PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM
Second Amendment to the
Agreement between the Nebraska Community Foundation, Inc. and Tetra Tech, Inc., Private Consultant

This Second Amendment to the Agreement between the Nebraska Community Foundation, Inc. ("Foundation") of Lincoln, Nebraska, representing all signatories to the Platte River Recovery Implementation Program ("Program") and Tetra Tech, Inc. ("Consultant"), a private consultant of Fort Collins, Colorado is made and entered into effective on the date of signing below.

The purpose of this Amendment is to:

1. Increase the contract payment amount by a total amount of $201,110, effective as of the date of this Amendment. The following describes the contract payment amount over time:
    - Original contract amount of $253,543
    - Amendment 1 (November 17, 2011) increase of $15,136 to total contract amount of $268,679
    - Amendment 2 increase of $201,110 to total contract amount of $469,789
2. The additional contract amount for this Second Amendment is for the purpose of funding work to be completed in the 2nd year (Calendar Year 2012) of the 3 year contract (May 2011 through May 2014). Detail regarding the scope of services to be completed as a result of this Second Amendment is provided in Exhibit A. A detailed budget estimate is provided in Exhibit B. The Consultant's rate schedule and project timeline are provided in Exhibit C and Exhibit D, respectively.

All other terms of the original agreement remain in effect as originally written in the Agreement dated April 25, 2011.

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

For the Foundation:

_____ _____
Diane M. Wilson (Nebraska Community Foundation) Date
Chief Financial and Administrative Officer

For the Consultant:

_____ _____
Robert A. Mussetter, PhD, PE (Tetra Tech, Inc.) Date
Discipline Lead

EXHIBIT A

Final Scope of Services
Platte River Recovery Implementation Program
Elm Creek Flow-Sediment-Mechanical "Proof of Concept" Experiment Implementation Design Technical Support, Monitoring, and Data Analysis
Year 2 (March 2012 through December 2012)

The following tasks will be completed by Tetra Tech, Inc. in accordance with the Budget (**Exhibit B**), Hourly Rate and Reimbursable Expenses Price Schedule 2012 (**Exhibit C**) and Project Timeline (**Exhibit D**) during the second year (March 2012 through December 2012) of the Elm Creek Flow-Sediment-Mechanical "Proof of Concept" Experiment Implementation Design Technical Support, Monitoring, and Data Analysis Project. The scope of work, budget and schedule for the remainder of the contract term will be developed in consultation with the Program during the Year 2 activities.

Scope of Work

Task 100 - Project Management

Objective: Facilitate scoping of tasks to efficiently complete the work necessary to achieve the objectives of the "Proof of Concept" experiment. Detailed project scoping and budgeting shall be completed under this task. Provide Program stakeholders information on project progress. Document project progress through monthly invoices and progress reports.

Activities:

Task 102 – Develop Final Scope of Services and Fee

- Incorporate comments from Kickoff Meeting into draft scope and fee.

Task 103 - Project Management and Meetings:

- Coordinate work and solicit input from Program staff and participants throughout the project.

- Conduct meetings as necessary to coordinate project activities and to keep the Technical Advisory Committee (TAC) and GC informed of project progress.

    - Specific Program committee meetings required under this scope of work are described under each related task below.

    - Bi-weekly conference calls may be held with ED office staff to assess project progress, and to coordinate with the ED office regarding upcoming work in the future. During these meetings, ED Office staff will provide the Consultant with input on previous

findings, and the timing and scope of upcoming monitoring and reporting tasks. Meetings will be scheduled at the discretion of the ED office.

Deliverables:

- Draft and final scope of work, schedule, and budget.
- Meeting minutes from all Project Management meetings.
    - Draft minutes in Microsoft Word format provided to ED office for review/comment.
    - Final minutes in PDF format.
    - Copies of all formal presentation materials for Program committee meetings described throughout the remainder of this scope of work.
    - Monthly invoices to the ED office, including a summary of work completed in the current month, anticipated work for the following month, and percent complete for scope of work and budget by task.

