Statement of Work

WATER ACTIVITY NAME – L.E.D.E. Ditch and Reservoir Reconstruction

GRANT RECIPIENT – Town of Gypsum

FUNDING SOURCES –

Total Project Cost for LEDE Ditch & Reservoir Alternative 3: $4,513,444
CWCB Loan Amount (58% of project cost) $2,662,000

Contribution from Gypsum Enterprise $500,000
Water Supply Reserve Account – Colorado Basin Funding $50,000
Water Supply Reserve Account – Statewide Funding $175,000
Additional Contribution from Gypsum Enterprise $681,444
Other Sources from Gypsum Developers: $445,000

*Funding source amounts have been modified due to recently revised construction estimates

*The Colorado Basin and Statewide Funding amounts will be applied to upcoming construction costs of the reservoir work

INTRODUCTION AND BACKGROUND

The Town of Gypsum, a Colorado Home Rule Municipality, owns the LEDE Ditch and LEDE Reservoir, which is located in the headwaters of Gypsum Creek, south of Gypsum. The original ditch and reservoir water rights are decreed absolute for irrigation uses up to 947 acre feet of storage. The existing LEDE Reservoir capacity is 431 acre feet. Gypsum seeks to increase capacity to accommodate continued agricultural irrigation, and for future water supplies to Gypsum Creek and the Town. Further, the ditch and reservoir require upgrades for aging facilities and to ensure compliance with state dam safety regulations, which were updated in 2007. Irrigation in the Gypsum valley often depletes Gypsum Creek entirely, so that reservoir releases have become increasingly important for operating other water rights owned by Gypsum, and for irrigation use. The reservoir storage is expected to become more important as Gypsum's population expands over time and additional water reserves are needed for environmental protection issues such as maintaining habitat areas and increasing stream flows.

OBJECTIVES

The Town seeks to insure reservoir capacity and avoid reservoir restrictions with repairs, firm up existing capacity, and increase capacity for LEDE Reservoir to accomplish the following goals:

a. Reclaim existing storage for agricultural use by assessing silt removal and lining.
b. Improve ability to release stored agricultural water by making repairs, lining, other.
c. Increase storage capacity to shore up agricultural rights secured in annexations.
d. Protect senior water rights in LEDE Ditch and Reservoir.

e. Meet state dam safety requirements for existing LEDE Reservoir.
f. Improve accessibility, potential recreation.
g. Improve Gypsum Creek flows and stream health.
h. Secure long term supplies available for agricultural use and/or lease.
i. Secure long-term municipal supply is adequate for anticipated growth.
j. Ensure contractual commitments for agricultural delivery are met.
k. Improve stream flow and enhance habitat in Gypsum Creek.
l. Explore hydropower potential with a renewable resource.
m. Pursue conservation goals with storage.

TASKS

TASK 1 – L.E.D.E. Ditch Improvements

Description of Task – The work includes installing a new head gate, screen and bypass at the beginning of the ditch, to control the inflow and safely allow releases back to the creek.

Method/Procedure - The existing 30" CMP, beginning at this point, carries the ditch for 860 L.F. The pipe needs to be repaired at the currently leaking band joints. The cost estimate includes tightening and sealing of each of these joints. In the area where the ditch remains frozen late into the spring, through the conifer forest, we propose to install approximately 1900 L.F. of 30" HDPE. This will allow for better/longer transfer through the ditch in early spring and reduce significantly washout potential that presently occur. The piping will also help to maintain maximum allowable flow through the ditch.

In 2007 a control gate was installed at the beginning of section 2 and the starting point for the proposed 30" HDPE. The LEDE ditch and Antones Creek come back together at this point, which requires a bypass to control the releases back into Antones Creek and maintain minimum stream flow requirements. The maintenance road will be bladed and reseeded to maintain access to the upper end of the 30" HDPE section of the ditch. The access will be on top of the pipe/ditch.

Deliverable – Replaces the severely aging ditch piping, ensures maximum flow through the ditch and reduces washout potential.

*Ditch work has been constructed and is complete as of October 2010

TASK 2 – L.E.D.E. Reservoir Reconstruction

Description of Task – Remove and replace existing dam

Method/Procedure - The wheel gate operator and dam outlet pipe are showing signs of wear and rust. Raising the dam height requires replacing the outlet pipe and replacing the trash rack. We propose that the entire outlet works be replaced. The excavation just for replacing the existing outlet pipe is significant. A large portion of the existing dam would need to be removed. For the cost estimate we assumed removing the entire existing dam and replacing it in place.

