

City of Ann Arbor **Water Treatment Plant Alternatives Analysis** RFP No. 881 Level of Effort

Fee (Revised - Scope Rev D.1)

					Droid	oct Team	Mamhar	Level of E	ffort (ho	ure)					1	Fee	
				l	SME/	SME/			· ·				AP/			ree	
ask No.	Task Description	PD	PM	LPE	WTP	SH	SME/S	SME/S	ES	ES	QC	PC	CAD	B&V			
	Salary Rate		\$48	\$65	\$65	\$55	\$65	\$60	\$45	\$32	\$60	\$32	\$29	Total	Total Fee	Direct	Total
1.025	Inflation adjustment	\$77.90	\$49.20		\$66.63	\$56.38	\$66.63	\$61.50	\$46.13	\$32.80	\$61.50	\$32.80	\$29.73	Hours	B&V Labor	Expenses	10141
2.9	Bill rate (based on salary multiplier at left)	\$226	\$143	\$193	\$193	\$163	\$193	\$178	\$134	\$95	\$178	\$95	\$86				
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000	Project Management & Administration		1	1						-							
010	Project Management & Administration	6	16									12	16	50	\$6,159		\$6,159
020	Project Factsheet	1	4										2	7	\$969		\$969
030	Summary Final Report	2	32	4	2	2		2			6		8	58	\$8,620	\$500	\$9,120
040	Council/Planning Commission Presentation and Meetings	2	2	4	1	2					1		4	16	\$2,553		\$2,553
Subtota	al - PM&A	11	54	8	3	4	0	2	0	0	7	12	30	131	\$ 18,302	\$ 500	\$ 18,80
											- 1				V 10,000	, , , , ,	¥ 10,00
hase I -	Source of Supply and Reliability Evaluation																
1001		L															
100A 101A	Source of Supply and System Reliability Alternatives Evaluation - Reconnassia	ance Leve	el Evalau	tions 4	4	4								13	\$2,654		\$2,654
101A	Data Gathering and Review Project Initiation Meeting	8		8	8	4	8			 			2	34	\$6,617	\$2,000	\$2,654
110A	Connection to DWSD	4		8	, J		16				1			29	\$5,719	Ψ2,000	\$5,719
120A	Treatment Capacity near City Wellfield	2		8			16				1			27	\$5,267		\$5,267
130A	Existing Treatment Facility Improvements	4		40	4	40					1			89	\$18,412		\$18,41
140A	Decision Analysis			32										32	\$6,183		\$6,183
150A	Workshop #1 (Day 1)	9		9		8	8						2	36	\$7,256	\$2,000	\$9,256
Subtota	al - Phase IA	28	0	109	16	52	48	0	0	0	3	0	4	260	\$ 52,108	\$ 4,000	\$ 56,10
Gubtota	Thursday,			100									-	200	ψ 02,100	ψ 4,000	Ψ 00,10
100B	Source of Supply and System Reliability Alternatives Evaluation - Planning Lev	vel (if req	uired bas	sed on on	outcome	of Phase	e IA)										
010B	Additional Project Management and Administration for Phase IB	1	2									1	2	6	\$779		\$779
110B	Connection to DWSD	2		24			16			80	1			123	\$15,968		\$15,96
120B	Treatment Capacity near City Wellfield	2		24			16			80	1			123	\$15,968		\$15,96
130B 140B	Existing Treatment Facility Improvements Decision Analysis	2		16 24	6	6					1			31 24	\$6,205 \$4,637		\$6,205 \$4,637
150B	Review Meeting	9		9			8						2	28	\$5,490	\$1,500	\$6,990
160B	Hybrid Source of Supply/Reliability Alternatives (Optional)	2		40			8			8	2			60	\$10,844	ψ1,500	\$10,84
			1	"			l .	J			1		'			,	
Subtota	al - Phase IB	18													-		
Justota		10	2	137	6	6	48	0	0	168	5	1	4	395	\$ 59,891	\$ 1,500	\$ 61,39
						6	48	0	0	168	5	1	4	395	\$ 59,891	\$ 1,500	\$ 61,39
	Preferred Alternative Detailed Evaluation and Development (based on Existing T					6	48	0	0	168	5	1	4	395	\$ 59,891	\$ 1,500	\$ 61,39
						6	48	0	0	168	5	1	4	395	\$ 59,891	\$ 1,500	\$ 61,39
hase II -	Preferred Alternative Detailed Evaluation and Development (based on Existing T Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable)					8	48	0	0	168	5	1	2	395 68	\$ 59,891 \$12,838	\$ 1,500 \$2,000	\$ 61,39 \$14,838
