

EXHIBIT C, Cost Estimate
2016 Water System Plan Update

TASK / DESCRIPTION	PM	QM	PE	PE	PE	Asst. PM	EI	GIS	WP	Total Hours	Carollo Labor Cost	Sub Total Cost	Sub Markup @ 10%	Total Cost	OTHER DIRECT COSTS			TOTAL COST																		
	Kammereck	Loper	Gresh	Various	Lanigan	Reisinger	Miner	Varies	Varies						Travel and Printing	PECE \$11.70	Total ODC																			
Total Labor Rate											\$	195	\$	226	\$	195	\$	195	\$	148	\$	148	\$	132	\$	118	\$	90								
Task 100 - Introduction																																				
101	Meeting No. 1 - Project Kick-off										4	0	4	0	4	8	0	0	0	20	\$	3,336	\$	-	\$	-	\$	-	\$	500	\$	234	\$	734	\$	4,070
102	Develop Introduction Information										2	0	0	0	0	2	4	0	0	8	\$	1,214	\$	-	\$	-	\$	-	\$	-	\$	94	\$	94	\$	1,308
103	Draft and Final Chapter 1 – Introduction										2	0	0	0	0	4	2	0	4	12	\$	1,606	\$	-	\$	-	\$	-	\$	-	\$	140	\$	140	\$	1,746
Subtotal - Task 100											8	0	4	0	4	14	6	0	4	40	\$	6,156	\$	-	\$	-	\$	-	\$	500	\$	468	\$	968	\$	7,124
Task 200 - Planning Considerations																																				
201	Data Request										0	0	0	0	2	0	0	0	0	2	\$	296	\$	-	\$	-	\$	-	\$	-	\$	23	\$	23	\$	319
202	Study Area										0	0	0	0	2	0	2	2	0	6	\$	796	\$	-	\$	-	\$	-	\$	-	\$	70	\$	70	\$	866
203	Identify Legislation, Regulations, and Permits										0	0	0	0	2	0	4	0	0	6	\$	824	\$	-	\$	-	\$	-	\$	-	\$	70	\$	70	\$	894
204	Review and Update of Policies and Criteria										2	0	0	0	12	0	0	0	2	16	\$	2,346	\$	-	\$	-	\$	-	\$	-	\$	187	\$	187	\$	2,533
205	Meeting No. 2 - Policies and Criteria										4	0	0	0	8	0	0	0	2	14	\$	2,144	\$	-	\$	-	\$	-	\$	500	\$	164	\$	664	\$	2,808
206	Summarize Related Documents										0	0	0	0	2	0	4	0	0	6	\$	824	\$	-	\$	-	\$	-	\$	-	\$	70	\$	70	\$	894
207	Draft and Final Chapter 2 – Planning Considerations										0	0	0	0	8	0	4	0	0	12	\$	1,712	\$	-	\$	-	\$	-	\$	-	\$	140	\$	140	\$	1,852
Subtotal - Task 200											6	0	0	0	36	0	14	2	4	62	\$	8,942	\$	-	\$	-	\$	-	\$	500	\$	725	\$	1,225	\$	10,167
Task 300 - Existing System																																				
301	Data Request										0	0	0	0	0	2	0	0	0	2	\$	296	\$	-	\$	-	\$	-	\$	-	\$	23	\$	23	\$	319
302	Review and Update of Existing System										0	0	0	0	0	4	20	8	4	36	\$	4,536	\$	-	\$	-	\$	-	\$	-	\$	421	\$	421	\$	4,957
303	Draft and Final Chapter 3 – Existing System										2	0	0	0	0	4	8	0	4	18	\$	2,398	\$	-	\$	-	\$	-	\$	-	\$	211	\$	211	\$	2,609
Subtotal - Task 300											2	0	0	0	0	10	28	8	8	56	\$	7,230	\$	-	\$	-	\$	-	\$	-	\$	655	\$	655	\$	7,885
Task 400 - Operation and Maintenance																																				
401	Data Request										0	0	0	0	0	2	0	0	0	2	\$	296	\$	-	\$	-	\$	-	\$	-	\$	23	\$	23	\$	319
402	O&M Analysis										0	0	0	0	0	12	0	0	0	12	\$	1,776	\$	-	\$	-	\$	-	\$	-	\$	140	\$	140	\$	1,916
403	Remaining Useful Life										0	0	0	0	0	4	16	8	0	28	\$	3,648	\$	-	\$	-	\$	-	\$	-	\$	328	\$	328	\$	3,976
404	Draft and Final Chapter 4 – Operations and Maintenance										2	0	2	0	0	8	2	0	4	18	\$	2,588	\$	-	\$	-	\$	-	\$	-	\$	211	\$	211	\$	2,799
