

Report to Congress for Future Water Resources Development (WRRDA 7001) Submission Package

Proposal Name: San Luis Rey River Flood Control Protection Project

Submission Date: 08/10/2017

Proposal ID Number: 4ff072a3-78d1-45f8-9269-86c80ba34e1b

Purpose of Proposal: The City of Oceanside, CA, requires additional funding for the San Luis Rey River (SLRR) Flood Protection Project for sediment removal, population and water quality monitoring, flycatcher mitigation, levee inspection/repair/certification, preparation of economic updates and an operation and maintenance (O&M) manual, and project management. The SLRR Flood Protection Project was originally authorized by Congress in 1970 with a 250-year level of flood protection. Project construction was completed in January 2000; however, the operation and maintenance could not be implemented, because of environmental constraints including the listing of critical habitat and species. In February 2008, the USACE completed a Post-Authorized Decision Document (PADD) that revised the O&M to obtain a minimum 100-year level of flood protection while addressing the environmental requirements of the Resource Agencies including the U.S. Fish and Wildlife Service (FWS) and the California Department of Fish and Wildlife (CDFW). The PADD included a plan to clear the vegetation in mowed strips over three phases with rotations to minimize the impact to threatened and endangered species. After the initial mowing was completed, the PADD provided for an annual maintenance plan that allowed for a rotating 185 foot-wide vegetation clearance in the river bed. The USACE is now implementing that revised plan. Despite vegetation clearing & management, USACE has determined that the 100-year flood protection will not be achieved until the sediment is removed, which is likely a function of the continued drought and lack of rain surge to help clear debris and sediment. Sediment will be removed from the channel this year and USACE continues to work on a Real Estate Plan, an Adaptive Habitat Management Plan and other required mitigation. Pursuant to the CDFW, the City completed a Declaration of Restrictive Covenants for the mitigation lands which will create significant costs to the City in perpetuity.

1. Administrative Details

Proposal Name: San Luis Rey River Flood Control Protection Project

by Agency: City of Oceanside

Locations: CA

Date Submitted: 08/11/2017

Confirmation Number: 4ff072a3-78d1-45f8-9269-86c80ba34e1b

Supporting Documents

File Name	Date Uploaded
City of Oceanside Letter of Support.pdf	08/11/2017
Cost MCX ATR Cert for SPL - P2 104743 - San Luis Rey Flood Control 2016-....pdf	08/11/2017
img-804161647-0001.pdf	08/11/2017

2. Provide the name of the primary sponsor and all non-Federal interests that have contributed or are expected to contribute toward the non-Federal share of the proposed feasibility study or modification.

Sponsor	Letter of Support
City of Oceanside(Primary)	The City of Oceanside is the applicant and fully supports the mission of the application.

3. State if this proposal is for a feasibility study, a modification to an authorized USACE feasibility study or a modification to an authorized USACE project. If it is a proposal for a modification, provide the authorized water resources development feasibility study or project name.

Modification to an Authorized USACE Project : San Luis Rey River Flood Control Project

4. Clearly articulate the specific project purpose(s) of the proposed study or modification. Demonstrate that the proposal is related to USACE mission and authorities and specifically address why additional or new authorization is needed.

The City of Oceanside, CA, requires additional funding for the San Luis Rey River (SLRR) Flood Protection Project for sediment removal, population and water quality monitoring, flycatcher mitigation, levee inspection/repair/certification, preparation of economic updates and an operation and maintenance (O&M) manual, and project management. The SLRR Flood Protection Project was originally authorized by Congress in 1970 with a 250-year level of flood protection. Project construction was completed in January 2000; however, the operation and maintenance could not be implemented, because of environmental constraints including the listing of critical habitat and species. In February 2008, the USACE completed a Post-Authorized Decision Document (PADD) that revised the O&M to obtain a minimum 100-year level of flood protection while addressing the environmental requirements of the Resource Agencies including the U.S. Fish and Wildlife Service (FWS) and the California Department of Fish and Wildlife (CDFW). The PADD included a plan to clear the vegetation in mowed strips over three phases with rotations to minimize the impact to threatened and endangered species. After the initial mowing was completed, the PADD provided for an annual maintenance plan that allowed for a rotating 185 foot-wide vegetation clearance in the river bed. The USACE is now implementing that revised plan. Despite vegetation clearing & management, USACE has determined that the 100-year flood protection will not be achieved until the sediment is removed, which is likely a function of the continued drought and lack of rain surge to help clear debris and sediment. Sediment will be removed from the channel this year and USACE continues to work on a Real Estate Plan, an Adaptive Habitat Management Plan and other required mitigation. Pursuant to the CDFW, the City completed a Declaration of Restrictive Covenants for the mitigation lands which will create significant costs to the City in perpetuity.

5. To the extent practicable, provide an estimate of the total cost, and the Federal and non-Federal share of those costs, of the proposed study and, separately, an estimate of the cost of construction or modification.

	Federal	Non-Federal	Total
Study	\$0	\$0	\$0
Construction	\$86,953,000	\$28,984,000	\$115,937,000

Explanation (if necessary)

Since levee construction, geotechnical work has been required to complete the Levee System Evaluation Report which is required for turnover. Geotechnical work requires environmental coordination. Geotechnical and resulting environmental costs are detailed in the attached TPCS.

6. To the extent practicable, describe the anticipated monetary and nonmonetary benefits of the proposal including benefits to the protection of human life and property; improvement to transportation; the national economy; the environment; or the national security interests of the United States.

