



**Perris II ROTF Pilot Study
PROJECT COST ESTIMATE**

		ESTIMATED COST
FACILITIES PLANNING PHASE		\$179,815
Facilities Planning Labor	\$19,657	
Environmental & Regulatory Compliance Labor	\$15,297	
Operations Labor	\$15,225	
Equipment & Materials	\$5,909	
Laboratory Analysis	\$9,191	
Adjunct Staff (WSC)	\$41,040	
Contractor/Vendor (On-Site)	\$8,000	
Report (Consultant)	\$24,000	
Contingencies - 30%	\$41,481	
TOTAL ESTIMATED PROJECT COST		\$179,815 *

* \$0 Previously Appropriated

Reviewed _____



Perris II ROTF Pilot Study

PROJECT ESTIMATE

ITEM	DESCRIPTION	COST	COST + PLANNING		FUNDING:	
				CONT.		
V - FACILITIES PLANNING PHASE					W.O.	30%
1	Facilities Planning Labor	\$19,657		\$19,657		
2	Environmental & Regulatory Compliance Labor	\$15,297		\$15,297		
3	Operations Labor	\$15,225		\$15,225		
4	Equipment & Materials	\$5,909		\$5,909		
5	Laboratory Analysis	\$9,191		\$9,191		
6	Adjunct Staff (WSC)	\$41,040		\$41,040		
7	Contractor/Vendor	\$8,000		\$8,000		
8	Consultant	\$24,000		\$24,000		
9	Contingencies - 30%	\$41,496		\$41,496		
TOTAL		\$179,815		\$179,815		

Contingency Guidelines:

Facilities Planning Estimate (30%)	100.00
Preliminary Design Estimate (15%)	100.00
Final Design Estimate (10%)	100.00
Place the correct percentage in Cell D45	100%



			EASTERN MUNICIPAL WATER DISTRICT		RESOURCE ALLOCATION WORKSHEET - EST. HOURS REQ'D																				TOTALS						
PHASE START	PHASE FINISH	CAL DAYS	Project:	Perris II ROTF Pilot Study	OTHER	ENGINEERING BRANCH																									
			W.O.:	472168		FP (Dept. 820)				Eng DS (Dept. 831)			FE (Dept. 832)							ES (Dept.835)						ACT	PHASE				
			Date:	8/26/2019		PM	PG	PE	SS	PM	PE	SS	CM	SV	SR	CR	SA	CA	IM	SI	IP	SS	LC	PT	RW	PM	PC	EN	SS	COST	COST
			STAFF MEMBER				JD	DT		AL									JD		SS										
			EMPLOYEE NUMBER (optional)	E-0000	E-0000	E-0000	E-0000	E-0000	E-0000	E-0000	E-0000	E-0000	E-0000	E-0000	E-0000	E-0000	E-0000	E-0000	E-0000	E-0000	E-0000	E-0000	E-0000	E-0000	E-0000	E-0000	E-0000	E-0000	E-0000	E-0000	E-0000
			AVERAGE BILLING RATE (\$/HR)		\$120	\$124	\$83	\$60	\$219	\$186	\$60	\$111	\$90	\$84	\$80	\$161	\$128	\$129	\$117	\$111	\$60	\$56	\$60	\$69	\$95	\$62	\$72	\$60			
			V - FACILITIES PLANNING PHASE	0	0	95	95	0	70	0	0	0	0	0	0	0	0	0	38	0	93	0	0	0	0	0	0	0	0	\$50,180	\$50,180
		0	MEETINGS & COORDINATION			10	10		10										10		10									\$6,655	
			PURCHASE OF EQUIPMENT/MATERIALS			5	5		2										2		2									\$1,952	
			PERFORM & EVALUATE WELL ASSESSMENTS			15	15		4										3		27									\$7,362	
			EQUIPMENT SETUP/STAGING			10	10		2										1		9									\$3,634	
			PERFORM FIELD DEMONSTRATIONS			20	20		20										20		36									\$15,085	
			POST-DEMONSTRATION DEMOB			5	5		2										2		9									\$2,729	
			STATE AGENCY INTERACTION			15	15		15																					\$6,382	
			EVALUATE RESULTS/REPORTING			15	15		15																					\$6,382	
			P - PRELIMINARY DESIGN PHASE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0
1/1/16	1/2/16	1	P10 PRELIMINARY DESIGN																											\$0	
			P20 IDENTIFY ROW, PERMIT & UTIL REQUIREMENTS																											\$0	
			P30 ENVIRONMENTAL REQUEST (CEQA 1 FORM)																											\$0	
			D - FINAL DESIGN PHASE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	
1/3/16	1/4/16	1	D10 FINAL DESIGN TO 95%																											\$0	
			D15 50% REVIEW BY DISTRICT																											\$0	
			D20 RIGHT OF WAY / PERMITS / UTILITIES																											\$0	
			D30 ENVIRONMENTAL PROCESS/APPR/SUPPORT/PERMIT																											\$0	
			D60 95% REVIEW BY DISTRICT																											\$0	
			D90 FINAL ACQUISITION OF PERMITS & ROW																											\$0	
			E/M PREPURCHASE OF EQUIPMENT/MATERIAL																											\$0	
1/5/16	1/6/16	1	S - SPEC REVIEW PHASE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	
			S70 FINAL PREP OF PLANS & SPECS																											\$0	
1/7/16	1/8/16	1	B - BID / AWARD PHASE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	
			B10 BID/AWARD PERIOD																											\$0	
1/9/16	1/10/16	1	C - CONSTRUCTION PHASE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	
			C15 CONTRACTOR SUBMITTALS																											\$0	
			C20 FINAL UTILITY SERVICES INSTALLATION																											\$0	
			C30 ENVIRONMENTAL MONITORING & OPS PERMITS																											\$0	
			C50 RFI'S/CHANGE CONTROL/FIELD CONST AS-BUILTS																											\$0	
			C60 TESTING / START-UP																											\$0	
			C90 FINAL ACCEPTANCE & PUNCH LIST																											\$0	
1/11/16	1/12/16	1	A - ADMINISTRATIVE CLOSEOUT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	
			A10 NOTICE OF ACCEPTANCE																											\$0	
			A30 PROJECT/C.O. CLOSEOUT																											\$0	
			A70 WARRANTY REVIEW																											\$0	
			TOTAL RESOURCE HOURS	0	0	95	95	0	70	0	0	0	0	0	0	0	0	0	38	0	93	0	0	0	0	0	0	0	0		
			INDIVIDUAL RESOURCE COST	\$0	\$0	\$11,820	\$7,838	\$0	\$15,297	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,902	\$0	\$10,323	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50,180	