200 210 220	Preferred Alternative Detailed Evaluation and Development (based on Existing T Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development	reatment	Facility I	Developm	nent)		48	0	0	168	5	1		68 30	\$12,838 \$5,796		\$14,838 \$5,796
200 210 220 230	Preferred Alternative Detailed Evaluation and Development (based on Existing T Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development Applied Turbidity Evaluation	reatment	Facility I	Developm 17	ient)		48	0	0	168	5	1		68	\$12,838		\$14,838 \$5,796
200 210 220 230 300	Preferred Alternative Detailed Evaluation and Development (based on Existing T Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development Applied Turbidity Evaluation Facility Plan Alternatives Development	reatment	Facility I	17 30	16 32		48	0		168		1	2	68 30 32	\$12,838 \$5,796 \$6,183		\$14,83 \$5,796 \$6,183
200 210 220 230 300 310	Preferred Alternative Detailed Evaluation and Development (based on Existing T Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development Applied Turbidity Evaluation Facility Plan Alternatives Development Precipitive Softening Analysis	reatment	Facility I	17 30	nent)		48		2	168	1	1	2	68 30 32 92	\$12,838 \$5,796 \$6,183 \$17,535		\$14,83 \$5,796 \$6,183 \$17,53
200 210 220 230 300	Preferred Alternative Detailed Evaluation and Development (based on Existing T Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development Applied Turbidity Evaluation Facility Plan Alternatives Development Precipitive Softening Analysis Plant 1 Service Life Extention Alternatives	reatment	Facility I	17 30	16 32		48	2		168		1	2	68 30 32 92 40	\$12,838 \$5,796 \$6,183 \$17,535 \$6,257		\$14,83 \$5,796 \$6,183 \$17,53 \$6,257
200 210 220 230 300 310 320	Preferred Alternative Detailed Evaluation and Development (based on Existing T Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development Applied Turbidity Evaluation Facility Plan Alternatives Development Precipitive Softening Analysis	reatment	Facility I	17 30 16 4	16 32		48		2 4	168	1 1	1	2	68 30 32 92	\$12,838 \$5,796 \$6,183 \$17,535		\$14,83 \$5,796 \$6,183 \$17,53 \$6,257 \$16,25
200 210 220 230 300 310 320 330 340 350	Preferred Alternative Detailed Evaluation and Development (based on Existing T Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development Applied Turbidity Evaluation Facility Plan Alternatives Development Precipitive Softening Analysis Plant 1 Service Life Extention Alternatives Plant 1 Pretreatment Alternatives Solids Management Alternatives Future Treatment Options and Regulatory Compliance	reatment	Facility I	17 30 16 4 80	16 32	8	48		2 4 4	168	1 1 1 1	1	1 1 1 1 1 1	68 30 32 92 40 86 86 70	\$12,838 \$5,796 \$6,183 \$17,535 \$6,257 \$16,257 \$13,879 \$13,106	\$2,000	\$14,83 \$5,796 \$6,183 \$17,53; \$6,25; \$16,25; \$13,87; \$13,100
200 210 220 230 300 310 320 330 340 350 360	Preferred Alternative Detailed Evaluation and Development (based on Existing T Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development Applied Turbidity Evaluation Facility Plan Alternatives Development Precipitive Softening Analysis Plant 1 Service Life Extention Alternatives Plant 1 Pretreatment Alternatives Solids Management Alternatives Future Treatment Options and Regulatory Compliance Facility Visits and Vendor Presentations (Allowance for use at City direction)	reatment	Facility I	17 30 16 4 80	16 32	8	48	2	2 4 4 4	168	1 1 1 1	1	1 1 1 1 1	68 30 32 92 40 86 86	\$12,838 \$5,796 \$6,183 \$17,535 \$6,257 \$16,257 \$13,879		\$14,83 \$5,796 \$6,183 \$17,53; \$6,25; \$16,25; \$13,87; \$13,100
