

TASK DESCRIPTION	CAROLLO TEAM LABOR HOURS															Water ARC	Misc Expenses and Travel	TOTAL ESTIMATED COSTS	
	Hutch Musallam Principal-in-Charge	Sergio Espinoza Project Manager	Greg Pope Taste and Odor Technical Lead	John Zwerneman Filter Technical Lead	Vanessa Pruneda Pilot Testing	Daniel Cardenas Operations Support	Arsalan Akram SCADA Optimization	Jim Gallovich Quality Manager	Patrick Carlson Technical Advisor	Paul Walker Technical Advisor	Caroline Russell Disinfection/Water Quality Support	Kwasi Duose Structural Engineer	Matt Guerrin Electrical Engineer	Clerical / DPs	Total Labor Hours				Total Labor Costs
Task 100 - Assessment and Optimization Report	2	45	80	172	152	8	80	8	12	4	6	0	8	56	633	\$160,523	\$0	\$8,400	\$168,923
101 Planning and Data Requests	1	2	10	32	48	4	0	0	4	0	2	0	0	40	143	\$30,257	\$0	\$0	\$30,257
101.1 Prepare data request		1	2	4	4										11	\$2,683			\$2,683
101.2 Review and compile data	1	1	8	24	40				4		2			40	120	\$24,786			\$24,786
101.3 Review instrument calibration records and QA/QC procedures and make recommendations				4	4	4									12	\$2,788			\$2,788
102 Benchmarking and Diagnostics	1	43	70	140	104	4	80	8	8	4	4	0	8	16	490	\$130,266	\$0	\$8,400	\$138,666
102.1 Desktop data analysis			8	24	40										72	\$15,200			\$15,200
102.2 Optimization scorecards		8	16	24	8				4						60	\$17,076			\$17,076
102.3 Filter performance data assessment			8	24	16				4						52	\$12,964			\$12,964
102.4 Identify treatment process data monitoring gaps and opportunities for upgrades		1	4	4		4									13	\$3,845			\$3,845
102.5 Plant SCADA Assessment		16		16			80						8	4	124	\$36,724	\$8,400		\$45,124
102.6 Draft Assessment and Optimization TM	1	16	26	32	16			4		2	2			8	107	\$29,623			\$29,623
102.7 Final Assessment and Optimization TM		2	8	16	24			4		2	2			4	62	\$14,834			\$14,834
Task 200 - Process Unit Evaluation and Jar Testing	1	36	108	128	92	0	0	8	32	4	8	0	0	16	433	\$117,913	\$1,200	\$21,600	\$140,713
201 Process Unit Evaluation	0	32	40	40	32	0	0	0	32	0	0	0	0	0	176	\$50,896	\$0	\$16,000	\$66,896
201.1 Process Unit Evaluation site visit		32	40	40	32				32						176	\$50,896		\$16,000	\$66,896
202 Jar Testing	0	1	30	32	4	0	0	2	0	2	4	0	0	4	79	\$23,107	\$1,200	\$5,600	\$29,907
202.1 Jar Testing Protocol		1	6	8	4			2		2	2			4	29	\$7,947			\$7,947
202.2 Jar Testing			24	24							2				50	\$15,160	\$1,200	\$5,600	\$21,960
203 Process Unit Evaluation and Jar Testing TM	1	3	38	56	56	0	0	6	0	2	4	0	0	12	178	\$43,910	\$0	\$0	\$43,910
203.1 Draft Process Unit Evaluation and Jar Testing TM	1	1	30	40	40			4		2	2			8	128	\$31,760			\$31,760
203.2 Final Process Unit Evaluation and Jar Testing TM		2	8	16	16			2			2			4	50	\$12,150			\$12,150
Task 300 - Taste and Odor Assessment	1	8	128	136	40	0	0	4	0	4	32	0	0	20	373	\$106,029	\$38,000	\$3,600	\$147,629
301 Seasonal Response Plans	0	3	32	32	0	0	0	0	0	2	8	0	0	8	85	\$25,235	\$0	\$0	\$25,235
301.1 Review MIB and Geosmin data		1	16	16						2	4				39	\$12,161			\$12,161
301.2 Seasonal Response Plan		2	16	16							4			8	46	\$13,074			\$13,074
302 Alternative Evaluation	0	1	64	64	0	0	0	0	0	0	8	0	0	0	137	\$41,709	\$38,000	\$3,600	\$83,309
302.1 Evaluate up to three T&O control alternatives			24	32							4				60	\$18,024			\$18,024
302.2 Bench-scale testing		1	40	32							4				77	\$23,685	\$38,000	\$3,600	\$65,285
303 Taste and Odor Control Plan	1	4	32	40	40	0	0	4	0	2	16	0	0	12	151	\$39,085	\$0	\$0	\$39,085
303.1 Draft Taste and Odor Control TM	1	2	24	16	16			4		2	8			8	81	\$22,127			\$22,127
