



PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM

**Third Amendment to the
Contract between the Nebraska Community Foundation, Inc. and
EA Engineering, Science, and Technology, Inc. regarding the
Nebraska Ground Water Recharge Feasibility Study**

This Third Amendment to the Contract between the Nebraska Community Foundation, Inc. (“Foundation”) of Lincoln, Nebraska, representing all signatories to the Platte River Recovery Implementation Program (“Program”), and EA Engineering, Science, and Technology, Inc. (“Consultant”), a private consultant of Lincoln, Nebraska, is made and entered into effective on the date of signing below.

The purpose of this Amendment is to:

1. Expand the Scope of Work to include the tasks as described in Attachment A.
2. Increase the contract amount by \$159,571, effective as of the date of this Amendment, so that total payment under the Contract shall not exceed \$452,171.

All other terms of the original contract remain in effect as originally written in the Contract dated November 23, 2010.

The following parties agree to the terms of this Amendment and the original Contract.

For the Foundation:

Diane M. Wilson
Chief Financial and Administrative Officer
Nebraska Community Foundation, Inc.

Date

For the Consultant:

Dale Schlautman, P.E.
Project Manager
EA Engineering, Science, & Technology, Inc.

Date



Attachment A

**Nebraska Ground Water Recharge Feasibility Study
3rd Amendment Scope of Work and Budget**

SCOPE OF WORK

Platte River Recovery Implementation Program Nebraska Ground Water Recharge Feasibility Study 19 July 2011

PROJECT DESCRIPTION

EA Engineering, Science, and Technology, Inc. (EA) with support from Daniel B. Stephens & Associates, Inc. (DBS&A) is contracted by the Platte River Recovery Implementation Program (Program) to conduct the Nebraska Ground Water Recharge Feasibility Study – Phase I to evaluate the feasibility of groundwater recharge in central Nebraska. Phase I of this project includes planning and collection of field data to refine understanding of site conditions and design of a pilot-scale recharge project.

Phase I activities are nearing completion and the Program is proceeding with Phase II activities. Phase II activities will be conducted at the Phelps Canal 8.7 Site and include construction and operation of the pilot-scale recharge project and recommendations.

SCOPE OF WORK

The services included in this Scope of Work are organized based on the tasks presented in the Pilot Study Work Plan, however the task numbering sequence is continued from the Phase I contract which included Tasks 1 through 7. The Consultant will provide the following services under this Scope of Work.

Note that the scope of work and associated budget for Tasks 11 and 12 will be refined as the pilot project proceeds, with authorization by the Executive Director's Office (EDO) after consultation with the Technical Work Group. The budget shall not exceed the preliminary budget estimate included with this document.

Task 8 – Installation of Instrumentation

The objective of this task is to install related monitoring instrumentation equipment necessary to determine recharge rate potential and, effects on local ground water conditions, directly related to the basin.

- 8.1 Install one piezometer adjacent to the recharge basin to monitor mounding of the water table beneath the basin using similar techniques as previous monitoring wells (excluding laboratory analysis). The piezometer will only be screened in the alluvial sand and gravel formation. A continuous water level recorder will be installed in the piezometer. The casing elevation of the piezometer will be surveyed to determine the measuring point elevation.
- 8.2 Prepare a geologic log from information obtained during installation of the piezometer.

- 8.3 Install one soil moisture array adjacent to the piezometer to monitor vertical movement of water through the vadose zone to the water table. A borehole will be drilled to install the soil moisture sensors. Starting above the water table, the soil moisture sensors will be placed on 5 foot intervals with the wires extending to the surface through the bore hole. Each sensor will be enveloped in a 2 foot layer of sand. Between each sensor and sand envelope, the borehole will be sealed with bentonite chips and hydrated. Each of the sensor leads will be connected to a data logger.
- 8.4 One rain gauge will be installed at the site to provide continuous measurement of rainfall, and will be connected to a data logger.
- 8.5 One continuous water level recorder will be installed in the stilling well to record water levels in the basin.

Upon completion of the pilot operation, EA will remove the instrumentation to return the site to pre-existing conditions. Removal activities include the following:

- 8.6 The rain gauge and water level recorders from the piezometer and stilling well will be removed and salvaged.
- 8.7 The piezometer will be abandoned meeting regulatory requirements for well abandonment.
- 8.8 The water level sensors from the soil moisture array will be difficult to remove since they will be directly buried. Where possible, the sensors will be pulled out and salvaged. If they sensor cannot be pulled out, the wire leads will be cut off at an approximate depth of 4 feet below final grade and abandoned in place.

Task 9 - Construction Phase Services and Operational Support

The objective of this task is to assist the Program with bidding, construction phase services during construction of the basin and water delivery system, and technical support during operation of the pilot recharge basin. EA will be providing construction phase engineering services during construction of the earthen recharge basins (earthwork contractor) and water delivery system (CNPPID). Observation of site restoration activities upon completion of the basin pilot operation is also included.

