

ATTACHMENT 4:

Budget

SANTA CLARA VALLEY WATER DISTRICT
Proposition 1E Round 2
Stormwater Flood Management Grant Program
Berryessa Creek Flood Protection Proposal

In accordance with PSP requirements, **Attachment 4** consists of the following items:

- ✓ A detailed estimate of costs (**PSP Table 5**), including land costs, planning and design costs, environmental compliance and documentation costs, construction costs and contingencies.
- ✓ A summary budget for proposal (**PSP Table 6**)
- ✓ **Appendix 4-1**, which contains supporting budget documentation and District financial summaries used in determining the total Project cost.

Summary Budget

This attachment presents detailed budget information and supporting documentation for the Berryessa Creek Flood Protection Project grant proposal. The project proposal offers tremendous investment value to the State for a number of reasons including:

- The proposal provides a 63% funding match from non-State sources, much greater than the 50% required by the grant guidelines, percent of funding from non-State sources, demonstrating there is a strong commitment to the implementation of this project.
- 100% of the grant funding request will be used directly for construction or construction-related activities.
- The District has a demonstrated track record for the completion of capital improvement projects throughout its service area with more than 80 projects completed in the past decade.

Table 4-1 provides a summary budget for the proposal (PSP Table 6) and **Table 4-2** provides a summary budget for the Berryessa Creek Flood Protection Project. As noted in these tables, the total budget is estimated at **\$81,865,630**. Of this amount, **\$51,865,630** is Non-State funding, and **\$30,000,000** is being requested as part of the Proposition 1E Round 2 Grant Program. The funding match for this proposal is **63%**, which exceeds the 50% grant match requirements. **Appendix 4-1** includes the supporting documentation used in developing the Project budget estimate.

Table 4-1. Summary Budget for Proposal

Table 6 – Summary Budget						
Proposal Title: Santa Clara Valley Water District Berryessa Creek Flood Protection Project						
Individual Project Title		Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source*	Total Cost	% Funding Match (col. b/col. d)
(a)	Berryessa Creek Flood Protection Project	\$ 30,000,000	\$ 51,865,630	-	\$ 81,865,630	63%
(b)	Project B					
(c)	Project C					
(d)	Project D					
(e)	Project E					
(f)	Project F					
(g)	Project G					
(h)	Project H (add more rows for additional projects as necessary)					
(i)	Grand Total (Sum rows (a) through (h) for each column)	\$ 30,000,000	\$ 51,865,630	-	\$ 81,865,630	63%

Table 4-2. Project Budget

Table 5 – Project Budget					
Proposal Title: Santa Clara Valley Water District Berryessa Creek Grant Proposal					
Project Title: Berryessa Creek Flood Protection Project					
Category		(a)	(b)	(c)	(d)
		Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source*	Total Cost
(a)	Direct Project Administration Costs	\$ -	\$ 2,455,700	\$ -	\$ 2,455,700
(b)	Land Purchase/Easement	\$ -	\$ 9,997,827	\$ -	\$ 9,997,827
(c)	Planning/Design/Engineering/ Environmental Documentation	\$ -	\$ 10,962,603	\$ -	\$ 10,962,603
(d)	Construction/Implementation	\$ 30,000,000	\$ 17,119,500	\$ -	\$ 47,119,500
(e)	Environmental Compliance/ Mitigation/Enhancement	\$ -	\$ 480,000	\$ -	\$ 480,000
(f)	Construction Administration	\$ -	\$ 5,072,600	\$ -	\$ 5,072,600
(g)	Other Costs	\$ -	\$ -	\$ -	\$ -
(h)	Construction/Implementation Contingency	\$ -	\$ 5,777,400	\$ -	\$ 5,777,400
(i)	Grand Total (Sum rows (a) through (h) for each column)	\$30,000,000	\$ 51,865,630	\$ -	\$81,865,630
<p>*List sources of funding: <i>Use as much space as required</i> Santa Clara Valley Water District Watershed and Clean and Safe Creeks Funds</p>					

A breakdown of this Project Budget for each project component is provided in **Table 4-3 through Table 4-5**, and **Table 4-6** provides a breakdown of this budget by Work Plan task.