In 2002, a site survey was performed that established project elevations for study purposes. The existing spillway elevation was determined to be 994.50. This is the basis for all of the elevations listed herein. The spillway elevation will be raised 9.5 feet to Elev. 1004.00. The dam crest will be raised 14.5 feet, to Elev. 1014.00 to maintain the necessary 5 foot of freeboard during peak flows. The 2007 state regulations require the dam crest width to be 20 feet. A grouted slurry/pressure grout cut-off wall expected to be required is 400 feet wide by 30 feet deep. This will be highly dependent upon further soil and geotechnical investigations. The spillway is required to meet current design standards for an IDF based on 0.70 PMP. The spillway will be widened to a base width of 40 feet from its current 16 feet. At a 2 percent slope, the depth of flow at the dam is 5 feet and with 5 feet of freeboard, which calculates 14.5 feet dam crest height increase. We estimated that the spillway will require grouted riprap the entire length due to velocities and volume of flow.

Deliverable – Meet compliance with the 2007 dam safety rules, replace aging and inoperable facilities, and allow additional capacity.

*As engineering drawings continue to be fine tuned specific methods and procedures may be adjusted as necessary but deliverables and acre feet remain the same.

REPORTING AND FINAL DELIVERABLE

Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the statement of work including a description of any major issues that have occurred and any corrective action taken to address these issues. The Town of Gypsum is agreeable to this reporting process.

Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

TASK 1- L.E.D.E. Ditch Improvements

LEDE Ditch Construction Estimate					
	Engineers Estimate				
Item	Description	Quantity	Units	Unit Price	Total Cost
1	Supply and install new bar screen and 30" wheel gate - Primary Head Gate	1	L.S.	$8,500.00	$8,500.00
2	Clean intake area and add to diversion embankment - Primary Head Gate	1	L.S.	$2,000.00	$2,000.00
3	Construct bypass/spillway to protect diversion area- Secondary Head gate	1	L.S.	$4,000.00	$4,000.00
4	Reset existing 30" wheel gate - Secondary Head Gate	1	L.S.	$1,000.00	$1,000.00
5	Supply and install 36" x 36" measuring weir with stilling well	1	L.S.	$5,000.00	$5,000.00
6	Supply and install replacement gaskets on existing 30" CMP	43	each	$250.00	$10,750.00
7	Supply and install 1900 lineal feet of 30" ADS N12 in existing ditch and cover for access road & reseed.	1,900	L.F.	$80.00	$152,000.00
9	SUB TOTAL				$183,250.00
10	Contingencies	20%			$36,650.00
	SUBTOTAL CONSTRUCTION				$219,900.00
11	Design	15%			$32,985.00
12	Permitting				$40,000.00
13	Mitigation	5%			$10,995.00
14	Construction Inspection	6%			$13,194.00
15	Legal Support				$25,000
TOTAL					$342,074.00

SCHEDULE

To follow is the proposed schedule for the project implementation.

Project component description	Beginning Date	Projected Completion Date
Improve LEDE Middle Section of Ditch to 30"; • Notify Forest Service regarding ditch improvement • Estimate Cubic Feet per second flow rates (30-45 cfs) • Design of Pipeline • Preparation of Bid Documents • Publication of Bid Document and LEDE Pipeline Construction Requirements • Construct Pipeline LEDE	Spring, Summer 2009	Completed Summer 2010
Review Out of Basin and In Basin Hydrology for Reservoir (Basin Yield) • Antones Creek • LEDE Reservoir	Spring, Summer 2009	Completed
Dam Hydrology/PMF Review	Initial Submittal April, 2010	Late Fall 2011
Collection and Review of Soils Data	Submittal May, 2011	Late Fall 2011
Assess United States Forest Service Requirements • Special Use Permit Boundaries • Potential environmental Assessment • Biological Assessment • Wildlife Study • Potential Environmental Impact Statement	Fall 2009 – December 2010	Winter 2011
Eagle County Requirements • Grading Permit • 1041 Review of Alternatives	Initial Submittal November, 2010	Winter 2011
United State Army CORPS of Engineers • 404 Permit	Summer 2011	Winter 2011
Colorado Dam Safety Review	2011	Winter 2011/Spring 2012
Water Rights Review	Spring – Summer 2010	Completed
Preliminary Dam Design	2010-2011	Fall/Winter 2011
Bid Dam • Design of Dam • Preparation of Bid Documents • Publication of Bid Document and LEDE Reservoir Construction Requirements	Winter 2011/Spring 2012	Spring 2012
Begin Dam Construction	Summer/Fall 2012	Summer 2013

PAYMENT

Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task, and estimate of the percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 5 percent of the entire water activity budget will be withheld until final project/water activity documentation is completed. All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and help promote the development of a common technical platform. This payment and tracking process is acceptable to the Town of Gypsum.