Information/Service to be Provided by EDO Office Staff:

- Data from ongoing Program data collection efforts.
- Timely review and comments on draft scope of work, meeting minutes and related documents

Meetings/Travel:

- Bi-weekly meetings to be held by telephone conference.
- Other meetings as described below.

Task Series 200 AM Design - 2-dimensional Hydraulic and Sediment Transport Modeling

Objective: Update the 2-dimensional (2-D) hydraulic and sediment-transport model of the approximately 4-mile Elm Creek Complex project reach that was developed and calibrated during Year 1, using the Bureau of Reclamation's SRH-2D platform. The model updates may include incorporation of revised topography based on the most recent LiDAR and monitoring data. This may also necessitate adjustments to the model mesh and the material-type polygons that define roughness zones and sediment gradations.

Activities: **Task 201 – 2D Hydraulic and Sediment-transport Model Updates and Re-Calibration**

- Review most recent LiDAR and monitoring data, and provide recommendations to the EDO regarding the need to update the model using the new data. The recommendations will be provided verbally at one of the bi-weekly update meetings, and will be supported, as appropriate, with graphics that illustrate the basis for the recommendations.

- If agreed to by the EDO, prepare a topographic surface at suitable resolution by combining the LiDAR and field data.
- Overlay the model mesh onto the new surface, adjust the mesh configuration, as appropriate, and re-assign the mesh node elevations.
- Adjust the sediment-transport model based on topographic, vegetation, and bed/bar substrate data collected in the field.
- Compare rigid boundary hydraulic model results and field data (measured water surface elevations from transducers and field survey, inundation boundaries from aerial imagery and field survey, and ADCP velocities from field survey). If necessary, make adjustments to achieve appropriate calibration.
- Prepare technical memorandum documenting the model updates and re-calibration.

Deliverables:

- Updated model(s).
- Technical memorandum documenting model updates and re-calibration.

Information/Service to be provided by EDO Staff:

- Data from ongoing Program data collection efforts.
- Timely review and comments on model report.

Meetings/Travel:

- Three (3) conference calls with Program staff to review approach and results for model adjustments.

Task Series 300 - AM Design - Information Review

Objective: Gain an understanding of FSM-related hypotheses and concepts developed for the Program, and utilize existing information and resources to design the management experiment at the Elm Creek Complex.

Activities: This task was completed under Year 1 activities. No work is envisioned under this task for Year 2.

Deliverables:

- None.

Meetings/Travel:

- None.

Task Series 400 - AM Design - Model Application

Objective: **Identify and** model potential management experiment options with the 2-D hydraulic and sediment-transport models updated and re-calibrated under **Task Series 200** to predict the range of potential experiment outcomes.

Activities:

Task 401 – Apply the 2-D Hydraulic and Sediment-transport Model

- Identify a limited number (2 or less) of combinations of management action scenarios that incorporate potential changes in topography (island lowering), vegetation removal (roughness effects) and sediment load (associated with the Sediment Augmentation Experiment).
- Modify the baseline hydraulic and sediment-transport models to incorporate each of the scenarios.
- Run the models for each of the physical scenarios with the SDHF hydrograph.

Task 402 – Evaluate Model Results to Assess Likely Response to Management Actions

- Evaluate and compare model results to assess likely response of the Elm Creek Complex to the proposed management actions and SDHF flow hydrograph. Specific issues to be considered include the following:
  - Potential ability for SDHFs to scour seedling vegetation
  - Potential ability to increase sandbar height.
- Conduct sensitivity analyses to assess the potential effects of uncertainty on management experiment outcomes, and identify design parameters that will have the greatest influence on outcomes.
- Compare model results to Program performance criteria developed for priority FSM-related physical process hypotheses to predict the ability to achieve management objectives.