Table 4-3. Project Budget for Component 1 (Lower Berryessa Creek Improvements)

Table 5 – Project Budget					
Proposal Title: Santa Clara Valley Water District Berryessa Creek Flood Protection Grant Proposal					
Project Title: Berryessa Creek Flood Protection Project - COMPONENT 1 (Lower Berryessa Creek)					
Category		(a)	(b)	(c)	(d)
		Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source*	Total Cost
(a)	Direct Project Administration Costs		\$ 1,499,100		\$ 1,499,100
(b)	Land Purchase/Easement		\$ 197,827		\$ 197,827
(c)	Planning/Design/Engineering/ Environmental Documentation		\$ 7,946,003		\$ 7,946,003
(d)	Construction/Implementation	\$ 15,445,500	\$ 14,919,500		\$ 30,365,000
(e)	Environmental Compliance/ Mitigation/Enhancement		\$ 279,400		\$ 279,400
(f)	Construction Administration		\$ 2,768,300		\$ 2,768,300
(g)	Other Costs				\$ -
(h)	Construction/Implementation Contingency		\$ 3,036,500		\$ 3,036,500
(i)	Grand Total (Sum rows (a) through (h) for each column)	\$15,445,500	\$ 30,646,630	\$ -	\$46,092,130
<p>*List sources of funding: <i>Use as much space as required</i> Santa Clara Valley Water District Watershed and Clean and Safe Creeks Funds</p>					

Table 4-4. Project Budget for Component 2 (Lower Penitencia Creek Improvements)

Table 5 – Project Budget				
Proposal Title: Santa Clara Valley Water District Berryessa Creek Flood Protection Grant Proposal				
Project Title: Berryessa Creek Flood Protection Project - COMPONENT 2 (Lower Penitencia Creek)				
	(a)	(b)	(c)	(d)
Category	Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source*	Total Cost
(a) Direct Project Administration Costs		\$ 225,000		\$ 225,000
(b) Land Purchase/Easement				\$ -
(c) Planning/Design/Engineering/ Environmental Documentation		\$ 1,676,300		\$ 1,676,300
(d) Construction/Implementation	\$ 4,554,500			\$ 4,554,500
(e) Environmental Compliance/ Mitigation/Enhancement		\$ 100,300		\$ 100,300
(f) Construction Administration		\$ 454,700		\$ 454,700
(g) Other Costs				\$ -
(h) Construction/Implementation Contingency		\$ 910,900		\$ 910,900
(i) Grand Total (Sum rows (a) through (h) for each column)	\$ 4,554,500	\$ 3,367,200	\$ -	\$ 7,921,700
<p>*List sources of funding: <i>Use as much space as required</i> <i>Santa Clara Valley Water District Watershed and Clean and Safe Creeks Funds</i></p>				

Table 4-5. Project Budget for Component 3 (Upper Berryessa Creek Improvements)

Table 5 – Project Budget				
Proposal Title: Santa Clara Valley Water District Berryessa Creek Flood Protection Grant Proposal				
Project Title: Berryessa Creek Flood Protection Project - COMPONENT 3 (Upper Berryessa Creek)				
Category	(a) Requested Grant Amount	(b) Cost Share: Non-State Fund Source* (Funding Match)	(c) Cost Share: Other State Fund Source*	(d) Total Cost
(a) Direct Project Administration Costs		\$ 731,600		\$ 731,600
(b) Land Purchase/Easement		\$ 9,800,000		\$ 9,800,000
(c) Planning/Design/Engineering/ Environmental Documentation		\$ 1,340,300		\$ 1,340,300
(d) Construction/Implementation	\$ 10,000,000	\$ 2,200,000		\$ 12,200,000
(e) Environmental Compliance/ Mitigation/Enhancement		\$ 100,300		\$ 100,300
(f) Construction Administration		\$ 1,849,600		\$ 1,849,600
(g) Other Costs				\$ -
(h) Construction/Implementation Contingency		\$ 1,830,000		\$ 1,830,000
(i) Grand Total (Sum rows (a) through (h) for each column)	\$10,000,000	\$ 17,851,800	\$ -	\$27,851,800
<p>*List sources of funding: <i>Use as much space as required</i> Santa Clara Valley Water District Watershed and Clean and Safe Creeks Funds</p>				