The USACE is assessing the remaining project costs, which will cover the following: sediment removal, population monitoring, Flycatcher mitigation, levee inspection/repair/certification, water quality monitoring, preparation of the economic updates, preparation of the operations and maintenance manual, project management, levee inspection and any associated repairs. The project continues to be in a critical position. While the first phase of vegetation management increased the flow conveyance of the river, the project has not yet reached the required level of flood protection. Currently, the City has an approximate 70-year level of flood protection, which is far below the 250-year level of protection which was promised when the project was originally authorized as well as below the 100-year level of protection contained in the 2008 PADD, even after mowing. Additionally, mandatory mitigation measures must be completed on schedule in order to avoid violations of the permits and to remove sediment. The status of the San Luis Rey levees is also a concern. The San Luis Rey River runs through the entire east-west corridor of the City of Oceanside and would have absolutely devastating impacts on the entire City if the levees were to fail. The City of Oceanside has been placed in a threatened position, and the City's Elected Officials are extremely concerned for the safety and well-being of its residents and businesses. Once the rains begin and the river begins to flow, it will be too late to provide any relief and clearing efforts in order to protect the levee, the City's bridges, utilities, and the public from threatened flooding. USACE is in the process of validating the safety of the levees. The project cannot be turned over until the levees are certified. FEMA map revisions cannot take place until levees are certified; thus, insurance relief will not be available either.

7. Does local support exist? If 'Yes', describe the local support for the proposal.

Yes

Local Support Description

This project has a lot of local support from Congressman Issa, City Councilmembers, citizens of Oceanside and especially the numerous homeowners who live near the San Luis Rey River and are required to carry flood insurance and are concerned about the flood capacity and structural integrity of the levee system.

8. Does the primary sponsor named in (2.) above have the financial ability to provide for the required cost share?

Yes

Primary Sponsor Letter of Support

(As uploaded)

City of Oceanside Letter of Support.pdf

Additional Proposal Information

(This is as uploaded, a blank page will show if nothing was submitted)

**Cost MCX ATR Cert for SPL - P2 104743 - San Luis Rey Flood
Control 2016_....pdf**

WALLA WALLA COST ENGINEERING MANDATORY CENTER OF EXPERTISE

COST AGENCY TECHNICAL REVIEW

CERTIFICATION STATEMENT

SPL - PN 104743

**San Luis Rey River Flood Control Project
San Diego County, California**

The San Luis Rey River Flood Control Project, as presented by the Los Angeles District, has undergone a successful cost update and Cost Agency Technical Review (Cost ATR) of remaining costs, performed by the Walla Walla District Cost Engineering Mandatory Center of Expertise (Cost MCX) team. The Cost ATR included study of the project scope, report, cost estimates, schedules, escalation, and risk-based contingencies. This certification signifies the cost products meet the quality standards as prescribed in ER 1110-2-1150 Engineering and Design for Civil Works Projects and ER 1110-2-1302 Civil Works Cost Engineering.

Date of Certification: 18 February 2016.

FY18 Remaining Costs:	\$ 17,156,000 (Cost ATR Certified) *
FY15 Spent Costs:	\$ 98,586,000 (From SAJ Programs & PM)
FY18 Project First Cost:	\$115,742,000 (Including Spent Costs)
Fully Funded Costs:	\$115,937,000 (Including Spent Costs)

Note: Cost ATR was devoted to remaining work. It did not review spent costs, which requires an audit process. It remains the responsibility of the District to correctly reflect these cost values within the Final Report and to implement effective project management controls and implementation procedures including risk management throughout the life of the project.

* Remaining Costs reflect project scope as presented in Memorandum for Record – San Luis Rey River – Remaining Project Scope, a lesser flow conveyance than the authorized language.



**FOR: Kim C. Callan, PE, CCE, PM
Chief, Cost Engineering MCX
Walla Walla District**

**** TOTAL PROJECT COST SUMMARY ****

PROJECT: San Luis Rey River Flood Control Project
PROJECT No:
LOCATION: San Diego County, California

104743

DISTRICT: Los Angeles District
POC: Mark Cooke, Cost Engineer

PREPARED: 18 Feb 2016

This Estimate reflects the scope and schedule in:

Discharge Analysis Report, and Environmental Section Contracts

WBS STRUCTURE		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)					TOTAL PROJECT COST (FULLY FUNDED)						
WBS NUMBER A	Civil Works Feature & Sub-Feature Description B	COST (\$K) C	CNTG (\$K) D	CNTG (%) E	TOTAL (\$K) F	ESC (%) G	COST (\$K) H	CNTG (\$K) I	TOTAL (\$K) J	Spent Thru: 1 Oct 2015 (\$K)	TOTAL FIRST COST (\$K)	INFLATED (%)	COST (\$K) M	CNTG (\$K) N	FULL (\$K) O		
																Program Year (Budget EC): Effective Price Level Date:	2018 1 Oct 2017
02	RELOCATIONS			-		-				78	78				78		
06	FISH & WILDLIFE FACILITIES	3,911	166	4%	4,077	1.1%	3,954	168	4,122	2,393	6,515	1.4%	4,010	171	6,574		
09	CHANNELS & CANALS	3,858	646	17%	4,504	5.0%	4,051	678	4,729	2,777	7,506		4,051	678	7,506		
11	LEVEES & FLOODWALLS	1,249	256	20%	1,505	4.1%	1,300	266	1,566	43,358	44,924	4.0%	1,352	277	44,987		
15	FLOODWAY CONTROL & DIVERSION STRUCTURE			-		-				2	2				2		
CONSTRUCTION ESTIMATE TOTALS:		9,018	1,068		10,086		9,305	1,112	10,417		48,608		59,025	1.2%	9,413	1,126	59,147
01	LANDS AND DAMAGES (Real Estate Expenditures)	1,900	-		1,900		1,900	-	1,900	18,248	20,148		1,900	-	20,148		
01	LANDS AND DAMAGES (Construction Expenditures)									234	234				234		
30	PRECONSTRUCTION, ENGINEERING & DESIGN	3,601	468	13%	4,069	9.7%	3,949	508	4,457	27,207	31,664	1.6%	4,014	514	31,735		
31	CONSTRUCTION MANAGEMENT	332	31	9%	363	5.4%	350	32	382	4,289	4,671	0.5%	352	32	4,673		
PROJECT COST TOTALS:		14,851	1,567	11%	16,418		15,504	1,652	17,156		98,586		115,742		15,679	1,672	115,937