200 210 220 230 300 310 320 330 340 350 360 400	Preferred Alternative Detailed Evaluation and Development (based on Existing T Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development Applied Turbidity Evaluation Facility Plan Alternatives Development Precipitive Softening Analysis Plant 1 Service Life Extention Alternatives Plant 1 Pretreatment Alternatives Solids Management Alternatives Future Treatment Options and Regulatory Compliance Facility Visits and Vendor Presentations (Allowance for use at City direction) Facility Plan Alternatives Evaluation	reatment	Facility I	17 30 16 4 80	16 32 72	8	48	2	2 4 4 4	168	1 1 1 1	1	1 1 1 1 1 1	68 30 32 92 40 86 86 70 36	\$12,838 \$5,796 \$6,183 \$17,535 \$6,257 \$16,257 \$13,879 \$13,106 \$6,697	\$2,000	\$14,83 \$5,796 \$6,183 \$17,53 \$6,257 \$16,25 \$13,87 \$13,10 \$12,69
200 210 220 230 300 310 320 330 340 350 400 410	Preferred Alternative Detailed Evaluation and Development (based on Existing T Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development Applied Turbidity Evaluation Facility Plan Alternatives Development Precipitive Softening Analysis Plant 1 Service Life Extention Alternatives Plant 1 Pretreatment Alternatives Solids Management Alternatives Future Treatment Options and Regulatory Compliance Facility Visits and Vendor Presentations (Allowance for use at City direction) Facility Plan Alternatives Evaluation Plant 1 Pretreatment Alternatives Ranking (during Workshop 2)	reatment	Facility I	17 30 16 4 80	16 32 72	8	48	2	2 4 4 4	168	1 1 1 1	1	1 1 1 1 1 1	68 30 32 92 40 86 86 70 36	\$12,838 \$5,796 \$6,183 \$17,535 \$6,257 \$16,257 \$13,879 \$13,106 \$6,697	\$2,000	\$14,83 \$5,796 \$6,183 \$17,53 \$6,257 \$16,25 \$13,87 \$13,10 \$12,69
200 210 220 230 300 310 320 330 340 350 360 400 410	Preferred Alternative Detailed Evaluation and Development (based on Existing T Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development Applied Turbidity Evaluation Facility Plan Alternatives Development Precipitive Softening Analysis Plant 1 Service Life Extention Alternatives Plant 1 Pretreatment Alternatives Solids Management Alternatives Future Treatment Options and Regulatory Compliance Facility Plan Alternatives Evaluation Plant 1 Pretreatment Alternatives Ranking (during Workshop 2) Solids Management Alternatives Ranking (during Workshop 2)	reatment	Facility I	17 30 16 4 80	16 32 72	8	48	2	2 4 4 4	168	1 1 1 1	1	1 1 1 1 1 1	92 40 86 86 70 36	\$12,838 \$5,796 \$6,183 \$17,535 \$6,257 \$16,257 \$13,879 \$13,106 \$6,697	\$2,000	\$14,83 \$5,796 \$6,183 \$17,53 \$16,25 \$13,87 \$13,10 \$12,69
200 210 220 230 300 310 320 330 340 350 400 410	Preferred Alternative Detailed Evaluation and Development (based on Existing T Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development Applied Turbidity Evaluation Facility Plan Alternatives Development Precipitive Softening Analysis Plant 1 Service Life Extention Alternatives Plant 1 Pretreatment Alternatives Solids Management Alternatives Future Treatment Options and Regulatory Compliance Facility Visits and Vendor Presentations (Allowance for use at City direction) Facility Plan Alternatives Evaluation Plant 1 Pretreatment Alternatives Ranking (during Workshop 2)	reatment	Facility I	17 30 16 4 80	16 32 72	8	48	2	2 4 4 4	168	1 1 1 1	1	1 1 1 1 1 1	68 30 32 92 40 86 86 70 36	\$12,838 \$5,796 \$6,183 \$17,535 \$6,257 \$16,257 \$13,879 \$13,106 \$6,697	\$2,000	\$14,83 \$5,796 \$6,183 \$17,53 \$6,257 \$16,25 \$13,87 \$13,10 \$12,69