Table 4-6. Project Budget by Task for Berryessa Creek Flood Protection Project

Category		Component 1 - Lower Berryessa	Component 2 - Lower Penitencia	Component 3- Upper Berryessa	Total Cost
(a)	Direct Project Administration Costs	\$ 1,499,100	\$ 225,000	\$ 731,600	\$ 2,455,700
Task 1	<i>Project Administration</i>	\$ 1,398,600	\$ 179,000	\$ 656,400	\$ 2,234,000
Task 2	<i>Labor Compliance Program</i>	\$ 500			\$ 500
Task 3	<i>Reporting</i>	\$ 100,000	\$ 46,000	\$ 75,200	\$ 221,200
(b)	Land Purchase/Easement	\$ 197,827	\$ -	\$ 9,800,000	\$ 9,997,827
Task 4	<i>Land Acquisition and Easements</i>	\$ 197,827		\$ 9,800,000	\$ 9,997,827
(c)	Planning/Design/Engineering/ Env. Documentation	\$ 7,946,003	\$ 1,676,300	\$ 1,340,300	\$ 10,962,603
Task 5	<i>Assessment and Evaluation</i>	\$ 2,657,161	\$ 450,000		\$ 3,107,161
Task 6	<i>Design</i>	\$ 4,327,000	\$ 675,600	\$ 1,223,500	\$ 6,226,100
Task 7	<i>Environmental Documentation</i>	\$ 911,742	\$ 500,600	\$ 66,700	\$ 1,479,042
Task 8	<i>Permitting</i>	\$ 50,100	\$ 50,100	\$ 50,100	\$ 150,300
(d)	Construction/Implementation	\$ 30,365,000	\$ 4,554,500	\$ 12,200,000	\$ 47,119,500
Task 9	<i>Construction Contracting</i>	\$ 50,000	\$ 24,500	\$ 50,000	\$ 124,500
Task 10	<i>Project Construction</i>	\$ 30,315,000	\$ 4,530,000	\$ 12,150,000	\$ 46,995,000
Subtask 10.1	<i>Mobilization and Site Preparation</i>	\$ 505,000	\$ 230,000	\$ 100,000	\$ 835,000
Subtask 10.2	<i>Project Construction</i>	\$ 29,505,000	\$ 4,070,000	\$ 12,000,000	\$ 45,575,000
Subtask 10.3	<i>Performance Testing and Demobilization</i>	\$ 305,000	\$ 230,000	\$ 50,000	\$ 585,000
(e)	Environmental Compliance/ Mitigation	\$ 279,400	\$ 100,300	\$ 100,300	\$ 480,000
Task 11	<i>Environmental Compliance/Mitigation</i>	\$ 279,400	\$ 100,300	\$ 100,300	\$ 480,000
(f)	Construction Administration	\$ 2,768,300	\$ 454,700	\$ 1,849,600	\$ 5,072,600
Task 12	<i>Construction Administration</i>	\$ 2,768,300	\$ 454,700	\$ 1,849,600	\$ 5,072,600
(g)	Other Costs				\$ -
(h)	Construction/Implementation Contingency	\$ 3,036,500	\$ 910,900	\$ 1,830,000	\$ 5,777,400
(i)	Grand Total (Sum rows (a) through (h) for each column)	\$46,092,130	\$ 7,921,700	\$27,851,800	\$81,865,630

Row (a) Direct Project Administration Costs

As noted in **Table 4-2** and **Table 4-6**, the total direct project administration cost for the Berryessa Creek Flood Protection Project is **\$2,455,700**. This represents 3% of the total project cost and includes activities relating to Task 1 – Project Administration, Task 2 – Labor Compliance Program, and Task 3 – Reporting. No grant funding is being requested for these direct project administration costs. A breakdown of these costs, by task, is provided below.

Task 1 – Project Administration:

Administration Costs of **\$2,234,000** were determined based on current contract estimates, previous project experience with similar construction projects, and previous expenditures dating no earlier than October 1, 2008. These costs account for all current project administrative activities. A breakdown of these estimated costs is provided in **Table 4-7**.

Table 4-7. Project Administration Cost Breakdown

Project Component	Discipline	Hourly Wage (\$/hr)	Number of Hours	Total
Component 1 - Lower Berryessa	Project Manager	\$220	3,630	\$798,600
	Administrator	\$100	6,000	\$600,000
	<i>Subtotal</i>		<i>9,630</i>	<i>\$1,398,600</i>
Component 2 - Lower Penitencia	Project Manager	\$220	450	\$99,000
	Administrator	\$100	800	\$80,000
	<i>Subtotal</i>		<i>1,250</i>	<i>\$179,000</i>
Component 3 - Upper Berryessa	Project Manager	\$220	1,620	\$356,400
	Administrator	\$100	3,000	\$300,000
	<i>Subtotal</i>		<i>4,620</i>	<i>\$656,400</i>
Total			15,500	\$2,234,000

Task 2 – Labor Compliance Program:

Labor Compliance Program (LCP) costs include time for a Management Analyst to register with the California Department of Industrial Relation’s Compliance Monitoring Unit for fee-based monitoring, consistent with AB 436. Registration will occur prior to the award of Component 1 – Lower Berryessa Creek Improvements. The fee-based monitoring will continue for all components of the project. It is assumed that re-registration will not be required. **Table 4-8** provides an estimated breakdown of these costs.