ESTIMATED FEDERAL COST: **86,953**
ESTIMATED NON-FEDERAL COST: **28,984**

CHIEF, COST ENGINEERING AND SPECIFICATIONS, Michael D. Newnam, P.E.

ESTIMATED TOTAL PROJECT COST: 115,937

PROJECT MANAGEMENT, Raina Fulton

PREVIOUS TPCS: 105,103
Dated: 6 Jun 2013

CHIEF, REAL ESTATE, Cheryl Connet

THIS TPCS REFLECTS A PROJECT COST INCREASE OF: 10,834

CHIEF, ENGINEERING, Richard J. Lefield, P.E.

THE 902 COST LIMIT IS: 116,167
Dated: 18 Feb 2016

O&M OUTSIDE OF TOTAL PROJECT COST: N/A

**** TOTAL PROJECT COST SUMMARY ****

**** CONTRACT COST SUMMARY ****

PROJECT: San Luis Rey River Flood Control Project
LOCATION: San Diego County, California
This Estimate reflects the scope and schedule in feasibility report.

Discharge Analysis Report, and Environmental Section Contracts

DISTRICT: Los Angeles District
POC: Mark Cooke, Cost Engineer

PREPARED: 18 Feb 2016

WBS STRUCTURE		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
WBS NUMBER	Civil Works Feature & Sub-Feature Description	Mii Estimate Prepared: 15 Jul 2015 Effective Price Level: 1 Oct 2017				Program Year (Budget EC): 2018 Effective Price Level Date: 1 Oct 2017				Mid-Point Date	INFLATED (%)	COST (\$K)	CNTG (\$K)	FULL (\$K)
		COST (\$K)	CNTG (\$K)	CNTG (%)	TOTAL (\$K)	ESC (%)	COST (\$K)	CNTG (\$K)	TOTAL (\$K)					
Undelivered Orders - Remaining Obligations														
06	FISH & WILDLIFE FACILITIES - Endangered Species Population Monitoring FY16-19	1,509	75	5%	1,584	1,509	75	5%	1,584	2016Q1		1,509	75	1,584
06	FISH & WILDLIFE FACILITIES - San Luis Rey River Water Quality Monitoring FY16-17	76	4	5%	80	76	4	5%	80	2016Q1		76	4	80
Remaining Costs Required to Meet \$5M Recovery Fund Fulfillment														
06	FISH & WILDLIFE FACILITIES - Remaining Recover Fund Costs to Fulfill \$5M EA Requirement	1,239			1,239	1,239			1,239	2016Q1		1,239		1,239
CONSTRUCTION ESTIMATE TOTALS:		2,825	79	3%	2,904	2,824	79	3%	2,903			2,824	79	2,903
01	LANDS AND DAMAGES (Rincon Lake Real Estate Purchased)	1,900	-		1,900	1,900			1,900	2015Q1		1,900		1,900
30	PRECONSTRUCTION, ENGINEERING & DESIGN Project Management Planning & Environmental Compliance Engineering & Design Reviews, ATRs, IEPs, VE Life Cycle Updates (cost, schedule, risks) Contracting & ReprographicsContracting Engineering During Construction Planning During Construction Project Operation													
		PED Subtotal:				PED Subtotal:				PED Subtotal:				
31	CONSTRUCTION MANAGEMENT Construction Management Project Operation: Project Management													
CONTRACT COST TOTALS:		4,725	79		4,804	4,724	79		4,803			4,724	79	4,803
COST SPLIT														
75.0%														
25.0%														
FEDERAL COST TOTALS:														
NON-FEDERAL COSTS TOTALS:														

