operational functionality and improves reliability to the water supply system. 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. This project was identified in the Water Master Plan.		Public Engagement							
161				Site Selection and Property Purchase (If Required)							
162				Engineering Services							
164				Construct BPS 109							
165				Water Main Improvements							
166				<b>Project Total</b>	-	-	-	-	-	-	-
167											
168	<b>Booster Pump Station 114</b>		<b>2026</b>								
169		Booster Pump Station 114 will provide the ability to move water from Pressure Zone 6W to Zone 8 and back again. This improves the operational flexibility of the west side supply system and provides the means of spreading out the current water supply capacity within the system. Construction of BPS 114 will benefit west side customers through gained system reliability and redundancy.		Public Engagement							
170				Site Selection and Property Purchase							
171				Engineering Services							
173				Construct BPS 114							
174				Water Main Improvements							
175				<b>Project Total</b>	-	-	-	-	-	-	-
176											
177	<b>Northeast Side Supplemental Water Supply (American Family)</b>		<b>2028</b>								
178		The 2006 Water Master Plan recommended an additional well on the east side that could provide water to Zones 6E and 3. The need for this well was verified during the system analysis completed for the East Side Water Supply project. The well would be tentatively located in the NE corner of the system and would provide water to Zones 3 and 6E. While no site has been identified at this point, the Utility owns property for this purpose on Hoepker Road. A public participation process is expected to be used to site the well and develop the details of this project. Continued development pressure on the east side and the need for reliability and redundancy in the NE corner of the water system is the focus of this project.		Public Engagement							
179				Property Purchase							
180				Well Siting Consultant							
181				Drill test well							
182				Drill Production Well							
183				Engineering Services							
				Construction of Unit Well, Filter, Reservoir and Pump Station							



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185				Pipelines							
186				<b>Project Total</b>	-	-	-	-	-	-	-
187											
188	<b>Near West Side Water Supply Project (Glenway)</b>		<b>2031</b>								
189	Construction of an additional well on the near west side has been in the Water Master Plan to mitigate an anticipated supply deficiency in Pressure Zones 6 and 7. The <i>Near West Side Water Supply Project</i> will provide additional water supply capacity to both Zones 6 & 7. The final location of the proposed well will be determined following a significant public participation process and evaluation period.			Public Engagement							
190				Site Selection and Property Purchase							
191				Drill Test Well							
192				Drill production Well							
193				Engineering Services							
194				Construction of Unit Well, Filter, Reservoir and Pump Station							
196				<b>Project Total</b>	-	-	-	-	-	-	-
197											
198	<b>Booster Pump Station 320</b>		<b>2033</b>								
199	Booster Pump Station 320 will provide the Utility with operational flexibility on the west side. The station will transfer water from Zones 7 to Zones 9 and 10 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 Engagement							
200				Site Selection and Property Purchase							
201				Engineering Services							
203				Construct BPS 320							
204				Water Main Improvements							
205					<b>Project Total</b>	-	-	-	-	-	-
206											
207				Pipe Replacement Reinvestment Budget Goal					14,020,000		
208	<b>Pipeline Replacement/Rehab/Improvements</b>		<b>Ongoing</b>	<b>Total Pipe Rehab Budget</b>	<b>11,719,000</b>	<b>12,155,000</b>	<b>12,965,000</b>	<b>13,839,000</b>	<b>14,782,000</b>	<b>14,782,000</b>	<b>15,301,000</b>
209	Madison Water Utility has a planned system replacement and upgrade program that provides for annual main replacement and rehabilitation. 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. A planned annual increase in spending to accomplish this goal by 2050 will be continued. The Utility's Water Master Plan also recommends hydraulic improvements to the system.			Reconstruction Pipe Projects	5,200,000	5,408,000	5,624,000	5,849,000	6,083,000	6,083,000	6,235,000
210				Resurfacing Pipe Projects	4,660,000	5,126,000	5,639,000	6,203,000	6,823,000	6,823,000	7,096,000
211				Pipe Lining Projects	1,474,000	1,621,000	1,702,000	1,787,000	1,876,000	1,876,000	1,970,000
212				Verona Road Pipeline	385,000						
213				East Johnson							
214				New Pipeline Projects	1,350,000	1,451,000	1,560,000	1,677,000	1,803,000	1,803,000	1,893,000
215				Master Plan Hydraulic Improvement Pipe Projects		500,000	560,000	627,000	702,000		786,000
216				<b>Project Total</b>	<b>13,069,000</b>	<b>14,106,000</b>	<b>15,085,000</b>	<b>16,143,000</b>	<b>17,287,000</b>	<b>16,585,000</b>	<b>17,980,000</b>
217											
218				Pipe Hydraulic Upgrade Investment Budget Goal					3,890,000		
219	<b>Misc. Pump Station/PRV/Facility Projects</b>		<b>Ongoing</b>								
220	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. Pressure Reducing stations will be constructed throughout the system as needed to reduce areas of excessive pressure.			PRV Station Gammon Rd							
221				Chemical Feed Room Mods		350,000		400,000			450,000
222				PRV Projects 2 per year				60,000		64,000	68,000
223				Misc. Projects	400,000	420,000	441,000	463,000	486,000	150,000	510,000
224				Engineering Services	48,000	92,000	60,000	104,000	66,000	18,000	123,000