Table 4-8. Labor Compliance Cost Breakdown

Project Component	Discipline	Hourly Wage (\$/hr)	Number of Hours	Total
Component 1 - Lower Berryessa	Management Analyst	\$125	4	\$500
	<i>Subtotal</i>		4	\$500
Component 2 - Lower Penitencia	Management Analyst	\$125	0	\$0
	<i>Subtotal</i>		0	\$0
Component 3 - Upper Berryessa	Management Analyst	\$125	0	\$0
	<i>Subtotal</i>		0	\$0
Total			4	\$500

Task 3 – Reporting:

Project reporting costs of **\$221,200** were determined based on current contract estimates, previous project experience with similar construction projects. These costs will cover all quarterly reports, annual reports, final reports and formation of a data management structure consistent with the Bay Area IRWMP requirements. A breakdown of these estimated costs is provided in **Table 4-9**.

Table 4-9. Reporting Cost Breakdown

Project Component	Discipline	Hourly Wage (\$/hr)	Number of Hours	Total
Component 1 - Lower Berryessa	Project Manager	\$220	200	\$44,000
	Administrator	\$100	560	\$56,000
	<i>Subtotal</i>		760	\$100,000
Component 2 - Lower Penitencia	Project Manager	\$220	100	\$22,000
	Administrator	\$100	240	\$24,000
	<i>Subtotal</i>		340	\$46,000
Component 3 - Upper Berryessa	Project Manager	\$220	160	\$35,200
	Administrator	\$100	400	\$40,000
	<i>Subtotal</i>		560	\$75,200
Total			1,660	\$221,200

Row (b) Land Purchase/Easement

Task 4 – Land Acquisition and Easements:

As noted in **Table 4-2** and **Table 4-6**, the total land purchase and easement cost for the Berryessa Creek Flood Protection Project is **\$9,997,827**. No grant funding is being requested for land purchase/easement costs. A breakdown of costs is discussed below.

- **Component 1 – Lower Berryessa Creek Improvements.** Land Acquisition/Easement costs for this component are \$197,827. This includes entering into a Memorandum of Understanding (MOU) with the City of Milpitas for easement acquisition; entering into a revocable permit agreement with San Francisco Public Utilities Commission (SFPUC) for work within their rights-

of-way; and securing other easements from private entities such as the Valley Transportation Authority (VTA).

- **Component 2 – Lower Penitencia Creek Improvements.** Proposed work on this Component is expected to be contained within existing Rights-of-Way. Therefore, no costs are associated with this component.
- **Component 3 – Upper Berryessa Creek Improvements.** Estimated Land Acquisition/Easement costs for this component are \$9,800,000. This estimate is based on a preliminary gross appraisal conducted by the USACE for acquisition of 26 parcels. A list of easements and current status is provided in **Appendix 4.3**.

Row (c) Planning/Design/Engineering/Environmental Documentation

As noted in **Table 4-2** and **Table 4-6**, the total planning/design/engineering and environmental documentation cost associated with the Berryessa Creek Flood Protection Project is **\$10,962,603**. No grant funding is being requested for these costs. A breakdown of costs, by task, is discussed below.

Task 5 – Assessment and Evaluation:

As noted in **Table 4-6**, the total assessment and evaluation cost associated with the Berryessa Creek Flood Protection Project is **\$3,107,161**. These costs are broken down by each Project component in the following sections.

Component 1 – Lower Berryessa Creek Improvements

Evaluation and assessment costs for this component involve completion of the Lower Berryessa Creek Planning Study Report in 2010. The District entered into a contract agreement with Winzler&Kelly/GHD to complete this work. Between the original contract agreement and subsequent amendments, a total of **\$2,657,161** was spent on developing this report. **Table 4-10** provides a breakdown of these costs, and **Appendix 4-1** provides copies of recent invoices showing contract information.

Table 4-10. Lower Berryessa Creek Planning Study Report Costs

Consultant Contract	Amount
Winzler&Kelly/GHD Original Agreement	\$1,423,972
Amendment 1	\$790,594
Amendment 2	\$442,595
Total	\$2,657,161

Component 2 – Lower Penitencia Creek Improvements

Evaluation and assessment costs for this component involve completion of the Lower Penitencia Creek Planning Study Report. Based on previous experience with similar projects, this effort is estimated to cost **\$450,000**. **Table 4-11** provides a breakdown of these costs.

Table 4-11. Lower Penitencia Planning Study Report Costs

Project Component	Discipline	Hourly Wage (\$/hr)	Number of Hours	Total
Component 2 - Lower Penitencia	Project Manager	\$220	500	\$110,000
	Associate Engineer	\$175	780	\$136,500
	Assistant Engineer 2	\$150	1,000	\$150,000
	Surveyor	\$140	320	\$44,800
	Outreach Specialist	\$145	60	\$8,700
Total			2,660	\$450,000

Component 3 – Upper Berryessa Creek Improvements

Evaluation and assessment costs for this component involve completion of the Upper Berryessa Creek Project Feasibility Study. This work is being performed by the USACE and is scheduled to be completed prior to grant award.