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WBS NUMBER	Civil Works Feature & Sub-Feature Description	Mii Estimate Prepared: 15 Jul 2015 Effective Price Level: 1 Oct 2014				Program Year (Budget EC): 2018 Effective Price Level Date: 1 Oct 2017				Mid-Point Date	INFLATED (%)	COST (\$K)	CNTG (\$K)	FULL (\$K)
		COST (\$K)	CNTG (\$K)	CNTG (%)	TOTAL (\$K)	ESC (%)	COST (\$K)	CNTG (\$K)	TOTAL (\$K)					
09	Sediment Removal - FY16* CHANNELS & CANALS - Sediment Sampling & Removal *Monitoring Contracts for FY16 have been awarded and are shown under "Undelivered Orders - Remaining Obligations"	3,858	646	17%	4,504	5.0%	4,051	678	4,729	2016Q4		4,051	678	4,729
CONSTRUCTION ESTIMATE TOTALS:		3,858	646	17%	4,504		4,051	678	4,729			4,051	678	4,729
01	LANDS AND DAMAGES	-	-	-	-									
30	PRECONSTRUCTION, ENGINEERING & DESIGN													
	Project Management	150	14	10%	164	9.7%	165	15	180	2015Q2		165	15	180
	Planning & Environmental Compliance	226	22	10%	248	9.7%	248	24	272	2015Q2		248	24	272
	Engineering & Design	386	37	10%	423	9.7%	423	41	464	2015Q2		423	41	464
	Reviews, ATRs, IEPRs, VE													
	Life Cycle Updates (cost, schedule, risks)	10	1	10%	11	9.7%	11	1	12	2015Q2		11	1	12
	Contracting & ReprographicsContracting													
	Engineering During Construction	193	19	10%	212	9.7%	212	21	233	2016Q2		212	21	233
	Planning During Construction	52	5	10%	57	9.7%	57	5	62	2016Q2		57	5	62
	Project Operation													
	Sediment Removal Environmental Assessment	50	12	23%	62	9.7%	55	13	68	2015Q2		55	13	68
	PED Subtotal:				1,115				1,223					1,223
31	CONSTRUCTION MANAGEMENT													
6.5%	Construction Management	251	25	10%	276	5.4%	264	26	290	2016Q4		264	26	290
	Project Operation:													
	Project Management													
CONTRACT COST TOTALS:		5,175	781		5,956		5,486	824	6,310			5,486	824	6,310
COST SPLIT														
	75.0%	FEDERAL COST TOTALS:			4,421				4,682					4,682
	25.0%	NON-FEDERAL COSTS TOTALS:			1,536				1,629					1,629

**** TOTAL PROJECT COST SUMMARY ****

*** CONTRACT COST SUMMARY ***

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PREPARED: 18 Feb 2016

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WBS STRUCTURE		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
WBS NUMBER	Civil Works Feature & Sub-Feature Description	Mii Estimate Prepared: 15 Jul 2015 Effective Price Level: 1 Oct 2014				Program Year (Budget EC): 2018 Effective Price Level Date: 1 Oct 2017				Mid-Point Date	INFLATED (%)	COST (\$K)	CNTG (\$K)	FULL (\$K)
		COST (\$K)	CNTG (\$K)	CNTG (%)	TOTAL (\$K)	ESC (%)	COST (\$K)	CNTG (\$K)	TOTAL (\$K)					
	Environmental Mitigation - FY17* *Monitoring Contracts for FY17 have been awarded and are shown under "Undelivered Orders - Remaining Obligations"													
	CONSTRUCTION ESTIMATE TOTALS:													
01	LANDS AND DAMAGES													
30	PRECONSTRUCTION, ENGINEERING & DESIGN													
	Project Management	137	13	10%	150	9.7%	150	14	164	2016Q2		150	14	164
	Planning & Environmental Compliance	161	16	10%	177	9.7%	177	18	195	2016Q2		177	18	195
	Engineering & Design	5		10%	5	9.7%	5		5	2016Q2		5		5
	Reviews, ATRs, IEPRs, VE													
	Life Cycle Updates (cost, schedule, risks)	80	8	10%	88	9.7%	88	9	97	2016Q2		88	9	97
	Contracting & ReprographicsContracting	4		10%	4	9.7%	4		4	2016Q2		4		4
	Engineering During Construction													
	Planning During Construction	52	5	10%	57	9.7%	57	5	62	2016Q4		57	5	62
	Project Operation													
	Levee Inspections	652	152	23%	804	9.7%	715	167	882	2016Q2		715	167	882
	PED Subtotal:				1,285				1,409					1,409
31	CONSTRUCTION MANAGEMENT													
	Construction Management													
	Project Operation:													
	Project Management													
	CONTRACT COST TOTALS:	1,091	194		1,285		1,196	213	1,409			1,196	213	1,409
	COST SPLIT													
	75.0%				964				1,057					1,057
	25.0%				321				352					352
	FEDERAL COST TOTALS:				964				1,057					1,057
	NON-FEDERAL COSTS TOTALS:				321				352					352

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WBS NUMBER	Civil Works Feature & Sub-Feature Description	Mii Estimate Prepared: 15 Jul 2015 Effective Price Level: 1 Oct 2014				Program Year (Budget EC): 2018 Effective Price Level Date: 1 Oct 2017				Mid-Point Date	INFLATED (%)	COST (\$K)	CNTG (\$K)	FULL (\$K)
		COST (\$K)	CNTG (\$K)	CNTG (%)	TOTAL (\$K)	ESC (%)	COST (\$K)	CNTG (\$K)	TOTAL (\$K)					
06	Environmental Mitigation - FY18* FISH & WILDLIFE FACILITIES - San Luis Rey River Water Quality Monitoring *Population Monitoring Contract for FY18 has been awarded and is shown under "Undelivered Orders - Remaining Obligations"	75	6	8%	81	4.1%	78	6	84	2018Q2	0.5%	78	6	84
	CONSTRUCTION ESTIMATE TOTALS:	75	6	8%	81		78	6	84			78	6	84
01	LANDS AND DAMAGES													
30	PRECONSTRUCTION, ENGINEERING & DESIGN													
	Project Management	48	5	10%	53	9.7%	52	5	57	2017Q2		52	5	57
	Planning & Environmental Compliance	151	15	10%	166	9.7%	166	16	182	2017Q2		166	16	182
	Engineering & Design													
	Reviews, ATRs, IEPRs, VE													
	Life Cycle Updates (cost, schedule, risks)	10	1	10%	11	9.7%	11	1	12	2017Q2		11	1	12
	Contracting & Reprographics													
	Engineering During Construction													
	Planning During Construction	52	5	10%	57	9.7%	57	5	62	2018Q2	1.0%	58	5	63
	Project Operation													
	PED Subtotal:				287				313					314
31	CONSTRUCTION MANAGEMENT													
	Construction Management													
	Project Operation:													
	Project Management													
	CONTRACT COST TOTALS:	336	32		368		364	33	397			365	33	398
	FEDERAL COST TOTALS:				276				298					299
	NON-FEDERAL COSTS TOTALS:				92				99					100