Subtotal - Task 400											2	0	2	0	0	26	18	8	4	60	\$	8,308	\$	-	\$	-	\$	-	\$	-	\$	702	\$	702	\$	9,010
Task 500 - Water Requirements																																				
501	Data Request										0	0	0	0	2	0	0	0	0	2	\$	296	\$	-	\$	-	\$	-	\$	-	\$	23	\$	23	\$	319
502	Demographics Projections										0	0	0	0	8	0	8	0	0	16	\$	2,240	\$	-	\$	-	\$	-	\$	-	\$	187	\$	187	\$	2,427
503	Demand Projections										0	0	0	0	8	0	16	0	0	24	\$	3,296	\$	-	\$	-	\$	-	\$	-	\$	281	\$	281	\$	3,577
504	Meeting No. 3 – Water Requirements / WUE Program Review										4	0	0	0	12	0	0	0	0	16	\$	2,556	\$	-	\$	-	\$	-	\$	500	\$	187	\$	687	\$	3,243

EXHIBIT C, Cost Estimate
2016 Water System Plan Update

TASK / DESCRIPTION		PM	QM	PE	PE	PE	Asst. PM	EI	GIS	WP	Total Hours	Carollo Labor Cost	Sub Total Cost	Sub Markup @ 10%	Total Cost	OTHER DIRECT COSTS			TOTAL COST	
		Kammereck	Loper	Gresh	Various	Lanigan	Reisinger	Miner	Varies	Varies						PECE	Travel and Printing	Total ODC		
Total Labor Rate		\$ 195	\$ 226	\$ 195	\$ 195	\$ 148	\$ 148	\$ 132	\$ 118	\$ 90							\$ 11.70			
505	Draft and Final Chapter 5 – Water Requirements	0	0	0	0	16	0	8	0	4	28	\$ 3,784	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 328	\$ 328	\$ 4,112
Subtotal - Task 500		4	0	0	0	46	0	32	0	4	86	\$ 12,172	\$ -	\$ -	\$ -	\$ -	\$ 500	\$ 1,006	\$ 1,506	\$ 13,678
Task 600 - Water Use Efficiency																				
601	Data Request	0	0	0	0	1	0	0	0	0	1	\$ 148	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12	\$ 12	\$ 160
602	Future Conservation Water Demand	0	0	0	0	8	0	4	0	0	12	\$ 1,712	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 140	\$ 140	\$ 1,852
603	Draft and Final Chapter 6 – Water Use Efficiency	1	0	0	0	4	0	0	0	4	9	\$ 1,147	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 105	\$ 105	\$ 1,252
Subtotal - Task 600		1	0	0	0	13	0	4	0	4	22	\$ 3,007	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 257	\$ 257	\$ 3,264
Task 700 - Water Quality																				
701	Data Request	0	0	0	0	0	2	0	0	0	2	\$ 296	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 23	\$ 23	\$ 319
702	Water Quality Summary	0	0	0	0	0	8	0	0	0	8	\$ 1,184	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 94	\$ 94	\$ 1,278
703	Water Quality Analysis	0	0	0	0	0	16	0	0	0	16	\$ 2,368	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 187	\$ 187	\$ 2,555
704	Draft and Final Chapter 7 – Water Quality	2	0	0	0	0	16	0	0	4	22	\$ 3,118	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 257	\$ 257	\$ 3,375
Subtotal - Task 700		2	0	0	0	0	42	0	0	4	48	\$ 6,966	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 562	\$ 562	\$ 7,528
Task 800 - Water Resources																				
801	Data Request	0	0	0	0	2	0	0	0	0	2	\$ 296	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 23	\$ 23	\$ 319
802	Water Supply Summary	0	0	0	0	6	0	0	0	0	6	\$ 888	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 70	\$ 70	\$ 958
803	Water Rights Assessment	0	0	0	0	8	0	0	0	0	8	\$ 1,184	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 94	\$ 94	\$ 1,278
804	Water Supply Analysis	0	0	0	0	10	0	0	4	0	14	\$ 1,952	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 164	\$ 164	\$ 2,116