Task 6 – Design:

As noted in **Table 4-6**, the total assessment and evaluation cost associated with the Berryessa Creek Flood Protection Project is **\$6,226,100**. These costs are broken down by each Project component in the following sections.

Component 1 – Lower Berryessa Creek Improvements

Design costs for this component involve completion of the plans and specifications for Lower Berryessa Creek Improvements. The total projected cost for this effort is **\$4,327,000** and this work is scheduled to be completed in April 2013. **Table 4-12** provides a breakdown of these costs.

Table 4-12. Lower Berryessa Creek Design Costs

Project Component	Discipline	Hourly Wage (\$/hr)	Number of Hours	Total
Component 1 - Lower Berryessa	Project Manager	\$220	4,110	\$904,200
	Associate Engineer	\$175	8,200	\$1,435,000
	Assistant Engineer 2	\$150	12,000	\$1,800,000
	Drafter	\$130	1,400	\$182,000
	Outreach Specialist	\$145	40	\$5,800
Total			25,750	\$4,327,000

Component 2 – Lower Penitencia Creek Improvements

Design costs for this component involve completion of the 30%, 60%, 90% and Final design documents for Lower Penitencia Creek improvements. Based on previous experience with similar projects, this effort is estimated to cost **\$675,600**. **Table 4-13** provides a breakdown of these costs.

Table 4-13. Lower Penitencia Creek Design Costs

Project Component	Discipline	Hourly Wage (\$/hr)	Number of Hours	Total
Component 2 - Lower Penitencia	Project Manager	\$220	600	\$132,000
	Associate Engineer	\$175	1,200	\$210,000
	Assistant Engineer 2	\$150	1,960	\$294,000
	Drafter	\$130	260	\$33,800
	Outreach Specialist	\$145	40	\$5,800
Total			4,060	\$675,600

Component 3 – Upper Berryessa Creek Improvements

Design costs for this component involve completion of the 30%, 60%, 90% and Final design documents for Upper Berryessa Creek improvements. Based on previous experience with similar projects, this effort is estimated to cost **\$1,223,500**. **Table 4-14** provides a breakdown of these costs.

Table 4-14. Upper Berryessa Creek Design Costs

Project Component	Discipline	Hourly Wage (\$/hr)	Number of Hours	Total
Component 3 – Upper Berryessa	Project Manager	\$220	1,010	\$222,200
	Associate Engineer	\$175	1,860	\$325,500
	Assistant Engineer 2	\$150	3,600	\$540,000
	Drafter	\$130	1,000	\$130,000
	Outreach Specialist	\$145	40	\$5,800
Total			7,510	\$1,223,500

Task 7 – Environmental Documentation:

As noted in **Table 4-6**, the total environmental documentation cost associated with the Berryessa Creek Flood Protection Project is **\$1,479,042**. These costs are broken down by each Project component in the following sections.

Component 1 – Lower Berryessa Creek Improvements

Evaluation and assessment costs for this component involve completion of the Lower Berryessa Creek EIR in 2011. The District entered into a contract agreement with ESA to complete this work. Between the original contract agreement and subsequent amendments, a total of **\$911,742** was spent on finalizing the EIR. **Table 4-15** provides a breakdown of these costs, and **Appendix 4-1** provides copies of recent invoices showing consulting contract information.

Table 4-15. Lower Berryessa Planning Study Report Costs

Consultant Contract	Amount
ESA Original Agreement	\$499,741
Amendment 1	\$319,723
Amendment 2	\$92,278
Total	\$911,742

Component 2 – Lower Penitencia Creek Improvements

Environmental documentation costs for this component involve completion of the Lower Penitencia Creek Supplemental EIR. Based on previous experience with similar projects, this effort is estimated to cost **\$500,600**. **Table 4-16** provides a breakdown of these costs.

Table 4-16. Lower Penitencia SEIR Costs

Project Component	Discipline	Hourly Wage (\$/hr)	Number of Hours	Total
Component 2 - Lower Penitencia	Project Manager	\$220	300	\$66,000
	Environmental Planner	\$160	2,100	\$336,000
	Biologist	\$145	680	\$98,600
Total			3,080	\$500,600

Component 3 – Upper Berryessa Creek Improvements

Environmental documentation costs for this component involve completion of the Upper Berryessa Creek EIS/EIR. This work is being performed primarily by the USACE and is scheduled to be completed prior to grant award. These costs are not being requested for grant funding and are not being used as part of the funding match, and are therefore not included. The **\$66,700** shown in **Table 4-17** below reflect the District’s costs associated with review of the EIS/EIR.