- 9.1 Provide bidding support to the Program including attending the pre-bid meeting, assist in addressing questions during bidding, and preparing bidding document addenda, if needed.
- 9.2 Conduct a pre-construction conference combined for work to be completed by the earthwork contractor and CNPPID.
- 9.3 Pre-construction survey including detailed topographic survey to serve the basis for calculating quantities, construction staking, and establishment of on-site horizontal and vertical control.
- 9.4 Post-construction survey to determine as-built quantities for unit price payment of earthwork contractor and measure as-built infiltration area.

- 9.5 Post-restoration survey to verify that the site has been returned to pre-construction grades, if the EDO deems necessary.
- 9.6 Review of submittals and contractor invoices.
- 9.7 Determination of quantities for contractor payment.
- 9.8 Address and resolve questions from the earthwork contractor and from CNPPID during construction activities.
- 9.9 Conduct on-site observation during construction. Three site visits were assumed.
- 9.10 Prepare record drawings of operating recharge basin.
- 9.11 Final site walk through with the contractor, CNPPID, and the Program at substantial completion of basin construction.
- 9.12 Final site walk through with the contractor, CNPPID, and the Program at substantial completion of restoration.

EA will observe and assist CNPPID during operation of the pilot-scale basin, including the following:

- 9.13 Provide on-site assistance during startup of the water delivery system.
- 9.14 On-call support to CNPPID during pilot operation to address questions, resolve issues and discuss operational adjustments. Operation of the pilot-scale basin is dependent on water availability from the Phelps Canal and weather. This SOW assumes continuous operation of the pilot-scale basin from early October 2011 through late February 2012.
- 9.15 Attend bi-weekly conference calls during basin operation.

Task 10 Collection of Instrumentation Data

The objective of this task is to operate and maintain monitoring instrumentation equipment related to the pilot project including the basin operation and the extended operation of Phelps Canal.

- 10.1 Download data on two week intervals for the following:
 - Instrumentation at the recharge site: piezometer, rain gauge, soil moisture sensor array, basin water levels, and flow meter
 - Water levels recorders in the six Program installed monitoring wells
 - Water levels in the four drains (prior to freezing conditions)
- 10.2 Additional data will be collected from the following sources:
 - Water level recorders in Tri-Basin wells
 - Phelps canal operational data from CNPPID
 - Manual water level readings from staff gauges in drains from the Program.
- 10.3 Data collected will be entered into a data base and checked for quality control.

Task 11 – Evaluation and Reporting

The objective of this task is to evaluate the data collected and prepare a report that summarizes the findings of the pilot project. The following preliminary scope of work and associated project budget for Tasks 11.2, 11.3, and 11.4 will be refined for authorization by the EDO, after consultation with the project Technical Work Group. Authorization to proceed will be based, in part, on a mid-pilot project conference call at which EA/DBS&A will provide an overview of project progress and recommendations for specific data analyses and evaluations.

- 11.1 Document the construction of the basin project and the pilot project operational information.
- 11.2 Compile and summarize the instrumentation data collected during the pilot project.
- 11.3 Evaluate the recharge results of the basin project.
- 11.4 Evaluate the recharge results of extended operation of the Phelps Canal.
- 11.5 Provide recommendations regarding the feasibility of implementing full-scale recharge projects. Present screening criteria and factors that impact the feasibility of full-scale recharge projects to provide guidance to the Program for identifying land more suitable for recharge activities
- 11.6 A Draft Report will be prepared for review and comment by the ED Office.
- 11.7 ED Office comments will be addressed and incorporated into a revised Draft Report for review and comment by the Work Group.
- 11.8 Work Group comments will be addressed and incorporated into a Final Report.
- 11.9 Prepare and conduct a presentation of the findings of pilot project to the Water Advisory Committee or other group as identified by the ED Office.

Task 12 – Refine Estimates of Return Flows and Full-Scale Project Cost

The objective of this task is to refine full-scale project return flow and general cost estimates for a future recharge full-scale project sites, based on work previously completed. The following preliminary Task 12 scope of work will be refined for authorization by the EDO, after consultation with the project Technical Work Group. Authorization to proceed will be based, in part, on recommendations from the EDO regarding utilization of the PRRIP Phelps Canal numerical model for recharge project evaluation.

- 12.1 Provide assistance to Program for updating estimates of return flows through coordination with the Program and other consultants including the on-going groundwater modeling activities.
- 12.2 Coordinate with the Program to determine the desired method for estimating return flows to river, and refinement of previous estimates of return flows.
- 12.3 Provide conceptual cost information for a full scale project, using the Phelps Canal 8.7 Site as the basis.

Additional Services:

Other additional services not included in this scope of services will be provided upon request according to mutually agreed scope and cost.