303.2 Final Taste and Odor Control TM		2	8	24	24						8			4	70	\$16,958			\$16,958
Task 400 - Cost and Implementation Roadmap	24	14	24	80	40	18	0	4	0	4	2	0	0	8	218	\$59,078	\$0	\$0	\$59,078
401 Cost Analysis	8	4	4	32	16	16	0	0	0	2	0	0	0	0	82	\$21,844	\$0	\$0	\$21,844
401.1 Prepare cost estimates	8	4	4	32	16	16				2					82	\$21,844			\$21,844
402 Cost Estimate and Implementation Roadmap TM	16	10	20	48	24	2	0	4	0	2	2	0	0	8	136	\$37,234	\$0	\$0	\$37,234
402.1 Draft Cost Estimate and Implementation Roadmap TM	8	8	16	32	16	2		4		2	2			4	94	\$26,088			\$26,088
402.2 Final Cost Estimate and Implementation Roadmap TM	8	2	4	16	8									4	42	\$11,146			\$11,146
Task 500 - Operations Assistance	1	84	48	104	32	120	0	0	0	0	0	0	0	12	401	\$112,313	\$0	\$14,000	\$126,313
501 SOP Updates	1	64	40	104	0	64	0	0	0	0	0	0	0	4	277	\$81,317	\$0	\$8,400	\$89,717
501.1 Existing SOP review site visit		24		24		24									72	\$21,072		\$8,400	\$29,472
501.2 Update existing SOPs (up to 10)	1	40	40	80		40								4	205	\$60,245			\$60,245
502 SOP Training Sessions and Deliverable	0	20	8	0	32	56	0	0	0	0	0	0	0	8	124	\$30,996	\$0	\$5,600	\$36,596
502.1 Training sessions (in-person)		16	8			32									56	\$16,824		\$5,600	\$22,424
502.2 Final SOP Deliverable		4			32	24								8	68	\$14,172			\$14,172
Task 600 - Meetings	18	174	76	80	76	0	0	0	0	0	4	0	0	0	418	\$121,058	\$0	\$46,000	\$167,058
601 Kickoff Meeting (in-person)	4	10	12	12	10	0	0	0	0	0	0	0	0	0	48	\$13,550	\$0	\$10,000	\$23,550
	4	10	12	12	10										48	\$13,550		\$10,000	\$23,550
602 Monthly project progress meetings (12 remote meetings)	6	116	12	16	16	0	0	0	0	0	0	0	0	0	166	\$51,574	\$0	\$0	\$51,574
	6	116	12	16	16										166	\$51,574			\$51,574
603 Assessment and Optimization TM Review Meeting (in-person)	4	10	12	12	10	0	0	0	0	0	0	0	0	0	48	\$13,550	\$0	\$10,000	\$23,550
	4	10	12	12	10										48	\$13,550		\$10,000	\$23,550
604 Process Unit Evaluation and Jar Test Results Review Meeting (in-person)	0	10	12	12	12	0	0	0	0	0	0	0	0	0	46	\$12,378	\$0	\$8,000	\$20,378
		10	12	12	12										46	\$12,378		\$8,000	\$20,378
605 Taste and Odor Control Plan Review Meeting (in-person)	0	8	16	16	16	0	0	0	0	0	0	0	0	0	56	\$14,728	\$0	\$8,000	\$22,728
		8	16	16	16										56	\$14,728		\$8,000	\$22,728
607 Executive Summary Presentation (in-person)	4	10	12	12	12	0	0	0	0	0	4	0	0	0	54	\$15,278	\$0	\$10,000	\$25,278
	4	10	12	12	12						4				54	\$15,278		\$10,000	\$25,278
Task 700 - Project Management and Coordination	0	72	0	24	0	0	0	0	0	0	0	0	0	12	108	\$32,460	\$0	\$0	\$32,460
701 Monthly progress reports, invoices, and coordination	0	72	0	24	0	0	0	0	0	0	0	0	0	12	108	\$32,460	\$0	\$0	\$32,460
Prepare monthly progress reports invoices and coordination (12 months)		72		24										12	108	\$32,460			\$32,460
Subtotal	47	433	464	724	432	146	80	24	44	16	52	0	8	124	2,584	\$709,374	\$39,200	\$93,600	\$842,174
Task 800 - Additional Services	8	56	20	36	0	0	0	4	0	0	0	128	128	4	384	\$119,116	\$0	\$20,400	\$139,516
801 Additional Site Visits and Assessments	8	56	20	36	0	0	0	4	0	0	0	128	128	4	384	\$119,116	\$0	\$20,400	\$139,516
801.1 Field Assessments (up to 2)	4	16		16								40	40		116	\$35,828		\$14,400	\$50,228
801.2 Field Assessment Workshops (hybrid)	2	8	8	8								8	8		42	\$13,162		\$6,000	\$19,162
801.3 Draft Field Assessment Findings TM	1	8	4	4				2				64	64	2	149	\$46,027			\$46,027
801.4 Final Field Assessment Findings TM	1	24	8	8				2				16	16	2	77	\$24,099			\$24,099
Total	55	489	484	760	432	146	80	28	44	16	52	128	136	128	2,968	\$828,490	\$39,200	\$114,000	\$981,690