RESOURCE ID'S	DIVISION CODES	DIVISION CODES
BRANCH CODES	PM Project Manager	SI Supervising Inspector
E Engineering	PE Project Engineer	IP Inspector
R Resource Dev	PG Project Geologist	LC Locator
X Executive	CM Construction Manager	PT Permits
O Operations	SV Construction Supervisor	RW Right of Way
DEPARTMENT CODES	SR Construction Senior Rep	EN Environmental
Eng. DS Engineering / Design	CR Construction Admin Rep	SS Support Staff
FE Field Engineering	CA Construction Administrator	PC Project Control
ES Engineering Services	IM Inspections Manager	SA Senior Construction Admin
FP Planning	RATES REVISED 04/04/2016	



Perris II ROTF Pilot Study

CONSTRUCTION COST ESTIMATE

ITEM	DESC	QUAN	UNIT	UNIT COST	TOTAL	SOURCE
1	Snap Sampler Module	18	EA.	\$170	\$3,060	QED Quote 9/11/19
2	Snap Sampler Pneumatic Trigger Actuator	3	EA.	\$195	\$585	QED Quote 9/11/19
3	Pneumatic Trigger Construction	3	EA.	\$40	\$120	QED Quote 9/11/19
4	Snap Sampler Pneumatic Trigger Line, 1/4" O.D. HDPE	1800	FT.	\$0.35	\$630	QED Quote 9/11/19
5	Snap Sampler 350 mL HDPE Bottle	38	EA.	\$18	\$684	QED Quote 9/11/19
6	Snap Sampler Tool Kit for Pneumatic Trigger System	1	EA.	\$695	\$695	QED Quote 9/11/19
7	AquaTROLL 600 Multiparameter Sonde	1	EA.	\$0	\$0	
8	In-Situ RuggedCable	800	FT.	\$0	\$0	
9	SUNA V2 Nitrate Sonde	1	EA.	\$0	\$0	
10	Plastic Sheeting (20' x 100', 6-mil)	1	EA.	\$115	\$115	The Home Depot
11	Steel Bailing Wire (20 gauge)	2	EA.	\$10	\$20	Amazon
TOTAL					\$5,909	

Lab Costs Worksheet

Category	Items	Quantity	Cost Per Sample	Estimated Total Cost
EMWD Lab	Nitrate	12	\$10.30	\$ 123.60
EMWD Lab	Perchlorate	12	\$15.45	\$ 185.40
EMWD Lab	PFAS	12	\$447.00	\$ 5,364.00
EMWD Lab	TDS	12	\$10.30	\$ 123.60
EMWD Lab	Odor	12	\$5.15	\$ 61.80
EMWD Lab	Turbidity	12	\$10.30	\$ 123.60
EMWD Lab	Color	12	\$5.15	\$ 61.80
EMWD Lab	General Mineral	12	\$85.49	\$ 1,025.88
			Subtotal:	\$ 7,069.68
			Incidental Costs (Add 30%):	\$ 2,120.90
			TOTAL:	\$ 9,190.58

Adjunct Staff Labor Hours and Costs Worksheet

Task Description	WSC Senior II	WSC Assistant II	Total Hours	Total Cost
Meetings & Coordination	8		8	\$ 1,800.00
Purchase Sampling Equipment & Materials	16		16	\$ 3,600.00
Perform & Evaluate Results of Pre-Test Assessments for Wells EMWD A1 and NWC 11	24		24	\$ 5,400.00
Pre-Demonstrations Equipment Setup and Staging	32	16	48	\$ 9,520.00
Perform Demonstrations at Wells EMWD 77 and NWC 11	40	40	80	\$ 14,800.00
Post-Demonstrations Demob	16	16	32	\$ 5,920.00
State Agency Interaction			0	\$ -
Compile Results, Present Findings, and Prepare Report			0	\$ -
<i>Subtotal:</i>	<i>136</i>	<i>72</i>	<i>208</i>	<i>\$ 41,040.00</i>
Contingency (Add 10%):				\$ -
TOTAL:				\$ 41,040.00

Auxiliary Costs Worksheet

Task Description	Vendor (Sea-Bird)	Contractor (Pacific Surveys)	Consultant (TBD)	Estimated Total Cost
Field Demonstrations at Wells EMWD 77 and NWC 11				\$ -
Travel & Accommodations (5 days)	\$ 2,000			\$ 2,000
Sampling Van & Equipment (5 days)		\$ 6,000		\$ 6,000
Subtotal:				\$ 8,000
Compile Results, Present Findings, and Prepare Report			\$ 24,000	\$ 24,000
Subtotal:				\$ 24,000
TOTAL:				\$ 32,000