200 210 220 230 300 310 320 330 340 350 360 400 410 420 430	Preferred Alternative Detailed Evaluation and Development (based on Existing T Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development Applied Turbidity Evaluation Facility Plan Alternatives Development Precipitive Softening Analysis Plant 1 Service Life Extention Alternatives Plant 1 Pretreatment Alternatives Solids Management Alternatives Future Treatment Options and Regulatory Compliance Facility Visits and Vendor Presentations (Allowance for use at City direction) Facility Plan Alternatives Evaluation Plant 1 Pretreatment Alternatives Ranking (during Workshop 2) Solids Management Alternatives Ranking (during Workshop 2) Future Treatment Alternatives Ranking (during Workshop 2)	17	8 8 24	17 30 16 4 80 60 28	16 32 72 3	8 80	48	2	2 4 4 4	168	1 1 1 1	1	1 1 1 1 1 2	68 30 32 92 40 86 86 70 36	\$12,838 \$5,796 \$6,183 \$17,535 \$6,257 \$13,879 \$13,106 \$6,697 \$0 \$0	\$2,000	\$14,83 \$5,796 \$6,183 \$17,53 \$6,257 \$16,25 \$13,87 \$13,10 \$12,69
200 210 220 230 300 310 320 330 340 350 360 410 420 430 500 510	Preferred Alternative Detailed Evaluation and Development (based on Existing T Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development Applied Turbidity Evaluation Facility Plan Alternatives Development Precipitive Softening Analysis Plant 1 Service Life Extention Alternatives Plant 1 Pretreatment Alternatives Solids Management Alternatives Future Treatment Options and Regulatory Compliance Facility Visits and Vendor Presentations (Allowance for use at City direction) Facility Plan Alternatives Evaluation Plant 1 Pretreatment Alternatives Ranking (during Workshop 2) Solids Management Alternatives Ranking (during Workshop 2) Future Treatment Alternatives Ranking (during Workshop 2) Workshop #2 (Day 1) Facility Plan Alternatives Integration and Consensus Building Workshop #2 (continuation)	17	8 8 24	17 30 16 4 80 60 28	16 32 72 3	8 80	48	2	2 4 4 4	168	1 1 1 1	1	1 1 1 1 1 2	68 30 32 92 40 86 86 70 36	\$12,838 \$5,796 \$6,183 \$17,535 \$6,257 \$13,879 \$13,106 \$6,697 \$0 \$0	\$2,000	\$14,83 \$5,796 \$6,183 \$17,53 \$6,257 \$16,257 \$13,10 \$12,69 \$0 \$0 \$0 \$10,15
200 210 220 230 300 310 320 330 340 350 360 410 420 430 440 500 600	Preferred Alternative Detailed Evaluation and Development (based on Existing T Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development Applied Turbidity Evaluation Facility Plan Alternatives Development Precipitive Softening Analysis Plant 1 Service Life Extention Alternatives Plant 1 Pretreatment Alternatives Solids Management Alternatives Future Treatment Options and Regulatory Compliance Facility Visits and Vendor Presentations (Allowance for use at City direction) Facility Plan Alternatives Evaluation Plant 1 Pretreatment Alternatives Ranking (during Workshop 2) Solids Management Alternatives Ranking (during Workshop 2) Future Treatment Alternatives Ranking (during Workshop 2) Workshop #2 (Day 1) Facility Plan Alternatives Integration and Consensus Building Workshop #2 (continuation) Document Facility Plan Solutions	17 4 4 8 8 8 8	8 24 9 9 9	17 30 16 4 80 60 28	16 32 72 3 3	80 80 8	48	2	2 4 4 4 4 4	168	1 1 1 1 1 1 1	1	2 1 1 1 1 1 1 2	92 40 86 86 70 36 0 0 0 44	\$12,838 \$5,796 \$6,183 \$17,535 \$6,257 \$16,257 \$13,879 \$13,106 \$6,697 \$0 \$0 \$7,856	\$2,000 \$6,000 \$2,300	\$14,83 \$5,796 \$6,183 \$17,53 \$6,257 \$16,25 \$13,87 \$13,10 \$12,69 \$0 \$0 \$0 \$10,15