Task 403 – Technical Memorandum

- Prepare technical memorandum documenting management experiment scenario results and potential outcomes

Task 404 – Model Application Meeting

- Participate in one informal meeting at Tetra Tech's office in Fort Collins or the ED Denver Office to discuss model application results and provide recommendations for management experiment implementation.

Deliverables:

- Draft technical memorandum.
- Final technical memorandum addressing ED office comments, to be completed following the model application meeting.

Meetings/Travel:

- One informal meeting at Tetra Tech's Fort Collins office or ED Denver Office.

Task Series 500 - AM Design - Management Experiment Statistical Design

Objective: Investigate the potential for implementing various mechanical channel action scenarios (e.g., selective macroform lowering and in-channel vegetation removal) to maximize the learning potential for the experiment. Provide statistical design of mechanical channel actions, if determined to increase learning potential of management experiment.

Activities:

Task 501 - Identify Potential Channel Manipulation Actions to Increase Learning Potential

- The Year 1 Scope of Work included both selective island lowering and vegetation clearing as possible management actions to be tested in this experiment. Based on the range of island sizes and heights in the observed reach during the 2011 monitoring, selective island lowering was not considered to be a necessary or appropriate action, and only vegetation removal was recommended for 2012 management actions. Under this task, this decision will be revisited, considering the response of the reach to the 2011 and 2012 flows, and if appropriate, the experimental plan will be adjusted to maximize learning opportunities from the experiment in the final year (2013) of the management experiment.

Task 502 – Perform statistical and other design input

- Provide statistical analysis of potential management experiment outcomes.
- Provide design input on mechanical action scenarios.

Task 503 – Technical Memorandum

- Prepare draft technical memorandum presenting recommendations for management actions in Year 3 and beyond, and the basis for those recommendations.

Deliverables:

- Draft technical memorandum.
- Final memorandum addressing EDO comments.
- Two (2) conference calls with Program staff.

Meetings/Travel:

- None anticipated under this task.

Task Series 600 - AM Design - Performance Evaluation Decision Tree

Objective: Provide technical support for the development of a performance evaluation decision tree of potential action adjustments based on the potential range of experiment outcomes. The decision tree will be used in conjunction with model results and monitoring data to evaluate management experiment outcomes, and will provide a quantitative means for evaluating the performance of the management experiment.

Activities: **Task 601** – Provide technical support and input to ED Office staff in developing a decision tree to guide management action adjustments under a range of possible outcomes. Model outcomes and monitoring data will be linked to performance measures from FSM-related physical process priority hypotheses to develop a range of potential action adjustments under a range of potential management action scenario outcomes.

Deliverables:

- Review of draft decision tree to be developed by ED Office. Technical input based on Tetra Tech's familiarity with modeled outcomes and analysis of field monitoring data from 2011 and 2012. Input to be provided in review comments and/or brief informal memorandum to ED Office.

Meetings/Travel:

- One (1) conference call to discuss draft decision tree that will be developed by ED Office.

Task Series 700 - AM Monitoring and Data Analysis

Objective: Collect field monitoring data in the Elm Creek Complex with emphasis on "need to know" information that will be used to evaluate management action performance, and present the data along with appropriate interpretations to Program stakeholders and other Program consultants.

Activities: **Task 701 - Elm Creek Complex Project-scale Monitoring**

Task 701.1 Complete project-scale monitoring at the Elm Creek complex following the Program's project-scale monitoring protocol and the Elm Creek complex monitoring and data analysis plan to be provided to the Consultant by the ED office. The monitoring will include two data collection events per year (total of six monitoring events during the 3-year contract).

Task 701.2 Monitoring events will include a combination of annual baseline monitoring, followed by event-based monitoring immediately after high flow events. It is anticipated that the first (baseline) sampling event will take place in late-April or early-May 2011. Timing of event-based monitoring will vary based on Platte River flows.