COST SPLIT
75.0%
25.0%

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WBS NUMBER	Civil Works Feature & Sub-Feature Description	Mii Estimate Prepared: 15 Jul 2015 Effective Price Level: 1 Oct 2014				Program Year (Budget EC): 2018 Effective Price Level Date: 1 Oct 2017				Mid-Point Date	INFLATED (%)	COST (\$K)	CNTG (\$K)	FULL (\$K)
		COST (\$K)	CNTG (\$K)	CNTG (%)	TOTAL (\$K)	ESC (%)	COST (\$K)	CNTG (\$K)	TOTAL (\$K)					
06	Environmental Mitigation - FY19*													
	FISH & WILDLIFE FACILITIES - San Luis Rey River Water Quality Monitoring	75	6	8%	81	4.1%	78	6	84	2019Q2	2.5%	80	6	86
11	LEVEES & FLOODWALLS - Levee Repairs	1,249	256	21%	1,505	4.1%	1,300	266	1,566	2020Q1	4.0%	1,352	277	1,629
	*Population Monitoring Contract for FY18 has been awarded and is shown under "Undelivered Orders - Remaining Obligations"													
	CONSTRUCTION ESTIMATE TOTALS:	1,324	262	20%	1,586		1,378	272	1,650			1,432	283	1,715
01	LANDS AND DAMAGES	-	-	-	-									
30	PRECONSTRUCTION, ENGINEERING & DESIGN													
11.3%	Project Management	150	14	10%	164	9.7%	165	15	180	2018Q2	1.0%	167	15	182
9.5%	Planning & Environmental Compliance	126	12	10%	138	9.7%	138	13	151	2018Q2	1.0%	139	13	152
9.4%	Engineering & Design	125	29	23%	154	9.7%	137	32	169	2018Q2	1.0%	138	32	170
	Reviews, ATRs, IEPRs, VE													
0.8%	Life Cycle Updates (cost, schedule, risks)	10	1	10%	11	9.7%	11	1	12	2018Q2	1.0%	11	1	12
0.3%	Contracting & Reprographics/Contracting	4		10%	4	9.7%	4		4	2018Q2	1.0%	4		4
4.7%	Engineering During Construction	62	15	23%	77	9.7%	69	16	85	2019Q1	4.0%	72	17	89
3.9%	Planning During Construction	52	5	10%	57	9.7%	57	5	62	2019Q1	4.0%	59	5	64
	Project Operation													
	PED Subtotal:				605				663					673
31	CONSTRUCTION MANAGEMENT													
6.1%	Construction Management	81	6	8%	87	5.4%	86	6	92	2019Q1	2.0%	88	6	94
	Project Operation:													
	Project Management													
	CONTRACT COST TOTALS:	1,935	344		2,279		2,045	360	2,405			2,110	372	2,482
	FEDERAL COST TOTALS:				1,709				1,804					1,862
	NON-FEDERAL COSTS TOTALS:				570				601					621
COST SPLIT														
	75.0%													
	25.0%													

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PREPARED: 18 Feb 2016

This Estimate reflects the scope and schedule in feasibility report;

Discharge Analysis Report, and Environmental Section Contracts

WBS STRUCTURE		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
WBS NUMBER	Civil Works Feature & Sub-Feature Description	Mii Estimate Prepared: 15 Jul 2015 Effective Price Level: 1 Oct 2014				Program Year (Budget EC): 2018 Effective Price Level Date: 1 Oct 2017				Mid-Point Date	INFLATED (%)	COST (\$K)	CNTG (\$K)	FULL (\$K)
		COST (\$K)	CNTG (\$K)	CNTG (%)	TOTAL (\$K)	ESC (%)	COST (\$K)	CNTG (\$K)	TOTAL (\$K)					
Environmental Mitigation - FY20														
06	FISH & WILDLIFE FACILITIES - Endangered Species Population Monitoring	389	31	8%	420	4.1%	405	32	437	2020Q2	4.5%	423	33	456
06	FISH & WILDLIFE FACILITIES - San Luis Rey River Water Quality Monitoring	75	6	8%	81	4.1%	78	6	84	2020Q2	4.5%	82	6	88
CONSTRUCTION ESTIMATE TOTALS:		464	37	8%	501		483	38	521			505	39	544
01	LANDS AND DAMAGES													
30	PRECONSTRUCTION, ENGINEERING & DESIGN													
22.8%	Project Management	106	10	10%	116	9.7%	116	11	127	2019Q2	5.0%	122	12	134
33.6%	Planning & Environmental Compliance	156	15	10%	171	9.7%	171	16	187	2019Q2	5.0%	180	17	197
10.8%	Engineering & Design	50	5	10%	55	9.7%	55	5	60	2019Q2	5.0%	58	5	63
	Reviews, ATRs, IEPs, VE													
2.2%	Life Cycle Updates (cost, schedule, risks)	10	1	10%	11	9.7%	11	1	12	2019Q2	5.0%	12	1	13
	Contracting & Reprographics													
11.2%	Engineering During Construction													
	Planning During Construction	52	5	10%	57	9.7%	57	5	62	2020Q2	9.2%	62	5	67
	Project Operation													
	PED Subtotal:				410				448					474
31	CONSTRUCTION MANAGEMENT													
	Construction Management													
	Project Operation:													
	Project Management													
CONTRACT COST TOTALS:		838	73		911		893	76	969			939	79	1,018
COST SPLIT														
	75.0%	FEDERAL COST TOTALS:			683				727					764
	25.0%	NON-FEDERAL COSTS TOTALS:			228				242					255