200 210 220 230 300 310 320 330 340 350 360 400 410 420 430 440 500 610	Preferred Alternative Detailed Evaluation and Development (based on Existing T Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development Applied Turbidity Evaluation Facility Plan Alternatives Development Precipitive Softening Analysis Plant 1 Service Life Extention Alternatives Plant 1 Pretreatment Alternatives Solids Management Alternatives Future Treatment Options and Regulatory Compliance Facility Visits and Vendor Presentations (Allowance for use at City direction) Facility Plan Alternatives Evaluation Plant 1 Pretreatment Alternatives Ranking (during Workshop 2) Solids Management Alternatives Ranking (during Workshop 2) Future Treatment Alternatives Ranking (during Workshop 2) Workshop #2 (Day 1) Facility Plan Alternatives Integration and Consensus Building Workshop #2 (continuation) Document Facility Plan Solutions Facility Site Layout and Opinions of Probable Cost	17 4 4 8 8 2 2	8 8 24 9 9 9 24	17 30 16 4 80 60 28	16 32 72 3 3 8 8 8	80 80 8	48	2	2 4 4 4	168	1 1 1 1 1 1 1 1 2	1	2 1 1 1 1 1 2 2	68 30 32 92 40 86 86 70 36 0 0 0 44	\$12,838 \$5,796 \$6,183 \$17,535 \$6,257 \$13,879 \$13,106 \$6,697 \$0 \$0 \$7,856 \$13,668	\$2,000 \$6,000 \$2,300	\$14,83 \$5,796 \$6,183 \$17,53 \$16,25 \$16,25 \$13,87 \$13,10 \$12,69 \$0 \$0 \$0 \$10,15
200 210 220 230 300 310 320 330 340 350 360 400 420 430 440 500 600	Preferred Alternative Detailed Evaluation and Development (based on Existing T Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development Applied Turbidity Evaluation Facility Plan Alternatives Development Precipitive Softening Analysis Plant 1 Service Life Extention Alternatives Plant 1 Pretreatment Alternatives Solids Management Alternatives Future Treatment Options and Regulatory Compliance Facility Visits and Vendor Presentations (Allowance for use at City direction) Facility Plan Alternatives Evaluation Plant 1 Pretreatment Alternatives Ranking (during Workshop 2) Solids Management Alternatives Ranking (during Workshop 2) Future Treatment Alternatives Ranking (during Workshop 2) Workshop #2 (Day 1) Facility Plan Alternatives Integration and Consensus Building Workshop #2 (continuation) Document Facility Plan Solutions	17 4 4 8 8 8 8	8 24 9 9 9	17 30 16 4 80 60 28	16 32 72 3 3	80 80 8	48	2	2 4 4 4 4 4	168	1 1 1 1 1 1 1	1	2 1 1 1 1 1 1 2	92 40 86 86 70 36 0 0 0 44	\$12,838 \$5,796 \$6,183 \$17,535 \$6,257 \$16,257 \$13,879 \$13,106 \$6,697 \$0 \$0 \$7,856	\$2,000 \$6,000 \$2,300	\$14,83 \$5,796 \$6,183 \$17,53 \$16,25 \$16,25 \$13,87 \$13,10 \$12,69 \$0 \$0 \$0 \$10,15
200 210 220 230 300 310 320 330 340 350 360 400 410 420 430 440 500 610 620	Preferred Alternative Detailed Evaluation and Development (based on Existing T Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development Applied Turbidity Evaluation Facility Plan Alternatives Development Precipitive Softening Analysis Plant 1 Service Life Extention Alternatives Plant 1 Pretreatment Alternatives Solids Management Alternatives Solids Management Alternatives Future Treatment Options and Regulatory Compliance Facility Visits and Vendor Presentations (Allowance for use at City direction) Facility Plan Alternatives Evaluation Plant 1 Pretreatment Alternatives Ranking (during Workshop 2) Solids Management Alternatives Ranking (during Workshop 2) Future Treatment Alternatives Ranking (during Workshop 2) Workshop #2 (Day 1) Facility Plan Alternatives Integration and Consensus Building Workshop #2 (continuation) Document Facility Plan Solutions Facility Site Layout and Opinions of Probable Cost