805	Meeting No. 4 – Water Supply Analysis / Water Quality	4	0	0	0	8	4	0	0	0	16	\$ 2,556	\$ -	\$ -	\$ -	\$ -	\$ 500	\$ 187	\$ 687	\$ 3,243
806	Wellhead Protection Program Update	0	0	0	0	4	0	0	0	0	4	\$ 592	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 47	\$ 47	\$ 639
	Task 2 - Assess Environmental Threats and Risk Reduction Strategies	0	0	0	0	0	0	0	0	0	-	\$ -	\$ 3,740	\$ 374	\$ 4,114	\$ -	\$ -	\$ -	\$ -	\$ 4,114
	Task 3 - Prepare Contingency Plan	0	0	0	0	0	0	0	0	0	-	\$ -	\$ 910	\$ 91	\$ 1,001	\$ -	\$ -	\$ -	\$ -	\$ 1,001
	Task 4 - Prepare Notification Letter	0	0	0	0	0	0	0	0	0	-	\$ -	\$ 970	\$ 97	\$ 1,067	\$ -	\$ -	\$ -	\$ -	\$ 1,067
	Task 5 - Provide Assistance with Steigerwald Wellfield Supply Options and Analysis	0	0	0	0	0	0	0	0	0			\$ 1,210	\$ 121	\$ 1,331	\$ -	\$ -	\$ -	\$ -	\$ 1,331
	Task 6 - Prepare WHP Summary Report	0	0	0	0	0	0	0	0	0			\$ 4,130	\$ 413	\$ 4,543	\$ 50	\$ -	\$ 50	\$ 50	\$ 4,593
	Task 7 - PGG Project Management	0	0	0	0	0	0	0	0	0			\$ 1,740	\$ 174	\$ 1,914	\$ 20	\$ -	\$ 20	\$ 20	\$ 1,934
807	Meeting No. 5 – Wellhead Protection	0	0	0	0	2	0	0	0	0	2	\$ 296	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 23	\$ 23	\$ 319
808	Draft and Final Chapter 8 – Water Resources	2	0	0	0	16	0	0	0	6	24	\$ 3,298	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 281	\$ 281	\$ 3,579
Subtotal - Task 800		6	0	0	0	56	4	0	4	6	76	\$ 11,062	\$ 12,700	\$ 1,270	\$ 13,970	\$ 570	\$ 889	\$ 1,459	\$ 26,491	
Task 900 - Water System Analysis																				
901	Data Request	0	0	0	0	0	2	0	0	0	2	\$ 296	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 23	\$ 23	\$ 319

EXHIBIT C, Cost Estimate
2016 Water System Plan Update

TASK / DESCRIPTION	PM	QM	PE	PE	PE	Asst. PM	EI	GIS	WP	Total Hours	Carollo Labor Cost	Sub Total Cost	Sub Markup @ 10%	Total Cost	OTHER DIRECT COSTS			TOTAL COST										
	Kammereck	Loper	Gresh	Various	Lanigan	Reisinger	Miner	Varies	Varies						Travel and Printing	PECE \$11.70	Total ODC											
Total Labor Rate											\$	195	\$	226	\$	195	\$	195	\$	148	\$	148	\$	132	\$	118	\$	90
902	Updated Hydraulic Profile										13	\$ 1,667	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 152	\$ 152	\$ 1,819								
903	Storage Analysis										8	\$ 1,184	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 94	\$ 94	\$ 1,278								
904	Pump Station Analysis										8	\$ 1,184	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 94	\$ 94	\$ 1,278								
905	Update Hydraulic Model										24	\$ 3,176	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 281	\$ 281	\$ 3,457								
906	Fire and System Pressure Analysis										100	\$ 14,020	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,170	\$ 1,170	\$ 15,190								
907	Meeting No. 6 - Desktop and System Pressure Analysis										28	\$ 3,956	\$ -	\$ -	\$ -	\$ -	\$ 500	\$ 328	\$ 828	\$ 4,784								
908	Identification of Water Improvement Projects										38	\$ 5,156	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 445	\$ 445	\$ 5,601								