**** TOTAL PROJECT COST SUMMARY ****

*** CONTRACT COST SUMMARY ***

PROJECT: San Luis Rey River Flood Control Project
LOCATION: San Diego County, California

DISTRICT: Los Angeles District
POC: Mark Cooke, Cost Engineer

PREPARED: 18 Feb 2016

This Estimate reflects the scope and schedule in feasibility report;

Discharge Analysis Report, and Environmental Section Contracts

WBS STRUCTURE		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
WBS NUMBER	Civil Works Feature & Sub-Feature Description	Mii Estimate Prepared: 15 Jul 2015 Effective Price Level: 1 Oct 2014				Program Year (Budget EC): 2018 Effective Price Level Date: 1 Oct 2017				Mid-Point Date	INFLATED (%)	COST (\$K)	CNTG (\$K)	FULL (\$K)
		COST (\$K)	CNTG (\$K)	CNTG (%)	TOTAL (\$K)	ESC (%)	COST (\$K)	CNTG (\$K)	TOTAL (\$K)					
Environmental Mitigation - FY21														
06	FISH & WILDLIFE FACILITIES - Endangered Species Population Monitoring	397	32	8%	429	4.1%	413	33	446	2021Q2	6.6%	440	35	475
06	FISH & WILDLIFE FACILITIES - San Luis Rey River Water Quality Monitoring	75	6	8%	81	4.1%	78	6	84	2021Q2	6.6%	83	6	89
CONSTRUCTION ESTIMATE TOTALS:		472	38	8%	510		491	39	530			523	41	564
01	LANDS AND DAMAGES													
30	PRECONSTRUCTION, ENGINEERING & DESIGN													
22.7%	Project Management	107	10	10%	117	9.7%	117	11	128	2020Q2	9.2%	128	12	140
22.5%	Planning & Environmental Compliance Engineering & Design Reviews, ATRs, IEPRs, VE	106	10	10%	116	9.7%	116	11	127	2020Q2	9.2%	127	12	139
2.1%	Life Cycle Updates (cost, schedule, risks)	10	1	10%	11	9.7%	11	1	12	2020Q2	9.2%	12	1	13
0.8%	Contracting & ReprographicsContracting Engineering During Construction	4		10%	4	9.7%	4		4	2020Q2	9.2%	4		4
11.0%	Planning During Construction Project Operation	52	5	10%	57	9.7%	57	5	62	2021Q2	13.6%	65	6	71
	PED Subtotal:				305				333					367
31	CONSTRUCTION MANAGEMENT													
	Construction Management Project Operation: Project Management													
CONTRACT COST TOTALS:		751	64		815		796	67	863			859	72	931
COST SPLIT														
75.0%	FEDERAL COST TOTALS:				611				647					698
25.0%	NON-FEDERAL COSTS TOTALS:				204				216					233

ROUTING AND TRANSMITTAL SLIP

Date

01/25/2016

TO: (Name, office symbol, room number, building, Agency/Post)

1. CESPL-ED-G (FARLEY)

Initials

Date

FF

2/16/16

2. CESPL-ED-H (VERMEEREN)

RV

1-28-16

3. CESPL-PM-C (FULTON)

MF

1-27-14

4. CESPL-ED (LEIFIELD)

LF

2/17/16

5. *MARK COOKE*

Action	File	Note and Return
Approval	For Clearance	Per Conversation
As Requested	For Correction	Prepare Reply
Circulate	For Your Information	See Me
Comment	Investigate	<input checked="" type="checkbox"/> Signature
Coordination	Justify	

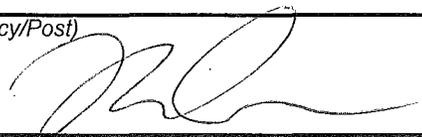
REMARKS

Memorandum for Record - San Luis Rey River - Remaining Project Scope for the Total Project Cost Summary

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, organization symbol, Agency/Post)

M. COOKE, CESPL-ED-DD



Room Number - Building

Phone Number
X-3704

~~21 January 2016~~ PJ
17 Feb 2016

MEMORANDUM FOR RECORD

SUBJECT: San Luis Rey River - Remaining Project Scope for the Total Project Cost Summary

1. Reference Files.

- a) San Luis Rey - Total Project Cost Summary (TPCS) (FY16)
- b) San Luis Rey - 902 Limit Update (FY16)
- c) San Luis Rey - Abbreviated Risk Analysis (ARA) (Dec15)
- d) San Luis Rey - Discharge Analysis Memorandum for Record
- e) San Luis Rey - Undelivered Orders - Remaining Obligations
- f) San Luis Rey - Levee Repairs Scope of Work
- g) San Luis Rey - Geotechnical Investigation IGE
- h) San Luis Rey - Remaining Costs Provided by PM
- i) San Luis Rey - Sunk Costs Reporting for TPCS & 902 Updates (FY18 submission)
- j) San Luis Rey - Environmental Permit Requirements (2008)
- k) San Luis Rey - Phase 2 Turnover Letter 2014
- l) San Luis Rey - Levee Inspection Trip Report
- m) San Luis Rey - Post Authorization Decision Document (PADD) (2007)
- n) San Luis Rey - Record of Decision (2008)

2. Objective. The purpose of this document is to outline all anticipated remaining scope for the San Luis Rey River project, with the intent to certify the Total Project Cost.