Implementation Schedule and Phasing	17 4 4 8 8 8 4 4	8 8 24 9 9 9 16 16 16 16 16 16 16 16 16 16 16 16 16	17 30 16 4 80 60 28 9 9 9 24 8	16 32 72 3 3 8 8 8 2 2	80 80 8 8 8	0	2 4 3	2 4 4 4 4 4 4	168	1 1 1 1 1 1 1 1 1 2 2 2 2	0	2 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2	68 30 32 92 40 86 86 70 36 0 0 0 44 44	\$12,838 \$5,796 \$6,183 \$17,535 \$6,257 \$13,879 \$13,106 \$6,697 \$0 \$0 \$7,856 \$13,668 \$6,302	\$2,000 \$6,000 \$2,300 \$900	\$14,83 \$5,796 \$6,183 \$17,53 \$6,257 \$16,25 \$13,10 \$12,69 \$0 \$0 \$0 \$10,15 \$13,66 \$13,66 \$6,302
200 210 220 230 300 310 320 330 340 350 360 400 410 420 430 440 500 610 620	Preferred Alternative Detailed Evaluation and Development (based on Existing T Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development Applied Turbidity Evaluation Facility Plan Alternatives Development Precipitive Softening Analysis Plant 1 Service Life Extention Alternatives Plant 1 Pretreatment Alternatives Solids Management Alternatives Future Treatment Options and Regulatory Compliance Facility Visits and Vendor Presentations (Allowance for use at City direction) Facility Plan Alternatives Evaluation Plant 1 Pretreatment Alternatives Ranking (during Workshop 2) Solids Management Alternatives Ranking (during Workshop 2) Future Treatment Alternatives Ranking (during Workshop 2) Workshop #2 (Day 1) Facility Plan Alternatives Integration and Consensus Building Workshop #2 (continuation) Document Facility Plan Solutions Facility Site Layout and Opinions of Probable Cost	17 4 4 8 8 2 2	8 8 24 9 9 9 24	17 30 16 4 80 60 28	16 32 72 3 3 8 8 8	80 80 8		2	2 4 4 4 4 4		1 1 1 1 1 1 1 1 2	0	2 1 1 1 1 1 2 2	68 30 32 92 40 86 86 70 36 0 0 0 44	\$12,838 \$5,796 \$6,183 \$17,535 \$6,257 \$13,879 \$13,106 \$6,697 \$0 \$0 \$7,856 \$13,668	\$2,000 \$6,000 \$2,300 \$900	\$14,838 \$5,796 \$6,183 \$17,538 \$6,257 \$16,255 \$13,100 \$12,697 \$0 \$0 \$10,156 \$13,666 \$6,302
200 210 220 230 300 310 320 330 340 350 400 410 420 430 440 500 610 620	Preferred Alternative Detailed Evaluation and Development (based on Existing T Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development Applied Turbidity Evaluation Facility Plan Alternatives Development Precipitive Softening Analysis Plant 1 Service Life Extention Alternatives Plant 1 Pretreatment Alternatives Solids Management Alternatives Solids Management Alternatives Future Treatment Options and Regulatory Compliance Facility Visits and Vendor Presentations (Allowance for use at City direction) Facility Plan Alternatives Evaluation Plant 1 Pretreatment Alternatives Ranking (during Workshop 2) Solids Management Alternatives Ranking (during Workshop 2) Future Treatment Alternatives Ranking (during Workshop 2) Workshop #2 (Day 1) Facility Plan Alternatives Integration and Consensus Building Workshop #2 (continuation) Document Facility Plan Solutions Facility Site Layout and Opinions of Probable Cost Implementation Schedule and Phasing	17 4 4 8 8 8 4 4	8 8 24 9 9 9 16 16 16 16 16 16 16 16 16 16 16 16 16	17 30 16 4 80 60 28 9 9 9 24 8	16 32 72 3 3 8 8 8 2 2	80 80 8 8 8		2 4 3	2 4 4 4 4 4 4		1 1 1 1 1 1 1 1 1 2 2 2 2	0 12	2 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2	68 30 32 92 40 86 86 70 36 0 0 0 44 44	\$12,838 \$5,796 \$6,183 \$17,535 \$6,257 \$13,879 \$13,106 \$6,697 \$0 \$0 \$7,856 \$13,668 \$6,302	\$2,000 \$6,000 \$2,300 \$900 \$11,200	\$14,83i \$5,796 \$6,183 \$17,53i \$6,257 \$16,25' \$13,87i \$13,10i \$12,69' \$0 \$0 \$0 \$10,15i \$8,756 \$13,66i \$6,302 \$145,42