Table 4-17. Upper Berryessa EIS/EIR Costs

Project Component	Discipline	Hourly Wage (\$/hr)	Number of Hours	Total
Component 3 - Upper Berryessa	Project Manager	\$220	85	\$18,700
	Environmental Planner	\$160	300	\$48,000
Total			385	\$66,700

Task 8 – Permitting:

As shown in **Table 4-18** below, permitting costs for the Berryessa Creek Flood Protection Project are estimated to be **\$150,300**. These costs account for securing a Streambed Alteration Agreement, RWQCB permits and a USACE 404 permit.

Table 4-18. Permitting Costs

Project Component	Discipline	Hourly Wage (\$/hr)	Number of Hours	Total
Component 1 - Lower Berryessa	Project Manager	\$220	75	\$16,500
	Environmental Planner	\$160	210	\$33,600
	<i>Subtotal</i>		<i>285</i>	<i>\$50,100</i>
Component 2 - Lower Penitencia	Project Manager	\$220	75	\$16,500
	Environmental Planner	\$160	210	\$33,600
	<i>Subtotal</i>		<i>285</i>	<i>\$50,100</i>
Component 3 - Upper Berryessa	Project Manager	\$220	75	\$16,500
	Environmental Planner	\$160	210	\$33,600
	<i>Subtotal</i>		<i>285</i>	<i>\$50,100</i>
Total			855	\$150,300

Row (d) Construction

As noted in **Table 4-19**, the total construction/implementation cost associated with the Berryessa Creek Flood Protection Project is **\$47,119,500**. The District is requesting \$30,000,000 in grant funding for these implementation efforts.

Table 4-19. Construction Costs

Project Component	Task 9 Construction Contracting	Task 10.1 - Mobilization and Site Preparation	Task 10.2 - Project Construction	Task 10.3 - Demobilization and Performance Testing	Total	Grant Request
Component 1 - Lower Berryessa	\$50,000	\$505,000	\$29,505,000	\$305,000	\$30,365,000	\$15,445,500
Component 2 - Lower Penitencia	\$24,500	\$230,000	\$4,070,000	\$230,000	\$4,554,500	\$4,554,500
Component 3 - Upper Berryessa	\$50,000	\$100,000	\$12,000,000	\$50,000	\$12,200,000	\$10,000,000
Total	\$124,500	\$835,000	\$45,575,000	\$585,000	\$47,119,500	\$30,000,000

Task 9 – Construction Contracting:

As shown in **Table 4-20**, construction contracting costs for the Berryessa Creek Flood Protection Project are estimated to be **\$124,500**. These costs account for activities relating to: advertisement for bids, a pre-bid meeting, bid opening, bid evaluations, selection of contractor, board approval, award of contract, and notice to proceed.

Table 4-20. Construction Contracting Costs

Project Component	Discipline	Hourly Wage (\$/hr)	Number of Hours	Total
Component 1 - Lower Berryessa	Project Manager	\$220	50	\$11,000
	Associate Engineer	\$175	160	\$28,000
	Administrator	\$100	110	\$11,000
	<i>Subtotal</i>		<i>320</i>	<i>\$50,000</i>
Component 2 - Lower Penitencia	Project Manager	\$220	25	\$5,500
	Associate Engineer	\$175	80	\$14,000
	Administrator	\$100	50	\$5,000
	<i>Subtotal</i>		<i>155</i>	<i>\$24,500</i>
Component 3 - Upper Berryessa	Project Manager	\$220	50	\$11,000
	Associate Engineer	\$175	160	\$28,000
	Administrator	\$100	110	\$11,000
	<i>Subtotal</i>		<i>320</i>	<i>\$50,000</i>
Total			795	\$124,500

Task 10 – Construction:

Construction/Implementation costs for all three components of the Berryessa Creek Flood Protection project are estimated to be **\$46,995,000**. This cost is broken down as follows:

- Task 10.1 – Mobilization & Site Preparation @ \$835,000
- Task 10.2 – Project Construction @ \$45,575,000
- Task 10.3 – Demobilization and Performance Testing @ \$585,000

Additional details on these costs (by task) are provided below.