TOTAL COST SUMMARY**PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM
NEBRAKSA GROUNDWATER RECHARGE FEASIBILITY STUDY
PILOT SCALE RECHARGE PROJECT - ENGINEERING SERVICES**

	Labor Hours	Labor Cost	Subcontractor	ODC's	Travel	TOTAL
Task 8 - Installation of Instrumentation	112	\$9,030.00	\$13,612.00	\$9,976.99	\$1,011.52	\$33,630.51
Task 9 - Construction Phase Services and Operational Support	295	\$27,130.00	\$2,330.00	\$4,284.14	\$505.76	\$34,249.90
Task 10 - Collection of Instrumentation Data	236	\$16,200.00	\$2,330.00	\$2,164.74	\$1,264.40	\$21,959.14
Task 11 - Evaluation and Reporting	443	\$40,360.00	\$18,552.00	\$469.05	\$0.00	\$59,381.05
Task 12 - Refine Estimates of Return Flows and Full-Scale Project Cost	80	\$8,020.00	\$2,330.00	\$0.00	\$0.00	\$10,350.00
TOTALS	1,166	\$100,740.00	\$39,154.00	\$16,894.92	\$2,781.68	\$159,570.60

PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM
NEBRAKSA GROUNDWATER RECHARGE FEASIBILITY STUDY
PILOT SCALE RECHARGE PROJECT - ENGINEERING SERVICES

	Senior Technical Review/ Senior PM	Project Manager	Senior Engineer	Mid-level Engineer	Junior Engineer	Mid-level Geologist	Junior Geologist	Senior Scientist	Mid-level Scientist	Junior Scientist	CADD/GIS	Drafter	TOTAL	Comments
Task 8 - Installation of Instrumentation														
PM Coordination		8						2		8				
Equipment Procurement, Prep, and Mob						8								
Install Piezometer						8								
Boring for Soil Moisture Array						8								
Install Soil Moisture Array Equipment										8				
Bore Logs						2					2			
Install Rain Gauge, Water Level Recorders, Data Loggers						8				8				
Removal and abandonment		2				20				20				
Task Total Hours	0	10	0	0	0	54	0	2	0	44	2	0	112	
Task 9 - Construction Phase Services and Operational Support														
PM Coordination		12												
Pre-bid conf				8										
Questions during bidding, and bidding support			1	4										
Pre-construction Conference				8										
Pre-construction Survey/Staking			2		12					12				
Post-construction Survey					8									
Post-Restoration Survey					8									
Review submittals/invoices					8									
Determination of quantities for payment					4						4			
Address and resolve questions			2		16									
Construction oversight, 3 site visits					24									
Site walk at substantial completion construction				8										
Record Drawings and 1 additional site visit			2	18						6	12			8 hr month for 5 months
Operational Supports - questions/resolve issues			4	40										Biweekly conf calls for 5 months, 1 hr calls
Bi-weekly conf calls		11		11										
Startup assistance			2	8										
Operational observations, 4 site visits				32										8 hr / visit
Site walk at substantial completion restoration				8										
Task Total Hours	0	23	13	145	80	0	0	0	0	18	16	0	295	
Task 10 - Collection of Instrumentation Data														
PM Coordination		20												
Bi-weekly downloads				4						160				16 hrs/trip, download every 2 weeks for 5 months
Collect data from other sources					8									
Data verification and management				4	40									2 hrs/download
Task Total Hours	0	20	0	8	48	0	0	0	0	160	0	0	236	
Task 11 - Evaluation and Reporting														
PM Coordination		32												
Documenting Project Construction and Operation	1	2	4	8							12	20		
Data Evaluatoin - Pilot Project	2		8	16	40	16								
Data Evaluation - Phelps Canal	2		8	16	32	8								
Pre-Draft Report	4		8	24	40	8					8	16		
ED Review Meeting			8	8										
Draft Report	1		4	8	24	4						4		
Work Group Conference Call			4	4										
Final Report	1		2	4	8	2						4		
Prepare Presentation		4		4										
Presentation in Kearney		8												
Task Total Hours	11	46	46	92	144	38	0	0	0	0	20	44	443	
Task 12 - Refine Estimates of Return Flows and Full-Scale Project Cost														
PM Coordination		8												
Coordination with GW Modeling				8										
Support Refining Return Flow Estimates		2	8	12					4					
Full Scale Design and Construction Estimate		2	4	16					4		4	8		Assuming 8.7 site is the basis
Task Total Hours	0	12	12	36	0	0	0	0	8	0	4	8	80	
Total Phases 8 - 12														
	11	111	71	281	272	92	0	2	8	222	42	52	1166	

PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM
NEBRASKA GROUNDWATER RECHARGE FEASIBILITY STUDY
PILOT SCALE RECHARGE PROJECT - ENGINEERING SERVICES
TABLE B - SUMMARY OF ESTIMATED COSTS