Task 702 – Data Analysis

- Analyze data from the monitoring events.
- Relate analysis results to the FSM-related physical priority hypotheses and Elm Creek performance measures and decision criteria to assess FSM hypotheses.
- Use the 2-D hydraulic model to assess flow characteristics (e.g., flow depth, velocity, and shear stress) that occurred at the Elm Creek complex between monitoring events.
- Relate flow characteristics to changes in geomorphology and in-channel vegetation to assess priority hypotheses using the performance evaluation decision tree.

- Perform additional statistical analyses of monitoring and modeling results to determine whether there is a statistically significant relationship between flow characteristics, geomorphology and in-channel vegetation.

Task 703 – Annual Monitoring and Analysis Report

- Prepare annual monitoring and data analysis reports, to include methods used, statistical trends indicated by the data and suggested modifications to the monitoring plan to improve the information being collected.

Task 704 – Participation in Adaptive Management (AM) Reporting Sessions

- Participate in annual AM session to present monitoring data collection and analysis results.

Deliverables:

- Draft, written annual monitoring and data analysis reports (one report during each of the three years of the contract).

- Finalized annual reports that address ED office comments.

Meetings/Travel:

- Annual Program AM reporting session in Denver (three meetings over 3-year contract period).

Task Series 800 - AM Evaluation/Assessment

NOTE: All work under Task Series 800 will be performed in 2013 and 2014. Budget for this work is not included Years 1 and 2 of the contract (Exhibit B).

Objective: Perform a formal evaluation of the performance of the management experiment based on the three years information to help the Program move from data monitoring and analysis to management decision-making. Prepare a synthesis of the work that can be used by policy makers to assess whether action adjustments are needed for the management experiment.

Activities: **Task 801 – Final Annual Update to 2D Hydraulic and Sediment Models**

- Make final updates to the 2-D hydraulic and sediment transport model in early-2013, based on monitoring data and physical process learning from 2011 and 2012.

- Use the updated model to revise predicted management experiment outcomes under a range of conditions, including SDHF timing, magnitude, and duration.

- Use performance measures and decision criteria from the performance evaluation decision tree developed under **Task 600** to evaluate management experiment outcomes, to include comparison of anticipated outcomes simulated under the Model Application task (**Task 400**) with observed outcomes. The steps in the performance evaluation tree will be used to determine whether action adjustments are needed (**Task 900**).

- Prepare a written synthesis of the experiment.

Task 802 – Technical Memorandum

- Prepare draft technical memorandum for the TAC synthesizing the results from the experiment.

Deliverables:

- Draft technical memorandum.

- Participate in peer review process by providing additional information, if requested.

- Final technical memorandum addressing ED office and independent peer review comments that will consider the implementation design, monitoring and data analysis, and performance evaluation. Responses to peer review comments will be provided with the final memorandum.

Meetings/Travel:

- Participate in TAC meeting to present results of the performance evaluation.

Task Series 900 - AM Adjustments

NOTE: All work under Task Series 900 will be performed in 2013 and 2014. Budget for this work is not included in Years 1 and 2 of the contract (Exhibit B).

Objective: Integrate modeling and monitoring results into the performance evaluation to assess Program decisions, hypotheses, and management experiment objectives, and provide recommendations regarding adjustments to the management experiment actions.

Activities: **Task 901 – Present Performance Evaluation Criteria and Recommendations to Governance Committee**

- Present results from the performance evaluation (**Task 800**) to the Governance Committee, and provide recommendations for adjusting management experiment action. These recommendations could include management action adjustments or potentially suspension, based on application of the performance evaluation decision tree (**Task 600**).

Deliverables:

- Formal presentation to the Program Governance Committee.

Meetings/Travel:

- Participate in one Governance Committee meeting in Kearney.