200 210 220 230 300 310 320 330 340 350 400 410 420 430 440 500 610 620	Preferred Alternative Detailed Evaluation and Development (based on Existing T Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development Applied Turbidity Evaluation Facility Plan Alternatives Development Precipitive Softening Analysis Plant 1 Service Life Extention Alternatives Plant 1 Pretreatment Alternatives Solids Management Alternatives Future Treatment Options and Regulatory Compliance Facility Visits and Vendor Presentations (Allowance for use at City direction) Facility Plan Alternatives Evaluation Plant 1 Pretreatment Alternatives Ranking (during Workshop 2) Solids Management Alternatives Ranking (during Workshop 2) Future Treatment Alternatives Ranking (during Workshop 2) Workshop #2 (Day 1) Facility Plan Alternatives Integration and Consensus Building Workshop #2 (continuation) Document Facility Plan Solutions Facility Site Layout and Opinions of Probable Cost Implementation Schedule and Phasing al - Preferred Alternative Evalaution and Development	17 4 4 8 8 8 2 4 4 43	8 24 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	17 30 16 4 80 60 28 9 9	16 32 72 3 8 8 8 141	8 80 80 8 8 8 16 4	0	2 4 3 3	2 4 4 4 4 4 6	0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		2 1 1 1 1 1 1 2 2 2 2 16 2	68 30 32 92 40 86 86 70 36 0 0 0 44 44 44	\$12,838 \$5,796 \$6,183 \$17,535 \$6,257 \$16,257 \$13,879 \$13,106 \$6,697 \$0 \$0 \$7,856 \$7,856 \$13,668 \$6,302	\$2,000 \$6,000 \$2,300 \$900 \$11,200	\$14,83i \$5,796 \$6,183 \$17,53i \$6,257 \$16,25' \$13,87i \$13,10i \$12,69' \$0 \$0 \$0 \$10,15i \$8,756 \$13,66i \$6,302 \$145,42
200 210 220 230 300 310 320 330 340 350 360 400 420 430 440 500 610 620 Subtota	Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development Applied Turbidity Evaluation Facility Plan Alternatives Development Precipitive Softening Analysis Plant 1 Service Life Extention Alternatives Plant 1 Pretreatment Alternatives Solids Management Alternatives Future Treatment Options and Regulatory Compliance Facility Visits and Vendor Presentations (Allowance for use at City direction) Facility Plan Alternatives Evaluation Plant 1 Pretreatment Alternatives Ranking (during Workshop 2) Solids Management Alternatives Ranking (during Workshop 2) Future Treatment Alternatives Ranking (during Workshop 2) Workshop #2 (Day 1) Facility Plan Alternatives Integration and Consensus Building Workshop #2 (continuation) Document Facility Plan Solutions Facility Site Layout and Opinions of Probable Cost Implementation Schedule and Phasing Plase PM&A, Phase IA, and Phase II	17 4 4 8 8 8 2 4 4 43	8 24 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	17 30 16 4 80 60 28 9 9	16 32 72 3 3 8 8 8 141 160	8 80 80 8 8 8 16 4	0	2 4 3 3	2 4 4 4 4 4 6	0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		2 1 1 1 1 1 1 2 2 2 2 16 2	68 30 32 92 40 86 86 70 36 0 0 0 44 44 44	\$12,838 \$5,796 \$6,183 \$17,535 \$6,257 \$16,257 \$13,879 \$13,106 \$6,697 \$0 \$0 \$7,856 \$7,856 \$13,668 \$6,302	\$2,000 \$6,000 \$2,300 \$900 \$11,200	\$14,83i \$5,796 \$6,183 \$17,53i \$6,257 \$16,25' \$13,87i \$13,10i \$12,69' \$0 \$0 \$0 \$10,15i \$8,756 \$13,66i \$6,302 \$145,42