3. Location. The San Luis Rey River Flood Control Project is located in southern California, in the City of Oceanside (City), San Diego County, California. The San Luis Rey River heads at the crest of the coast range near the northern boundary of San Diego County and flows generally westward and enters the Pacific Ocean at the City of Oceanside. The project area encompasses a total of approximately 7.2 river miles from College Blvd. to the Pacific Ocean.

4. Project Background. The San Luis Rey River Flood Control Project was authorized by Congress in 1970. The original project design, identified as the "modified single-levee plan," with subsequent modifications, was approved in March 1988 (Corps 1987). Construction was initiated in September 1990 in phases designed to convey 89,000 cubic feet per second for a Standard Project Flood event. Physical construction of the levee system of the flood control channel was completed in January 2000. However, due to changed environmental conditions, new endangered species listing, and new critical habitat designation during construction, the U.S. Army Corps of Engineers (Corps) determined that construction could not be completed, and operation and maintenance could not be implemented, as planned. The Corps and City then worked with the resource agencies to develop a modified plan for project completion and

Operation and Maintenance implementation that would meet the project purpose while avoiding violations of environmental laws. That revised plan was approved in a Record of Decision (ROD) in 2008. Since then, the Corps and City have been implementing the plan approved in the ROD.

Prior to completion of the levee structures in 2000, vegetation filled in the channel; this was unexpected, and therefore, not budgeted nor funded for removal. This vegetation provided habitat for several threatened and endangered species and reduced flow conveyance by more than 50% to 40,000 cfs. During levee construction, new listed species established in the channel and critical habitat was also designated within the channel requiring the Corps to reinitiate consultation under the Endangered Species Act before proceeding with further actions. The Fish and Wildlife Service (FWS) indicated that the existing plan would receive a jeopardy opinion. Even though the levee components were completed, the construction phase of the project was incomplete and could not be turned over to the non-federal sponsor, the City of Oceanside, because the management of vegetation and sediment could not be implemented as planned.

To identify a plan for vegetation and sediment removal to complete the project and provide the sponsor with an Operation and Maintenance (O&M) Manual for implementation, the Corps consulted with the FWS and coordinated with the other resource agencies. The Corps and City assessed a range of alternatives in the 2007 Post Authorization Decision Document (PADD). In 2008, the SPD Commander signed the ROD approving a revised vegetation and sediment removal plan to achieve project completion and implementable O&M. Although the plan requires several years to implement, the revised plan was adopted because it is the most effective and efficient plan to complete and turn over the project within the existing project authorization while minimizing impacts to critical habitat and listed species occurring within the project footprint. The resulting terms, conditions, minimization, and mitigation were extensive. This plan intends to meet the river channel conveyance, as approved in the 2008 ROD.

Ultimately, project completion requires turning over the channel and levees to the local sponsor for Federal Emergency Management Agency (FEMA) certification. With the vegetation maintenance complete in fiscal year (FY) 16, the remaining work involves sediment removal, environmental mitigation and monitoring and levee inspection. The remaining work is outlined in the enclosed Total Project Cost Summary (TPCS) and described below. All project expenditures and obligations through 31 September 2015 have been provided by the Programs and Project Controls section and are indicated on the TPCS.

5. Remaining Channel Work. Initial vegetation removal within the Channel completed in the winter of FY16, will be turned over to the local sponsor for O&M. The majority of the remaining work within the channel involves 265,000 cubic yards (CY) of sediment removal from river STA 227+16 to I-5, and 140,000 CY of sediment at the mouth of the river from I-5 to N. Pacific Street. The extent of sediment removal is identified in the San Luis Rey – Discharge

Analysis Memorandum for Record, and is intended to meet the project authorized flow conveyance. The local sponsor has identified a local disposal site at Foussat Road, for the removed sediment to be placed, adjacent to the river. The owner of the disposal site, needs 1 million CY of fill and will accept the 405,000 CY of removed sediment free of charge.

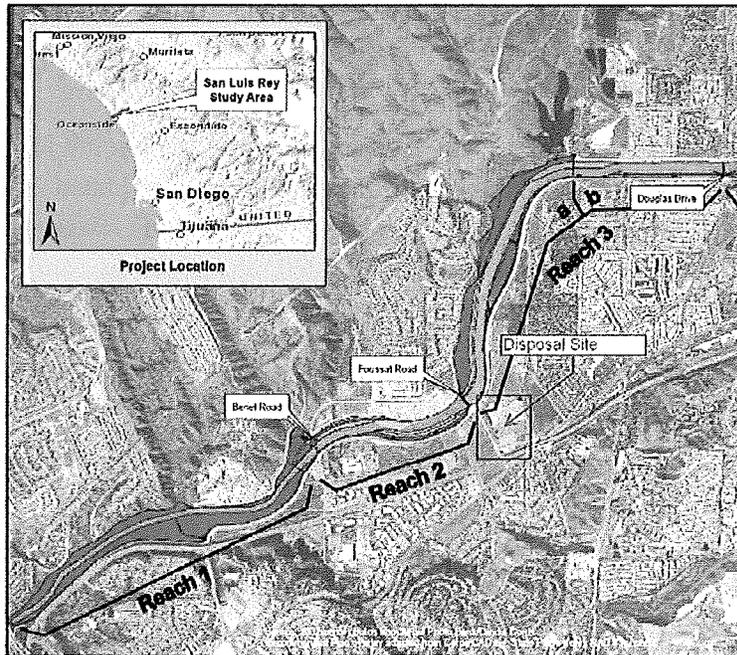


Figure 1. Disposal site location

The environmental terms and conditions and permit requirements for work within the channel (i.e. vegetation removal and sediment removal) involve water quality and endangered species population monitoring through FY21. The population monitoring for FY16-19 and water quality monitoring for FY16-17, are currently obligated under awarded contracts as shown in the San Luis Rey Undelivered Orders - Remaining Obligations spreadsheet.

