

Final Draft Technical Memorandum**Knights Landing Flood Risk Reduction Feasibility Study
Small Communities Flood Risk Reduction Program***Conceptual Finance Plan**July 8, 2019***Prepared by:** Derek Larsen, P.E.**Reviewed by:** Elisabet Abdissa and David Lee**Purpose**

This memorandum has been prepared by Larsen Wurzel & Associates, Inc. (LWA) in support of the Knights Landing Flood Risk Reduction Feasibility Study under the Department of Water Resources (DWR) Small Communities Flood Risk Reduction (SCFRR) Program. This memorandum provides a conceptual financial plan and funding strategy for implementation of the preferred alternative.

Approach

The conceptual finance plan applies information from the Financial Feasibility and Funding Sources memos prepared by LWA with funding information provided by the local agencies to identify potential local and non-local matching funds to implement the preferred alternative. Based on cost estimates provided by the Knights Landing project team, a funding “sources and uses” table was prepared to determine funding capabilities for flood risk reduction features. This memo does not address funding mechanisms for identified multi-benefit projects.

Selected Alternative

Alternative 12 was identified in the Feasibility Study as the preferred alternative. Alternative 12 includes a new 6,800 feet cross levee running perpendicular from the right bank of the Sacramento River to the left bank of Knights Landing Ridge Cut. The alternative also includes a fix-in-place of USACE Mid-Valley Project Sites 9, 10, and 11 as identified in the Mid-Valley Project by USACE. This involves fix-in-place levee improvements along 7,235 feet on the Sacramento River right bank to address seepage.

Funding Approach

Total project cost estimates provided by the Knights Landing project team were divided by project features; a Fix-in-Place, a new cross levee, and improvements in agricultural areas outside of the proposed ring levee as displayed in **Table 1**. Based on overall cost estimates, Alternative 12 is projected to cost \$72.0 million.

Table 1
Knights Landing - Conceptual Finance Plan
Project Construction Phasing

Project Feature	Cost Estimate
Knights Landing Fix-in-Place & Cross Levee	\$60.1
Agricultural Areas - Mid Valley Project Sites 9, 10 & 11	\$11.9
Total	\$72.0

Notes:

- [1] Cost estimate prepared by GEI Consultants.
- [2] All values reported in millions of dollars.

The project was separated into two distinct benefit project benefit zones. A sources and uses table was developed for the project features protecting Knights Landing and is shown in **Table 2**. It is assumed that the capital improvement project will secure 90% of non-local matching funds revenue from State and federal sources. The remaining revenue to cover general overhead and administration (GO&A), operations, maintenance, repair, replacement and rehabilitation (OMRR&R), and the local matching share would be raised locally. Agricultural area improvements that include Mid-Valley sites 9, 10, and 11 are presented in the sources and uses of **Table 3**. It is assumed that the capital improvement project will secure 85% of non-local matching funds revenue from State and federal sources. The remaining revenue to cover GO&A, OMRR&R, and the local matching share would be raised locally. It was assumed that Yolo County would be able to secure local matching funds to supplement local revenue raised through a land-based assessment. The remaining funds for capital improvements were assumed to come from yet to be identified State and/or federal funding sources. **Table 4** provides a summary of potential State and federal funding sources that could be sought to complete proposed improvements.

Table 2
Knights Landing - Conceptual Finance Plan
Knights Landing Ring Levee Project Sources and Uses

Sources	Cost	Percent
Non-Secured Local Funding	\$6.00	9.5%
Special Tax/Assessments	\$3.34	5.3%
State/Federal Funding (90% Share of Capital Project)	\$54.09	85.3%
Total Sources [A]	\$63.43	100.0%
GO&A Uses	Cost	Percent
General Overhead and Admin	\$2.04	3.2%
Incremental OMRR&R Costs	\$1.29	2.0%
Total GO&A Uses [B]	\$3.33	5.2%
Capital Improvement Projects Uses	Cost	Percent
Knights Landing Fix-in-Place & Cross Levee	\$60.10	94.8%
Total Capital Uses [C]	\$60.10	94.8%
Total Uses [D = B + C]	\$63.43	100.0%
End Cash Position (Deficit) [E = A - D]	\$0.00	

Notes:

[1] All values reported in millions of dollars.

[2] Assumes 30-year assessment (cost and revenue escalation not included)

Table 3
Knights Landing - Conceptual Finance Plan
Knights Landing Agricultural Area Sources and Uses

Sources	Cost	Percent
Non-Secured Local Funding	\$1.00	7.5%
Special Tax/Assessments	\$2.28	17.0%
State/Federal Funding (85% Share of Capital Project)	\$10.12	75.5%
Total Sources [A]	\$13.40	100.0%
GO&A Uses	Cost	Percent
General Overhead and Admin	\$0.50	3.7%
Incremental OMRR&R Costs	\$1.00	7.5%
Total GO&A Uses [B]	\$1.50	11.2%
Capital Improvement Projects Uses	Cost	Percent
Agricultural Areas - Mid Valley Project Sites 9, 10 & 11	\$11.90	88.8%
Total Capital Uses [C]	\$11.90	88.8%
Total Uses [D = B + C]	\$13.40	100.0%
End Cash Position (Deficit) [E = A - D]	\$0.00	

Notes:

[1] All values reported in millions of dollars.

[2] Assumes 30-year assessment (cost and revenue escalation not included)

Table 4
Knights Landing - Conceptual Finance Plan
Funding Sources by Solution Matrix

Funding Program	Agency	Structural		Study/Plan/OMRR&R	
		Levees/ Floodwalls/ Dams/ Erosion	Bypasses	Feasibility Study /Flood Management Plan	OMRR&R
Small Communities Flood Risk Reduction (SCFRR) Program	DWR	X	X	X	
Flood System Repair Projects (FSRP)	DWR	X	X		
Flood Maintenance Assistance Program (FMAP)	DWR				X
Flood Mitigation Assistance (FMA)	FEMA		X		
Pre-disaster Mitigation (PDM)	FEMA	X	X		
Hazard Mitigation Grant Program (HMGP)	FEMA	X	X		

Notes:

[1] Potential Funding Programs Identified by LWA from the Funding Sources Memo.

Recommended Next Step

The County should work to determine if advancing a land-based assessment would be a viable approach and should refine assumptions associated with the amount of funding required to complete planned improvements. In order to secure local funding, the County will need to prepare a detailed project financing plan and cash flow model in support of a land-based assessment. The County should advance design and environmental compliance of the preferred alternative to develop a construction ready project that can better compete for State and federal funding. The County should develop construction phasing and implementation scenarios that are flexible enough to be opportunistic in securing matching State and federal funding. Furthermore, the County will need to determine how to address governance prior to advancing the preferred alternative.