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# Cash Flow Draft

**Annual Totals**    \$ 27,098,000    \$ 29,553,000    \$ 23,377,000    \$ 22,765,000    \$ 24,176,000    \$ 21,653,800    \$ 25,749,700

Line	Project	Date/Description/Purpose	Primary Construction Year	Tasks	2016	2017	2018	2019	2020	2021	2022
225				<b>Project Total</b>	<b>448,000</b>	<b>862,000</b>	<b>561,000</b>	<b>967,000</b>	<b>616,000</b>	<b>168,000</b>	<b>1,151,000</b>
226											
227	<b>System Wide Misc Projects</b>		<b>Ongoing</b>								
230	Several system wide tasks are included in the Capital Budget that cover a variety of repair, rehabilitation, and upgrade projects. The Utility's Infrastructure Management Plan recommends a reinvestment of \$2.5 (2005 dollars) in system facilities to sustain their viability for the long term. This would include Unit Well, pump station, and reservoir improvements and renewal. For budgeting purposes, these projects are itemized under a single heading.			SCADA Maintenance and 6 Year Upgrade	100,000	40,000	40,000	40,000	41,000	42,000	43,100
231				Video System Upgrades	43,000	44,000	45,000	46,000	20,000	20,800	21,600
232				Flow Meter and VFD Retrofit		200,000	206,000	212,000	218,000		
233				Meter Program	208,000	216,000	225,000	234,000	243,000	253,000	263,000
234				Private Well Connection Program							
235				Safety Additions to the Plant	72,000	76,000	80,000	84,000	88,000	92,000	97,000
236				Olin Admin Office Maintenance	51,000	55,000	59,000	63,000	143,000	73,000	78,000
237				Unit Well/PS/Reservoir Rehab/Maintenance	750,000	825,000	908,000	999,000	1,039,000	500,000	1,081,000
238				Paterson Vehicle Storage Bldg Maintenance	58,000	20,000	21,000	22,000	23,000	24,000	25,000
239				Paterson Office and Shop Maintenance	25,000	20,000	21,000	22,000	23,000	24,000	25,000
240				<b>Project Total</b>	<b>1,307,000</b>	<b>1,496,000</b>	<b>1,605,000</b>	<b>1,722,000</b>	<b>1,838,000</b>	<b>1,028,800</b>	<b>1,633,700</b>
241											
242				<b>Total Estimated Annual Costs</b>	<b>27,098,000</b>	<b>29,553,000</b>	<b>23,377,000</b>	<b>22,765,000</b>	<b>24,176,000</b>	<b>21,653,800</b>	<b>25,749,700</b>
243				Facility Reinvestment and Renewal Goal					3.89		
244				Facility Reinvestment and Renewal Actual					1.32		