The remaining costs through FY21 have been provided by the Project Manager and Environmental section based on historical pricing on previous San Luis Rey monitoring contracts.

In addition, the environmental permits require that “The Permittee in conjunction with the Corps, shall provide (5) million dollars, subject to the availability of funds, to further the recovery of the Covered Species.” Currently \$3.8M of the \$5M “Recovery Fund” for endangered species have been spent; \$1.9M under obligation W912PL-10-F-0030, and \$1.9M in real estate purchases for

MEMORANDUM FOR RECORD

SUBJECT: San Luis Rey River - Remaining Project Scope for the Total Project Cost Summary

the Rincon Environmental Recovery Site. The outstanding \$1.2M will be spent throughout the remaining project years (at the current price level). Since the permit requires that \$5M be spent towards recovery fund efforts, without specific performance requirements, the cost of the mitigation work carries no contingency. All recovery fund money expended counts towards the \$5M permit requirement.

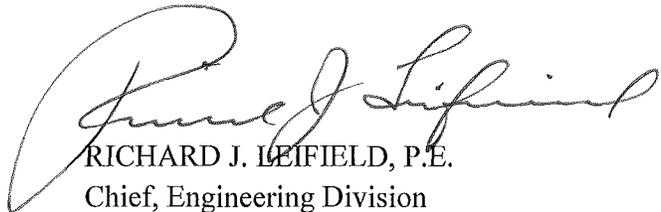
6. Remaining Levee Work. The levees completed in 2000, will need to be inspected by USACE and certified by FEMA in order to eliminate the flood insurance requirement and provide the full economic benefits for the community.

In 2014 the O&M of the asphalt concrete maintenance road atop the south levee from STA 15+00 to 385+00 was turned over to the local sponsor. However, as stated in the San Luis Rey Phase 2 turnover letter dated Jan 31, 2014 "while construction of the levees was completed several years ago, a safety inspection and any associated repairs will be completed prior to turnover of the levees to the City."

Costs to perform geotechnical evaluations of the levee system, and perform additional geotechnical investigation required to identify existing levee damages have been estimated at \$467k and \$185k respectively. Periodic inspection of the San Luis Rey Levee systems will be completed in FY16. The full extent of the required levee repairs are dependent on the findings of the periodic inspections and geotechnical evaluation. Meanwhile, a partial scope of work for levee repairs has been provided by the Geotechnical Branch based on a 2008 levee inspection and subsequent site visits. The scope involves: 1) Foussat Bridge - remove existing riprap subgrade, re-compact the subgrade, and place new grouted riprap from the access roadway down to the toe of the levee; 2) Douglas Bridge - remove existing riprap, grouted stone, and subgrade underneath bridge up to approximate station 296+50 from the access roadway down to the toe of the levee, replace subgrade, re-compact subgrade and replace existing grouted and non-grouted riprap with new grouted riprap. 3) Miscellaneous road and outlet works repairs. See attached Levee Repairs Scope of Work for details. Preliminary costs of repair are provided in FY19 of the Total Project Cost Summary.

7. Additional Costs. Costs for Preconstruction Engineering and Design (30 account) have been provided by the Project Manager based on historical costs throughout the project life and the anticipated remaining work. The total PED cost is shown in detail in the TPCS, and the attached reference document "San Luis Rey - Remaining Costs Provided by PM." Construction Management (31 account) costs are calculated as a percentage of the construction costs, based on historical Supervision and Administration costs. These costs only occur in FY16 and FY19 as they are related to the Construction Contracts for Sediment Removal and Levee Repairs. The environmental monitoring costs do not include Construction Management Costs because the Contract Administration is performed by the Corps Environmental Personnel and is included in the Preconstruction Engineering and Design costs.

8. Conclusion. All scope described above, has been estimated based on the most current information available from the Project Delivery Team. The estimated costs within the Total Project Cost Summary account for risks and uncertainties by applying risk-based contingencies calculated in the Abbreviated Risk Analysis. The Total Project Cost Summary represents all known expenditures and currently quantifiable costs for the San Luis Rey River Flood Control Project. A Post Authorization Change Request (PACR) report will be initiated in FY16 to further capture all remaining project scope and costs.



RICHARD J. LEIFIELD, P.E.
Chief, Engineering Division
Los Angeles District

CF

CESPL-ED-DD (Attn: M. Cooke)

CESPL-ED-DD
MEMORANDUM FOR RECORD
SUBJECT: San Luis Rey River - Remaining Project Scope for the Total Project Cost Summary

21 January 2016

CF

CESPL-ED-DD (Attn: M. Cooke)

W 2/17/16
LEIFIELD

CESPL-ED

JF 2/16/16
FARLEY

CESPL-ED-G

VERMEEREN

CESPL-ED-H

FULTON
CESPL-PM-C

RF 1-21-16

Map Document

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