(1) Direct Labor	Class Code	Hours	Rate	Cost
Principal-in-Charge		0	\$160.00	\$0.00
Senior Technical Review/ Senior PM		11	\$150.00	\$1,650.00
Project Manager		111	\$110.00	\$12,210.00
Senior Engineer		71	\$140.00	\$9,940.00
Mid-level Engineer		281	\$100.00	\$28,100.00
Junior Engineer		272	\$75.00	\$20,400.00
Construction Manager		0	\$70.00	\$0.00
Engineering Technician		0	\$35.00	\$0.00
Contracts Manager		0	\$80.00	\$0.00
Industrial Hygienist (Certified)		0	\$150.00	\$0.00
Senior Geologist		0	\$140.00	\$0.00
Mid-level Geologist		92	\$90.00	\$8,280.00
Junior Geologist		0	\$60.00	\$0.00
Senior Scientist		2	\$140.00	\$280.00
Mid-level Scientist		8	\$90.00	\$720.00
Junior Scientist		222	\$60.00	\$13,320.00
CADD/GIS		42	\$75.00	\$3,150.00
Drafter		52	\$50.00	\$2,600.00
Administrative Assistant		2	\$45.00	\$90.00
Clerical Support		0	\$45.00	\$0.00
Subtotal Direct Labor and Multipliers				\$100,740.00
(3) Subcontractors	Units	No. of Units	Rate	Cost
DBS&A	LS	32654	\$1.00	\$32,654.00
Driller - Install	LS	5000	\$1.00	\$5,000.00
Driller - Abandon	LS	1500	\$1.00	\$1,500.00
Subcontractor 4	LS	0	\$1.00	\$0.00
Subtotal Subcontractors				\$39,154.00
G & A @ 0.00%				\$0.00
Subtotal Subcontractors and G & A				\$39,154.00
(3) Usage and Other Costs	Units	No. of Units	Rate	Cost
Bond/Vellum Plots/Copies - B&W	sq ft	0	\$0.27	\$0.00
Bond/Vellum Plots/Copies - Color	sq ft	0	\$2.12	\$0.00
Mylar Plots/Copies - B&W	sq ft	0	\$2.12	\$0.00
Photo Quality Plots/Copies - Color	sq ft	0	\$3.18	\$0.00
Report Preparation Materials	inch	4	\$20.78	\$83.12
Level, Tripod, Rod	day	0	\$27.13	\$0.00
Magellan/Garmin Handheld GPS	day	0	\$26.52	\$0.00
Magellan/Garmin Handheld GPS	week	0	\$106.08	\$0.00
Trimble GPS	day	0	\$106.09	\$0.00
Trimble GPS	week	0	\$424.36	\$0.00
Vehicle Usage (1/2 Ton Pickup)	day	31	\$59.00	\$1,829.00
Vehicle Usage (1/2 Ton Pickup)	week	0	\$236.00	\$0.00
Vehicle Usage (1/2 Ton Pickup)	month	0	\$708.00	\$0.00
Vehicle Usage (Pickup)	mile	9260	\$0.28	\$2,592.80
Supplies	each	2000	\$1.00	\$2,000.00
gps rental	day	3	\$450.00	\$1,350.00
Rain Gauge	each	1	\$260.00	\$260.00
EC-5 Soil Moisture Sensor	each	7	\$165.00	\$1,155.00
Data Logger	each	3	\$660.00	\$1,980.00
Level Troll 500	each	2	\$1,850.00	\$3,700.00
Shipping	each	550	\$1.00	\$550.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
Subtotal Usage and Other Costs				\$15,499.92
G & A @ 9.00%				\$1,394.99
Subtotal ODC's and G & A				\$16,894.91
(4) Travel	Units	No. of Units	Rate	Cost
Airfare	R/T	0	\$1.00	\$0.00
Per Diem	day	22	\$116.00	\$2,552.00
Rental Car	day	0	\$1.00	\$0.00
Mileage (POV)	mile	0	\$0.50	\$0.00
Subtotal Travel				\$2,552.00
G & A @ 9.00%				\$229.68
Subtotal Travel and G & A				\$2,781.68
TOTAL ESTIMATED PROJECT COSTS				\$159,570.59

PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM
NEBRASKA GROUNDWATER RECHARGE FEASIBILITY STUDY
PILOT SCALE RECHARGE PROJECT - ENGINEERING SERVICES
Task 8 - Installation of Instrumentation

(1) Direct Labor	Class Code	Hours	Rate	Cost
Principal-in-Charge		0	\$160.00	\$0.00
Senior Technical Review/ Senior PM		0	\$150.00	\$0.00
Project Manager		10	\$110.00	\$1,100.00
Senior Engineer		0	\$140.00	\$0.00
Mid-level Engineer		0	\$100.00	\$0.00
Junior Engineer		0	\$75.00	\$0.00
Construction Manager		0	\$70.00	\$0.00
Engineering Technician		0	\$35.00	\$0.00
Contracts Manager		0	\$80.00	\$0.00
Industrial Hygienist (Certified)		0	\$150.00	\$0.00
Senior Geologist		0	\$140.00	\$0.00
Mid-level Geologist		54	\$90.00	\$4,860.00
Junior Geologist		0	\$60.00	\$0.00
Senior Scientist		2	\$140.00	\$280.00
Mid-level Scientist		0	\$90.00	\$0.00
Junior Scientist		44	\$60.00	\$2,640.00
CADD/GIS		2	\$75.00	\$150.00
Drafter		0	\$50.00	\$0.00
Administrative Assistant		0	\$45.00	\$0.00
Clerical Support		0	\$45.00	\$0.00
Subtotal Direct Labor and Multipliers				\$9,030.00