EXHIBIT B

Cost Estimate for Elm Creek Flow-Sediment-Mechanical "Proof of Concept" Experiment Implementation Design Technical Support, Monitoring, and Data Analysis

Year 2 (Calendar Year 2012)

Task	Description	Principal Engineer/ Geomorphologist	Senior Biologist	Statistical Ecologist	Senior Engineer/ Scientist	Engineer/ Scientist	Junior Engineer/Scientist	Staff Biologist	Staff Ecologist/ Technician	Draftsman/ Technician	Clerical	Labor Cost	Direct Costs	Total by Task
		$228.15	$176.65	$156.05	$114.85	$106.61	$99.40	$94.25	$88.58	$68.50	$78.80			
100	**Project Initiation and Management**													
101	Attend Kickoff Meeting and Site Visit											$ -	$ -	$ -
102	Develop Final Scope of Services and Fee	6	2	2								$ 2,034	$ -	$ 2,035
103	Project Management and Biweekly Conf Calls	35	9	9	12						14	$ 13,461	$ -	$ 13,461
	Task 1 Totals:	**41**	**11**	**11**	**12**						**14**	**$ 15,495**	**$ -**	**$ 15,495**
200	**Model Construction and Updates**													
201	Adjust and update model, as appropriate	24			38		24		8	2		$ 13,071	$ -	$ 13,071
202	Prepare technical memorandum	8			12		8			4	6	$ 4,745	$ -	$ 4,745
	Task 2 Totals:	**32**			**50**		**32**			**6**	**6**	**$ 17,107**	**$ -**	**$ 17,107**
300	**AM Design - Information Review**													
301	Review available information											$ -	$ -	$ -
302	Prepare technical memorandum											$ -	$ -	$ -
	Task 3 Totals:											**$ -**	**$ -**	**$ -**
400	**AM Design - Model Application**													
401	Apply the 2D Hydraulic and Sediment Transport Model	12	2	4	32		16			4		$ 9,255	$ -	$ 9,255
402	Evaluate model results	12	2	4	28		12			4		$ 8,398	$ -	$ 8,398
403	Prepare technical memorandum	8	1	2	8		4			4	3	$ 4,141	$ -	$ 4,141
	Task 4 Totals:	**32**	**5**	**10**	**68**		**32**			**12**	**3**	**$ 21,793**	**$ -**	**$ 21,793**
500	**AM Design - Management Experiment Statistical Design**													
501	Identify action scenarios for analysis	8	4	8	8							$ 4,699	$ -	$ 4,699
502	Develop Statistical Design	4	4	16	2							$ 4,346	$ -	$ 4,346
503	Prepare technical memorandum	4	1	8	2					2	2	$ 2,862	$ -	$ 2,862
	Task 5 Totals:	**16**	**9**	**32**	**12**					**2**	**2**	**$ 11,906**	**$ -**	**$ 11,906**
600	**AM Design - Performance Evaluation Decision Tree**													
601	Assist Program and review decision tree	16			4						2	$ 4,267	$ -	$ 4,267
	Task 6 Totals:	**16**			**4**						**2**	**$ 4,267**	**$ -**	**$ 4,267**
700	**AM Monitoring and Data Analysis**													
701	Elm Creek Complex Project-scale Monitoring (see attached)											$ 69,644	$ 38,270	$ 107,915
702	Data Analysis	4	4	16	12		24			8		$ 8,427	$ -	$ 8,427
703	Prepare annual report	8	4	8	24		16			24	4	$ 10,086	$ -	$ 10,086
704	Attend AM Reporting Session	12			4		4			4	2	$ 4,026	$ 87	$ 4,114
	Task 7 Totals:	**24**	**8**	**24**	**40**		**44**			**36**	**6**	**$ 92,184**	**$ 38,357**	**$ 130,541**
	Total Hours	161	33	77	186		108			56	33			
	TOTAL COST	**$36,731**	**$5,829**	**$12,015**	**$21,361**	**$0**	**$10,735**	**$0**	**$0**	**$3,836**	**$2,600**	**$ 162,752**	**$ 38,357**	**$ 201,110**

*Direct Costs includes 13.46% G&A markup.