Task 10.1 – Mobilization & Site Preparation

Mobilization for the project will include moving the required equipment and materials onto the sites in preparation for construction. The total mobilization and site preparation costs are estimated to be **\$835,000** and are broken down by component as follows:

- **Component 1 – Lower Berryessa.** Mobilization costs for Component 1 are estimated to be \$505,000. This includes labor, equipment and materials needed to prepare the site. Refer to **Appendix 4-1** (Lower Berryessa 60% Design Estimate) for a more detailed breakdown of the mobilization, clearing & grubbing and fencing costs that went into developing this estimate.
- **Component 2 – Lower Penitencia.** Mobilization costs for Component 2 are estimated to be \$230,000. This includes \$150,000 for labor, \$45,000 for equipment, and \$35,000 for materials needed to prepare the site.

- **Component 3 – Upper Berryessa.** Mobilization costs for Component 1 are estimated to be \$100,000. This includes labor, equipment and materials needed to prepare the site.

Task 10.2 – Project Construction

Mobilization for the project will include moving the required equipment and materials onto the sites in preparation for construction. The total project construction costs are estimated to be **\$45,575,000** and are broken down by component in the following sections.

Component 1 – Lower Berryessa Creek Improvements

As discussed in detail in Attachment 3, Component 1 involves the following construction activities:

- Raising existing levees;
- Widening the channel by removing the existing levee from one side of the existing channel with floodwalls;
- Constructing a stormwater pump station;
- Improving maintenance access;
- Removing sediment and vegetation; and
- Constructing re-vegetated floodplains.

The total cost to complete these activities is estimated to be **\$29,505,000**. Refer to **Appendix 4-1** (Lower Berryessa 60% Design Estimate) for a detailed breakdown of these construction costs (see Bid Items 9 through 29).

Component 2 – Lower Penitencia Creek Improvements

As discussed in detail in Attachment 3, Component 2 involves the following construction activities:

- Removing sediment and vegetation;
- Partial widening of channel; and
- Improving maintenance access.

The total cost to complete these activities is estimated to be **\$4,070,000**. Of this amount, \$2,600,000 is estimated for labor, \$810,000 is estimated for equipment, and \$610,000 is estimated for materials.

Component 3 – Upper Berryessa Creek Improvements

As discussed in detail in Attachment 3, Component 3 involves the following construction activities:

- Channel widening;
- Low-flood channel construction;
- Traffic bridge replacements;
- Utility relocations;
- Floodwall construction;
- Maintenance road re-construction;
- Montague Expressway culvert replacement; and

- Vegetation plantings.

The total cost to complete these activities is estimated to be **\$12,000,000**. A detailed cost estimate is provided in Part IV of Appendix B, Chapter 3 of the Draft General Re-Evaluation Report and Environmental Impact Statement / Environmental Impact Report (“GRR Study”), included in **Appendix 4-1**.

Task 10.3 – Demobilization and Performance Testing

Demobilization will include removal of all equipments at post construction, finalization per SWPPP requirements, and final inspection by appropriate District personnel and other partner agencies/entities. The long-term operation of the constructed project will be administered in accordance to District’s Stream Maintenance Program. The total demobilization and performance testing costs are estimated to be **\$585,000** and are broken down by component as follows:

- **Component 1 – Lower Berryessa.** Demobilization costs for Component 1 are estimated to be \$305,000. This includes labor, equipment and materials needed to prepare the site. Refer to **Appendix 4-1** (Lower Berryessa 60% Design Estimate) for a more detailed breakdown of the demobilization costs that went into developing this estimate.
- **Component 2 – Lower Penitencia.** Mobilization costs for Component 2 are estimated to be \$230,000. This includes \$150,000 for labor, \$45,000 for equipment, and \$35,000 for materials needed to prepare the site.
- **Component 3 – Upper Berryessa.** Mobilization costs for Component 1 are estimated to be \$50,000. This includes labor, equipment and materials needed to prepare the site.

Row (e) Environmental Compliance/Mitigation/Enhancement

Task 11- Environmental Compliance/Mitigation/Enhancement:

As shown in **Table 4-21**, total environmental compliance and mitigation costs for the Berryessa Creek Flood Protection Project are estimated to be **\$480,000**. This estimate consistent with costs observed for similar projects. These costs account for activities relating to implementation of mitigation measures, including but not limited to revegetation activities.