200 210 220 230 300 310 320 330 340 350 360 400 410 420 430 440 500 610 620 Subtota	Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development Applied Turbidity Evaluation Facility Plan Alternatives Development Precipitive Softening Analysis Plant 1 Service Life Extention Alternatives Plant 1 Pretreatment Alternatives Solids Management Alternatives Future Treatment Options and Regulatory Compliance Facility Visits and Vendor Presentations (Allowance for use at City direction) Facility Plan Alternatives Evaluation Plant 1 Pretreatment Alternatives Ranking (during Workshop 2) Solids Management Alternatives Ranking (during Workshop 2) Solids Management Alternatives Ranking (during Workshop 2) Workshop #2 (Day 1) Facility Plan Alternatives Integration and Consensus Building Workshop #2 (continuation) Document Facility Plan Solutions Facility Site Layout and Opinions of Probable Cost Implementation Schedule and Phasing All - Preferred Alternative Evalaution and Development Thase PM&A, Phase IA, and Phase II Additional Optional Project Tasks Develop Pilot Testing Plan	17 4 4 8 8 8 2 4 4 43	9 9 24 16 90	17 30 16 4 80 60 28 9 9 24 8 285 402 32	16 32 72 3 8 8 8 141	8 80 80 8 8 8 16 4	0	2 4 3 3	2 4 4 4 4 4 2 2	0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		2 1 1 1 1 1 1 2 2 2 31 65	68 30 32 92 40 86 86 70 36 0 0 0 44 44 90 38 756	\$12,838 \$5,796 \$6,183 \$17,535 \$6,257 \$13,879 \$13,106 \$6,697 \$0 \$0 \$7,856 \$13,668 \$6,302 \$134,229 \$204,639	\$2,000 \$6,000 \$2,300 \$900 \$11,200 \$15,700	\$14,83i \$5,796 \$6,183 \$17,53i \$6,25; \$16,25; \$13,87; \$13,10i \$12,69 \$0 \$0 \$10,15i \$8,756 \$13,66i \$6,302 \$145,42 \$220,3;
200 210 220 230 300 310 320 330 340 350 360 400 420 430 440 500 610 620 Subtota	Alternatives Screening and Preliminary Evaluations Workshop #1 (continuation from Phase IA or IB as applicable) Structured Decision Model Development Applied Turbidity Evaluation Facility Plan Alternatives Development Precipitive Softening Analysis Plant 1 Service Life Extention Alternatives Plant 1 Pretreatment Alternatives Solids Management Alternatives Future Treatment Options and Regulatory Compliance Facility Visits and Vendor Presentations (Allowance for use at City direction) Facility Plan Alternatives Evaluation Plant 1 Pretreatment Alternatives Ranking (during Workshop 2) Solids Management Alternatives Ranking (during Workshop 2) Future Treatment Alternatives Ranking (during Workshop 2) Workshop #2 (Day 1) Facility Plan Alternatives Integration and Consensus Building Workshop #2 (continuation) Document Facility Plan Solutions Facility Site Layout and Opinions of Probable Cost Implementation Schedule and Phasing Plase PM&A, Phase IA, and Phase II	17 4 4 8 8 8 2 4 4 43	9 9 24 16 90 144	17 30 16 4 80 60 28 9 9 24 8 285	16 32 72 3 3 8 8 8 141 160	8 80 80 8 8 8 16 4	0	2 4 3 3 9 11	2 4 4 4 4 4 24	0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	12	2 1 1 1 1 1 1 2 2 2 2 31 65	68 30 32 92 40 86 86 70 36 0 0 0 44 44 90 38 756	\$12,838 \$5,796 \$6,183 \$17,535 \$6,257 \$16,257 \$13,879 \$13,106 \$6,697 \$0 \$0 \$7,856 \$7,856 \$13,668 \$6,302 \$134,229	\$2,000 \$6,000 \$2,300 \$900 \$11,200	\$14,83i \$5,796 \$6,183 \$17,53i \$6,257 \$16,25; \$13,87i \$13,10i \$12,69i \$0 \$0

Project Team Member Legend
PD - Project Director (Dave Koch)
PM - Project Manager (Ben Whitehead)

LPE - Lead Process Engineer (Chris Tadanier)

SME/WTP - Subject Matter Expert/Water Treatment Processes (Doug Elder)

SME/SH - Subject Matter Expert/Solids Handling (Trish Scanlan)
SME/SH - Subject Matter Expert/Support (climate change, O&M, etc.)
ES - Engineering Support (modeling, estimating, CFD analysis, etc.)
QC - Quality Control (support staff)

PC - Project Controls (support staff)
AP/CAD - Administrative Professionals/CAD (support staff)