(2) Subcontractors	Units	No. of Units	Rate	Cost
DBS&A	LS	7112	\$1.00	\$7,112.00
Driller - Install	LS	5000	\$1.00	\$5,000.00
Driller - Abandon	LS	1500	\$1.00	\$1,500.00
Subcontractor 4	LS	0	\$1.00	\$0.00
Subtotal Subcontractors		13612		\$13,612.00
G & A @ 0.00%				\$0.00
Subtotal Subcontractors and G & A				\$13,612.00

(3) Usage and Other Costs	Units	No. of Units	Rate	Cost
Bond/Vellum Plots/Copies - B&W	sq ft	0	\$0.27	\$0.00
Bond/Vellum Plots/Copies - Color	sq ft	0	\$2.12	\$0.00
Mylar Plots/Copies - B&W	sq ft	0	\$2.12	\$0.00
Photo Quality Plots/Copies - Color	sq ft	0	\$3.18	\$0.00
Report Preparation Materials	inch	0	\$20.78	\$0.00
Level, Tripod, Rod	day	0	\$27.13	\$0.00
Magellan/Garmin Handheld GPS	day	0	\$26.52	\$0.00
Magellan/Garmin Handheld GPS	week	0	\$106.08	\$0.00
Trimble GPS	day	0	\$106.09	\$0.00
Trimble GPS	week	0	\$424.36	\$0.00
Vehicle Usage (1/2 Ton Pickup)	day	5	\$59.00	\$295.00
Vehicle Usage (1/2 Ton Pickup)	week	0	\$236.00	\$0.00
Vehicle Usage (1/2 Ton Pickup)	month	0	\$708.00	\$0.00
Vehicle Usage (Pickup)	mile	940	\$0.28	\$263.20
Supplies	each	1000	\$1.00	\$1,000.00
gps rental	day	0	\$450.00	\$0.00
Rain Gauge	each	1	\$260.00	\$260.00
EC-5 Soil Moisture Sensor	each	7	\$165.00	\$1,155.00
Data Logger	each	3	\$660.00	\$1,980.00
Level Troll 500	each	2	\$1,850.00	\$3,700.00
Shipping	each	500	\$1.00	\$500.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
Subtotal Usage and Other Costs		2458		\$9,153.20
G & A @ 9.00%				\$823.79
Subtotal ODC's and G & A				\$9,976.99

(4) Travel	Units	No. of Units	Rate	Cost
Airfare	R/T	0	\$1.00	\$0.00
Per Diem	day	8	\$116.00	\$928.00
Rental Car	day	0	\$1.00	\$0.00
Mileage (POV)	mile	0	\$0.50	\$0.00
Subtotal Travel		8		\$928.00
G & A @ 9.00%				\$83.52
Subtotal Travel and G & A				\$1,011.52

TOTAL ESTIMATED PROJECT COSTS **\$33,630.51**

PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM
NEBRASKA GROUNDWATER RECHARGE FEASIBILITY STUDY
PILOT SCALE RECHARGE PROJECT - ENGINEERING SERVICES
Task 9 - Construction Phase Services and Operational Support

(1) Direct Labor	Class Code	Hours	Rate	Cost
Principal-in-Charge		0	\$160.00	\$0.00
Senior Technical Review/ Senior PM		0	\$150.00	\$0.00
Project Manager		23	\$110.00	\$2,530.00
Senior Engineer		13	\$140.00	\$1,820.00
Mid-level Engineer		145	\$100.00	\$14,500.00
Junior Engineer		80	\$75.00	\$6,000.00
Construction Manager		0	\$70.00	\$0.00
Engineering Technician		0	\$35.00	\$0.00
Contracts Manager		0	\$80.00	\$0.00
Industrial Hygienist (Certified)		0	\$150.00	\$0.00
Senior Geologist		0	\$140.00	\$0.00
Mid-level Geologist		0	\$90.00	\$0.00
Junior Geologist		0	\$60.00	\$0.00
Senior Scientist		0	\$140.00	\$0.00
Mid-level Scientist		0	\$90.00	\$0.00
Junior Scientist		18	\$60.00	\$1,080.00
CADD/GIS		16	\$75.00	\$1,200.00
Drafter		0	\$50.00	\$0.00
Administrative Assistant		0	\$45.00	\$0.00
Clerical Support		0	\$45.00	\$0.00
Subtotal Direct Labor and Multipliers				\$27,130.00

(2) Subcontractors	Units	No. of Units	Rate	Cost
DBS&A	LS	2330	\$1.00	\$2,330.00
Driller - Install	LS	0	\$1.00	\$0.00
Driller - Abandon	LS	0	\$1.00	\$0.00
Subcontractor 4	LS	0	\$1.00	\$0.00
Subtotal Subcontractors		2330		\$2,330.00
G & A @ 0.00%				\$0.00
Subtotal Subcontractors and G & A				\$2,330.00