Table 4-21. Environmental Compliance/Mitigation/Enhancement Costs

Project Component	Discipline	Hourly Wage (\$/hr)	Number of Hours	Labor Subtotal	ODCs^a	Total
Component 1 - Lower Berryessa	Sr Biologist	\$170	300	\$51,000	Mitigation Planting and Equipment	
	Sr Maintenance Worker	\$135	200	\$27,000		
	Maintenance Worker	\$110	240	\$26,400		
	<i>Subtotal</i>		<i>740</i>	<i>\$104,400</i>	<i>\$175,000</i>	<i>\$279,400</i>
Component 2 - Lower Penitencia	Sr Biologist	\$170	80	\$13,600	Plantings, Hydroseeding & Trucks	
	Sr Maintenance Worker	\$135	100	\$13,500		
	Maintenance Worker	\$110	120	\$13,200		
	<i>Subtotal</i>		<i>300</i>	<i>\$40,300</i>	<i>\$60,000</i>	<i>\$100,300</i>
Component 3 - Upper Berryessa	Sr Biologist	\$170	80	\$13,600	Plantings, Hydroseeding & Trucks	
	Sr Maintenance Worker	\$135	100	\$13,500		
	Maintenance Worker	\$110	120	\$13,200		
	<i>Subtotal</i>		<i>300</i>	<i>\$40,300</i>	<i>\$60,000</i>	<i>\$100,300</i>
Total			1,340	\$185,000	\$295,000	\$480,000

a. ODCs = Other Direct Costs. In this case, these costs include costs for plantings, hydroseeds and the hydroseed trucks.

Row (f) Construction Administration

Task 12 - Construction Administration:

As shown in **Table 4-22**, total construction administration costs for the Berryessa Creek Flood Protection Project are estimated to be **\$5,072,600**. This represents approximately 10% of the total construction costs, which is reasonable based on the District’s experience with similar projects. These costs account for: overseeing the construction sites, providing daily on-site observation, coordinating with contractors, reviewing schedules, preparing construction related invoices, and providing inspection services to ensure construction is in compliance with District, SWPPP and other agencies’ standards.

Table 4-22. Construction Administration Costs

Project Component	Discipline	Hourly Wage (\$/hr)	Number of Hours	Total
Component 1 - Lower Berryessa	Project Manager	\$220	1,390	\$305,800
	Associate Engineer	\$175	3,100	\$542,500
	Chief Inspector	\$160	3,300	\$528,000
	Resident Inspectors	\$145	9,600	\$1,392,000
	<i>Subtotal</i>		<i>17,390</i>	<i>\$2,768,300</i>
Component 2 - Lower Penitencia	Project Manager	\$220	200	\$44,000
	Associate Engineer	\$175	500	\$87,500
	Chief Inspector	\$160	570	\$91,200
	Resident Inspectors	\$145	1,600	\$232,000
	<i>Subtotal</i>		<i>2,870</i>	<i>\$454,700</i>
Component 3 - Upper Berryessa	Project Manager	\$220	680	\$149,600
	Associate Engineer	\$175	2,000	\$350,000
	Chief Inspector	\$160	3,000	\$480,000
	Resident Inspectors	\$145	6,000	\$870,000
	<i>Subtotal</i>		<i>11,680</i>	<i>\$1,849,600</i>
Total			31,940	\$5,072,600

Row (g) Other Costs

Not applicable.

Row (h) Construction Contingency

The construction/implementation contingency percentage applied for the Berryessa Creek Flood Protection Project is **\$5,777,400**, which represents approximately 12% of the total anticipated construction cost. The contingency costs include funds to handle unknown and unspecified conditions encountered during construction or implementation of the project.

Table 4-23 provides a breakdown of these costs and assumed percentages by component. As noted in this table, the assumed percent construction contingency varies by component:

- **Component 1 – Lower Berryessa Creek Improvements.** A 10% contingency was assumed for this component. This was selected as appropriate given that the component is currently in 90% design and an EIR has already been adopted, and given the District’s experience with similar projects.
- **Component 2 – Lower Penitencia Creek Improvements.** A 20% contingency was assumed for this component as it is still in the preliminary planning phases. This contingency was selected as appropriate given the preliminary level of the construction estimate and the District’s

experience with similar projects.

- **Component 3 – Upper Berryessa Creek Improvements.** A 15% contingency was assumed for this component as it is in the final planning phases. This contingency was selected as appropriate given the planning level of the construction estimate and the District’s experience with similar projects.

Table 4-23. Construction Contingency Costs

Project Component	Total Construction Costs	Construction Contingency (%)	Construction Contingency (\$)
Component 1 - Lower Berryessa	\$30,365,000	10%	\$3,036,500
Component 2 - Lower Penitencia	\$4,554,500	20%	\$910,900
Component 3 - Upper Berryessa	\$12,200,000	15%	\$1,830,000
Total	\$47,119,500		\$5,777,400

Row (i) Grand Total

The grand total cost for the Berryessa Creek Flood Protection Project is **\$81,865,630**. Of this amount, \$30,000,000 (37%) is being requested for grant funding, and the remaining 63% is being funded by the District as part of its cost-share.

APPENDIX 4-1: Supporting Budget Information

(Provided on Attached CD as follows Att4_SWF_Budget_2of2)