

Attachment 8. Benefits and Cost Analysis.

Springville Disadvantaged Community Phase I Wastewater Treatment Plant Improvement Project

Completion of the project will bring the SPUD WWTP into compliance with RWQCB standards and most likely result in the resolution of the Cease-and-Desist order.

Benefits of the proposed construction project (Phase II) meet the criteria for IRWM projects:

- In-stream benefit to aquatic invertebrates;
- Improvement of natural wetland filtration;
- Corridor enhancement- growth of willows, cottonwoods, sycamores, alder;
- Reclamation of water;
- Wildlife and fishery benefits;
- Disadvantaged community assistance with a critical water issue;
- Provide aesthetic and recreational benefits to surrounding area;
- Demonstrate the effectiveness of utilizing treated effluent as a new water supply.

SPUD has several project alternatives from which to choose regarding the study project (Phase I) and the construction project (Phase II). One alternative to the comprehensive study method proposed herein is a more piecemeal study process where consultants complete tasks in a piecemeal, non-parallel manner. This method has the benefit of potentially lowering upfront costs while work is ongoing, but this benefit is lost in the potential for cost increases owing to longer timeframe to gather the information SPUD requires to implement the construction project (Phase II) and the potential need to update earlier, out of date work. In the proposed study, all consultants and the SPUD board will participate in the entire process, thereby creating efficiencies by completing the project in a parallel fashion where all the separate tasks, subtasks and consultants integrate to perform the work in a cohesive, comprehensive manner. Under the alternative, SPUD would not be able to apply for DWR Round Three grant funds to implement the project. The phased approach to SPUD's water quality and treatment problem enables extensive data gathering in Phase I. This will enable SPUD to fully understand project benefits, integrate project elements to benefit to the greatest number of sectors, allow time for project environmental documentation and begin permitting. This enables the greatest amount of data to be incorporated from Phase I into Phase II.

SPUD already spent approximately \$400,000 over the last 20 years for an average of \$20,000 per year on the project (Phase II). SPUD will gain additional information and prepare the construction project for implementation. Without grant funding, SPUD would

continue to pay \$20,000 or more per year to work on the project with unknown outcomes (see table below). Thus, Phase I results in an immediate cost-savings to SPUD and will ensure the success and great benefit of Phase II. Without the project, SPUD lacks the detailed information to provide a superior project with multiple, integrated benefits with which it can seek additional sources of construction funding and prepare the project for the DWR Round Three Implementation Grant Program.

Table 18 Cost benefit analysis for the SPUD project including cost-effectiveness.

Alternative	Costs	Benefits	Notes, cost difference
Alternative 1 – Piecemeal Approach	>\$800,000 for studies to ready the project, >\$3.1 million for construction. Total: \$3,900,000	Lower upfront costs	Incur higher costs because of delays, complexity, piecemeal approach
Phases I and II – Comprehensive Approach	\$313,775 for Phase I, \$3.1 million for Phase II.	Lower long-term costs	Lower overall costs

Table 11 – Statement of Cost-Effectiveness

Project name: __ Springville Disadvantaged Community Phase I Wastewater Treatment Plant Improvement Project	
Question 1	Types of benefits provided Lower costs
Question 2	Have alternative methods of providing the same types and amounts of physical benefits as the proposed project been identified? Yes
	If no, why?
	If yes, list the methods (including the proposed project) and estimated costs. See narrative.
Question 3	If the proposed project is not the least cost alternative, why is it the preferred alternative? Provide an explanation of any accomplishments of the proposed project that are different from the alternative project or methods.
Comments:	

Kern River Watershed Long Meadow Restoration

Table 11 – Statement of Cost-Effectiveness	
Project name: ___Kern River Watershed Long Meadow Restoration Project_____	
Question 1	Types of benefits provided Water quality, ecosystem restoration
Question 2	Have alternative methods of providing the same types and amounts of physical benefits as the proposed project been identified?
	If no, why? No, no comprehensive, smaller scale type of construction would be effective or cost-effective
	If yes, list the methods (including the proposed project) and estimated costs.
Question 3	If the proposed project is not the least cost alternative, why is it the preferred alternative? Provide an explanation of any accomplishments of the proposed project that are different from the alternative project or methods. The project will utilize primarily local staff and contractors, which will provide a cost-benefit advantage. However, a regional expert, Jim Wilcox will assist to train local staff and contractors in executing the project. This will have the added expertise benefit, but extend local capacity long term.
Comments:	

Table 11 – Statement of Cost-Effectiveness	
Project name: ___ Kings River Watershed Restoration: the Mill Flat Creek Road Decommission Project	
Question 1	Types of benefits provided Water quality, ecosystem restoration
Question 2	Have alternative methods of providing the same types and amounts of physical benefits as the proposed project been identified? Yes, more decommissioning was considered initially. But public input rearranged the locations or shortened the decommission stretch.
	If no, why? NEPA/CEQA process not completed, that process will also propose potential alternatives.
	If yes, list the methods (including the proposed project) and estimated costs. See narrative. Yes, more decommissioning was considered initially. But public input rearranged the locations or shortened the decommission stretch.
Question 3	If the proposed project is not the least cost alternative, why is it the preferred alternative? Provide an explanation of any accomplishments of the proposed project that are different from the alternative project or methods. The project will utilize primarily local staff and contractors, which will provide a cost-benefit advantage. Sequoia National Forest utilized past experience and costs for this project, providing a reference for this methodology.
Comments:	

Table 12 – Non-monetized Benefits Checklist		
N o.	Question	Enter “Yes”, “No” or “Neg”
	Community/Social Benefits Will the proposal	
1	Provide education or technology benefits?	Yes
	Examples are not limited to, but may include: <ul style="list-style-type: none"> - Include educational features that should result in water supply, water quality, or flood damage reduction benefits? - Develop, test, or document a new technology for water supply, water quality, or flood damage reduction management? - Provide some other education or technological benefit? 	
2	Provide social recreation or access benefits?	Yes
	Examples are not limited to, but may include: <ul style="list-style-type: none"> - Provide new or improved outdoor recreation opportunities? - Provide more access to open space? - Provide some other recreation or public access benefit? 	
3	Help avoid, reduce or resolve various public water resources conflicts?	Yes
	Examples are not limited to, but may include: <ul style="list-style-type: none"> - Provide more opportunities for public involvement in water management? - Help avoid or resolve an existing conflict as evidenced by recurring fines or litigation? - Help meet an existing state mandate (e.g., water quality, water conservation, flood control)? 	
4	Promote social health and safety?	Yes
	Examples are not limited to, but may include: <ul style="list-style-type: none"> - Increase urban water supply reliability for fire-fighting and critical services following seismic events? - Reduce risk to life from dam failure or flooding? - Reduce exposure to water-related hazards? 	
5	Have other social benefits?	Yes
	Examples are not limited to, but may include: <ul style="list-style-type: none"> - Redress or increase inequitable distribution of environmental burdens? - Have disproportionate beneficial or adverse effects on disadvantaged communities, Native Americans, or other distinct cultural groups? 	
	Environmental Stewardship Benefits: Will the proposal	
6	Benefit wildlife or habitat in ways that were not quantified in Attachment 7?	Yes