(3) Usage and Other Costs	Units	No. of Units	Rate	Cost
Bond/Vellum Plots/Copies - B&W	sq ft	0	\$0.27	\$0.00
Bond/Vellum Plots/Copies - Color	sq ft	0	\$2.12	\$0.00
Mylar Plots/Copies - B&W	sq ft	0	\$2.12	\$0.00
Photo Quality Plots/Copies - Color	sq ft	0	\$3.18	\$0.00
Report Preparation Materials	inch	0	\$20.78	\$0.00
Level, Tripod, Rod	day	0	\$27.13	\$0.00
Magellan/Garmin Handheld GPS	day	0	\$26.52	\$0.00
Magellan/Garmin Handheld GPS	week	0	\$106.08	\$0.00
Trimble GPS	day	0	\$106.09	\$0.00
Trimble GPS	week	0	\$424.36	\$0.00
Vehicle Usage (1/2 Ton Pickup)	day	14	\$59.00	\$826.00
Vehicle Usage (1/2 Ton Pickup)	week	0	\$236.00	\$0.00
Vehicle Usage (1/2 Ton Pickup)	month	0	\$708.00	\$0.00
Vehicle Usage (Pickup)	mile	4480	\$0.28	\$1,254.40
Supplies	each	500	\$1.00	\$500.00
gps rental	day	3	\$450.00	\$1,350.00
Rain Gauge	each	0	\$260.00	\$0.00
EC-5 Soil Moisture Sensor	each	0	\$165.00	\$0.00
Data Logger	each	0	\$660.00	\$0.00
Level Troll 500	each	0	\$1,850.00	\$0.00
Shipping	each	0	\$1.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
Subtotal Usage and Other Costs		4997		\$3,930.40
G & A @ 9.00%				\$353.74
Subtotal ODC's and G & A				\$4,284.14

(4) Travel	Units	No. of Units	Rate	Cost
Airfare	R/T	0	\$1.00	\$0.00
Per Diem	day	4	\$116.00	\$464.00
Rental Car	day	0	\$1.00	\$0.00
Mileage (POV)	mile	0	\$0.50	\$0.00
Subtotal Travel		4		\$464.00
G & A @ 9.00%				\$41.76
Subtotal Travel and G & A				\$505.76

TOTAL ESTIMATED PROJECT COSTS **\$34,249.90**

PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM
NEBRASKA GROUNDWATER RECHARGE FEASIBILITY STUDY
PILOT SCALE RECHARGE PROJECT - ENGINEERING SERVICES
Task 10 - Collection of Instrumentation Data

(1) Direct Labor	Class Code	Hours	Rate	Cost
Principal-in-Charge		0	\$160.00	\$0.00
Senior Technical Review/ Senior PM		0	\$150.00	\$0.00
Project Manager		20	\$110.00	\$2,200.00
Senior Engineer		0	\$140.00	\$0.00
Mid-level Engineer		8	\$100.00	\$800.00
Junior Engineer		48	\$75.00	\$3,600.00
Construction Manager		0	\$70.00	\$0.00
Engineering Technician		0	\$35.00	\$0.00
Contracts Manager		0	\$80.00	\$0.00
Industrial Hygienist (Certified)		0	\$150.00	\$0.00
Senior Geologist		0	\$140.00	\$0.00
Mid-level Geologist		0	\$90.00	\$0.00
Junior Geologist		0	\$60.00	\$0.00
Senior Scientist		0	\$140.00	\$0.00
Mid-level Scientist		0	\$90.00	\$0.00
Junior Scientist		160	\$60.00	\$9,600.00
CADD/GIS		0	\$75.00	\$0.00
Drafter		0	\$50.00	\$0.00
Administrative Assistant		0	\$45.00	\$0.00
Clerical Support		0	\$45.00	\$0.00
Subtotal Direct Labor and Multipliers				\$16,200.00
(2) Subcontractors	Units	No. of Units	Rate	Cost
DBS&A	LS	2330	\$1.00	\$2,330.00
Driller - Install	LS	0	\$1.00	\$0.00
Driller - Abandon	LS	0	\$1.00	\$0.00
Subcontractor 4	LS	0	\$1.00	\$0.00
Subtotal Subcontractors		2330		\$2,330.00
G & A @ 0.00%				\$0.00
Subtotal Subcontractors and G & A				\$2,330.00
(3) Usage and Other Costs	Units	No. of Units	Rate	Cost
Bond/Vellum Plots/Copies - B&W	sq ft	0	\$0.27	\$0.00
Bond/Vellum Plots/Copies - Color	sq ft	0	\$2.12	\$0.00
Mylar Plots/Copies - B&W	sq ft	0	\$2.12	\$0.00
Photo Quality Plots/Copies - Color	sq ft	0	\$3.18	\$0.00
Report Preparation Materials	inch	0	\$20.78	\$0.00
Level, Tripod, Rod	day	0	\$27.13	\$0.00
Magellan/Garmin Handheld GPS	day	0	\$26.52	\$0.00
Magellan/Garmin Handheld GPS	week	0	\$106.08	\$0.00
Trimble GPS	day	0	\$106.09	\$0.00
Trimble GPS	week	0	\$424.36	\$0.00
Vehicle Usage (1/2 Ton Pickup)	day	10	\$59.00	\$590.00
Vehicle Usage (1/2 Ton Pickup)	week	0	\$236.00	\$0.00
Vehicle Usage (1/2 Ton Pickup)	month	0	\$708.00	\$0.00
Vehicle Usage (Pickup)	mile	3200	\$0.28	\$896.00
Supplies	each	500	\$1.00	\$500.00
gps rental	day	0	\$450.00	\$0.00
Rain Gauge	each	0	\$260.00	\$0.00
EC-5 Soil Moisture Sensor	each	0	\$165.00	\$0.00
Data Logger	each	0	\$660.00	\$0.00
Level Troll 500	each	0	\$1,850.00	\$0.00
Shipping	each	0	\$1.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
Subtotal Usage and Other Costs		3710		\$1,986.00
G & A @ 9.00%				\$178.74
Subtotal ODC's and G & A				\$2,164.74
(4) Travel	Units	No. of Units	Rate	Cost
Airfare	R/T	0	\$1.00	\$0.00
Per Diem	day	10	\$116.00	\$1,160.00
Rental Car	day	0	\$1.00	\$0.00
Mileage (POV)	mile	0	\$0.50	\$0.00
Subtotal Travel		10		\$1,160.00
G & A @ 9.00%				\$104.40
Subtotal Travel and G & A				\$1,264.40
TOTAL ESTIMATED PROJECT COSTS				\$21,959.14

PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM
NEBRASKA GROUNDWATER RECHARGE FEASIBILITY STUDY
PILOT SCALE RECHARGE PROJECT - ENGINEERING SERVICES
Task 11 - Evaluation and Reporting

(1) Direct Labor	Class Code	Hours	Rate	Cost
Principal-in-Charge		0	\$160.00	\$0.00
Senior Technical Review/ Senior PM		11	\$150.00	\$1,650.00
Project Manager		46	\$110.00	\$5,060.00
Senior Engineer		46	\$140.00	\$6,440.00
Mid-level Engineer		92	\$100.00	\$9,200.00
Junior Engineer		144	\$75.00	\$10,800.00
Construction Manager		0	\$70.00	\$0.00
Engineering Technician		0	\$35.00	\$0.00
Contracts Manager		0	\$80.00	\$0.00
Industrial Hygienist (Certified)		0	\$150.00	\$0.00
Senior Geologist		0	\$140.00	\$0.00
Mid-level Geologist		38	\$90.00	\$3,420.00
Junior Geologist		0	\$60.00	\$0.00
Senior Scientist		0	\$140.00	\$0.00
Mid-level Scientist		0	\$90.00	\$0.00
Junior Scientist		0	\$60.00	\$0.00
CADD/GIS		20	\$75.00	\$1,500.00
Drafter		44	\$50.00	\$2,200.00
Administrative Assistant		2	\$45.00	\$90.00
Clerical Support		0	\$45.00	\$0.00
Subtotal Direct Labor and Multipliers				\$40,360.00
(2) Subcontractors	Units	No. of Units	Rate	Cost
DBS&A	LS	18552	\$1.00	\$18,552.00
Driller - Install	LS	0	\$1.00	\$0.00
Driller - Abandon	LS	0	\$1.00	\$0.00
Subcontractor 4	LS	0	\$1.00	\$0.00
Subtotal Subcontractors		18552		\$18,552.00
G & A @ 0.00%				\$0.00
Subtotal Subcontractors and G & A				\$18,552.00
(3) Usage and Other Costs	Units	No. of Units	Rate	Cost
Bond/Vellum Plots/Copies - B&W	sq ft	0	\$0.27	\$0.00
Bond/Vellum Plots/Copies - Color	sq ft	0	\$2.12	\$0.00
Mylar Plots/Copies - B&W	sq ft	0	\$2.12	\$0.00
Photo Quality Plots/Copies - Color	sq ft	0	\$3.18	\$0.00
Report Preparation Materials	inch	4	\$20.78	\$83.12
Level, Tripod, Rod	day	0	\$27.13	\$0.00
Magellan/Garmin Handheld GPS	day	0	\$26.52	\$0.00
Magellan/Garmin Handheld GPS	week	0	\$106.08	\$0.00
Trimble GPS	day	0	\$106.09	\$0.00
Trimble GPS	week	0	\$424.36	\$0.00
Vehicle Usage (1/2 Ton Pickup)	day	2	\$59.00	\$118.00
Vehicle Usage (1/2 Ton Pickup)	week	0	\$236.00	\$0.00
Vehicle Usage (1/2 Ton Pickup)	month	0	\$708.00	\$0.00
Vehicle Usage (Pickup)	mile	640	\$0.28	\$179.20
Supplies	each	0	\$1.00	\$0.00
gps rental	day	0	\$450.00	\$0.00
Rain Gauge	each	0	\$260.00	\$0.00
EC-5 Soil Moisture Sensor	each	0	\$165.00	\$0.00
Data Logger	each	0	\$660.00	\$0.00
Level Troll 500	each	0	\$1,850.00	\$0.00
Shipping	each	50	\$1.00	\$50.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
Subtotal Usage and Other Costs		696		\$430.32
G & A @ 9.00%				\$38.73
Subtotal ODC's and G & A				\$469.05
(4) Travel	Units	No. of Units	Rate	Cost
Airfare	R/T	0	\$1.00	\$0.00
Per Diem	day	0	\$116.00	\$0.00
Rental Car	day	0	\$1.00	\$0.00
Mileage (POV)	mile	0	\$0.50	\$0.00
Subtotal Travel		0		\$0.00
G & A @ 9.00%				\$0.00
Subtotal Travel and G & A				\$0.00
TOTAL ESTIMATED PROJECT COSTS				\$59,381.05

PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM
NEBRASKA GROUNDWATER RECHARGE FEASIBILITY STUDY
PILOT SCALE RECHARGE PROJECT - ENGINEERING SERVICES
Task 12 - Refine Estimates of Return Flows and Full-Scale Project Cost

(1) Direct Labor	Class Code	Hours	Rate	Cost
Principal-in-Charge		0	\$160.00	\$0.00
Senior Technical Review/ Senior PM		0	\$150.00	\$0.00
Project Manager		12	\$110.00	\$1,320.00
Senior Engineer		12	\$140.00	\$1,680.00
Mid-level Engineer		36	\$100.00	\$3,600.00
Junior Engineer		0	\$75.00	\$0.00
Construction Manager		0	\$70.00	\$0.00
Engineering Technician		0	\$35.00	\$0.00
Contracts Manager		0	\$80.00	\$0.00
Industrial Hygienist (Certified)		0	\$150.00	\$0.00
Senior Geologist		0	\$140.00	\$0.00
Mid-level Geologist		0	\$90.00	\$0.00
Junior Geologist		0	\$60.00	\$0.00
Senior Scientist		0	\$140.00	\$0.00
Mid-level Scientist		8	\$90.00	\$720.00
Junior Scientist		0	\$60.00	\$0.00
CADD/GIS		4	\$75.00	\$300.00
Drafter		8	\$50.00	\$400.00
Administrative Assistant		0	\$45.00	\$0.00
Clerical Support		0	\$45.00	\$0.00
Subtotal Direct Labor and Multipliers				\$8,020.00
(2) Subcontractors	Units	No. of Units	Rate	Cost
DBS&A	LS	2330	\$1.00	\$2,330.00
Driller - Install	LS	0	\$1.00	\$0.00
Driller - Abandon	LS	0	\$1.00	\$0.00
Subcontractor 4	LS	0	\$1.00	\$0.00
Subtotal Subcontractors		2330		\$2,330.00
G & A @ 0.00%				\$0.00
Subtotal Subcontractors and G & A				\$2,330.00
(3) Usage and Other Costs	Units	No. of Units	Rate	Cost
Bond/Vellum Plots/Copies - B&W	sq ft	0	\$0.27	\$0.00
Bond/Vellum Plots/Copies - Color	sq ft	0	\$2.12	\$0.00
Mylar Plots/Copies - B&W	sq ft	0	\$2.12	\$0.00
Photo Quality Plots/Copies - Color	sq ft	0	\$3.18	\$0.00
Report Preparation Materials	inch	0	\$20.78	\$0.00
Level, Tripod, Rod	day	0	\$27.13	\$0.00
Magellan/Garmin Handheld GPS	day	0	\$26.52	\$0.00
Magellan/Garmin Handheld GPS	week	0	\$106.08	\$0.00
Trimble GPS	day	0	\$106.09	\$0.00
Trimble GPS	week	0	\$424.36	\$0.00
Vehicle Usage (1/2 Ton Pickup)	day	0	\$59.00	\$0.00
Vehicle Usage (1/2 Ton Pickup)	week	0	\$236.00	\$0.00
Vehicle Usage (1/2 Ton Pickup)	month	0	\$708.00	\$0.00
Vehicle Usage (Pickup)	mile	0	\$0.28	\$0.00
Supplies	each	0	\$1.00	\$0.00
gps rental	day	0	\$450.00	\$0.00
Rain Gauge	each	0	\$260.00	\$0.00
EC-5 Soil Moisture Sensor	each	0	\$165.00	\$0.00
Data Logger	each	0	\$660.00	\$0.00
Level Troll 500	each	0	\$1,850.00	\$0.00
Shipping	each	0	\$1.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
[Blank]	day	0	\$0.00	\$0.00
Subtotal Usage and Other Costs		0		\$0.00
G & A @ 9.00%				\$0.00
Subtotal ODC's and G & A				\$0.00
(4) Travel	Units	No. of Units	Rate	Cost
Airfare	R/T	0	\$1.00	\$0.00
Per Diem	day	0	\$116.00	\$0.00
Rental Car	day	0	\$1.00	\$0.00
Mileage (POV)	mile	0	\$0.50	\$0.00
Subtotal Travel		0		\$0.00
G & A @ 9.00%				\$0.00
Subtotal Travel and G & A				\$0.00
TOTAL ESTIMATED PROJECT COSTS				\$10,350.00