909	Draft and Final Chapter 9 – System Analysis										38	\$ 5,006	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 445	\$ 445	\$ 5,451								
Subtotal - Task 900											259	\$ 35,645	\$ -	\$ -	\$ -	\$ -	\$ 500	\$ 3,030	\$ 3,530	\$ 39,175								
Task 1000 - Capital Improvements																												
1001	Cost Estimates										20	\$ 2,892	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 234	\$ 234	\$ 3,126								
1002	Project Prioritization										4	\$ 592	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 47	\$ 47	\$ 639								
1003	Meeting No. 8 - Capital Improvements										24	\$ 3,548	\$ -	\$ -	\$ -	\$ -	\$ 500	\$ 281	\$ 781	\$ 4,329								
1004	Electronic CIP										20	\$ 2,640	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 234	\$ 234	\$ 2,874								
1005	Draft and Final Chapter 10 – Capital Improvements										22	\$ 2,862	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 257	\$ 257	\$ 3,119								
Subtotal - Task 1000											90	\$ 12,534	\$ -	\$ -	\$ -	\$ -	\$ 500	\$ 1,053	\$ 1,553	\$ 14,087								
Task 1100 - Financial																												
1101	Data Collection / Review										-	\$ -	\$ 420	\$ 42	\$ 462	\$ -	\$ -	\$ -	\$ -	\$ 462								
1102	Historical Financial Performance Review										-	\$ -	\$ 2,284	\$ 228	\$ 2,512	\$ -	\$ -	\$ -	\$ -	\$ 2,512								
1103	Fiscal Policy Review										-	\$ -	\$ 840	\$ 84	\$ 924	\$ -	\$ -	\$ -	\$ -	\$ 924								
1104	Capital Financing Plan										-	\$ -	\$ 1,547	\$ 155	\$ 1,702	\$ -	\$ -	\$ -	\$ -	\$ 1,702								
1105	Operating Forecast										-	\$ -	\$ 1,547	\$ 155	\$ 1,702	\$ -	\$ -	\$ -	\$ -	\$ 1,702								
1106	Revenue Needs Assessment										-	\$ -	\$ 1,547	\$ 155	\$ 1,702	\$ -	\$ -	\$ -	\$ -	\$ 1,702								
1107	Rate Forecast & Affordability Test										-	\$ -	\$ 1,547	\$ 155	\$ 1,702	\$ -	\$ -	\$ -	\$ -	\$ 1,702								
1108	Meeting No. 9 - Financial Analysis										8	\$ 1,372	\$ 1,470	\$ 147	\$ 1,617	\$ 500	\$ 94	\$ 594	\$ 3,583									
1109	Documentation										14	\$ 1,702	\$ 5,515	\$ 551	\$ 6,066	\$ -	\$ 164	\$ 164	\$ 7,932									
Subtotal - Task 1100											22	\$ 3,074	\$ 16,716	\$ 1,672	\$ 18,388	\$ 500	\$ 257	\$ 757	\$ 22,219									
Task 1200 - Plan Integration																												
1201	Executive Summary										12	\$ 1,544	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 140	\$ 140	\$ 1,684								
1202	City Draft Plan										64	\$ 8,028	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 749	\$ 749	\$ 8,777								
1203	Meeting No. 10 - City Draft Plan										20	\$ 3,148	\$ -	\$ -	\$ -	\$ -	\$ 500	\$ 234	\$ 734	\$ 3,882								
1204	Additional Meetings										24	\$ 3,928	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 281	\$ 281	\$ 4,209								
1205	Agency Draft Plan										34	\$ 4,216	\$ 4,000	\$ 400	\$ 4,400	\$ -	\$ 398	\$ 398	\$ 9,014									
1206	Final Plan										24	\$ 3,044	\$ 4,000	\$ 400	\$ 4,400	\$ -	\$ 281	\$ 281	\$ 7,725									
Subtotal - Task 1200											178	\$ 23,908	\$ 8,000	\$ 800	\$ 8,800	\$ 500	\$ 2,083	\$ 2,583	\$ 35,291									