EXHIBIT B (CONTINUED)

Cost Estimate for Baseline and Post-runoff Monitoring for Elm Creek Flow-Sediment-Mechanical "Proof of Concept" Experiment Implementation Design Technical Support, Monitoring, and Data Analysis

Year 2 (Calendar Year 2012)

Task 701.1 Basline Monitoring

Subtask	Description	Principal Engineer/ Geomorphologist	Senior Biologist	Engineer/ Scientist	Junior Engineer/Scientist	Staff Biologist	Staff Ecologist/ Technician	Draftsman/ Technician	Clerical	Labor Cost	Direct Costs	Total by Task
		$228.15	$176.65	$106.61	$99.40	$94.25	$88.58	$68.50	$78.80			
1	Preparation; travel to and from site	8	8		8	8	8			$ 5,496	$ 1,231	$ 6,727
2	Bathymetric and topographic surveys	8			60		60			$ 13,104	$ 7,539	$ 20,643
3	Vegetation surveys		8			60	60			$ 12,383	$ 3,988	$ 16,371
4	Bed and bar material sampling	2			10		10			$ 2,336	$ 6,047	$ 8,383
5	Discharge and velocity measurements (2 locations per event)	2			8		8			$ 1,960	$ 329	$ 2,289
6	Sediment transport measurements									$ -	$ -	$ -
	Total Hours	20	16		86	68	146					
	TOTAL COST	**$4,563**	**$2,826**	**$0**	**$8,548**	**$6,409**	**$12,933**	**$0**	**$0**	**$ 35,279**	**$ 19,135**	**$ 54,414**

Task 701.2 Post-runoff Monitoring

Subtask	Description	Principal Engineer/ Geomorphologist	Senior Biologist	Engineer/ Scientist	Junior Engineer/Scientist	Staff Biologist	Staff Ecologist/ Technician	Draftsman/ Technician	Clerical	Labor Cost	Direct Costs	Total by Task
		$228.15	$176.65	$106.61	$99.40	$94.25	$88.58	$68.50	$78.80			
1	Preparation; travel to and from site	8	8		8	8	8			$ 5,496	$ 1,231	$ 6,727
2	Bathymetric and topographic surveys	6			60		60			$ 12,647	$ 7,539	$ 20,187
3	Vegetation surveys		8			60	60			$ 12,383	$ 3,988	$ 16,371
4	Bed and bar material sampling	2			10		10			$ 2,336	$ 6,047	$ 8,383
5	Discharge and velocity measurements (2 locations per event)				8		8			$ 1,504	$ 329	$ 1,833
6	Sediment transport measurements									$ -	$ -	$ -
	Total Hours	16	16		86	68	146					
	TOTAL COST	**$3,650**	**$2,826**	**$0**	**$8,548**	**$6,409**	**$12,933**	**$0**	**$0**	**$ 34,366**	**$ 19,135**	**$ 53,501**

EXHIBIT B (CONTINUED)

Other Direct Costs for Baseline and Post-runoff Monitoring for Elm Creek Flow-Sediment-Mechanical "Proof of Concept" Experiment Implementation Design Technical Support, Monitoring, and Data Analysis

Year 2 (Calendar Year 2012)

Item	Unit Cost	Task 1		Task 2		Task 3		Task 4		Task 5		Total w/ 13.46% OH Mark-up
		Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	
Airline Tickets	$400		$ -		$ -	3	$ 1,200.00		$ -		$ -	$ 1,361.52
Mileage	$0.550 /mi.	700	$ 385.00	100	$ 55.00		$ -		$ -		$ -	$ 499.22
Mileage (4x4)	$1.00 /mi.	700	$ 700.00	250	$ 250.00		$ -	50	$ 50.00	50	$ 50.00	$ 1,191.33
Lodging and per diem	$120 /day		$ -	12	$ 1,440.00	12	$ 1,440.00	2	$ 240.00	2	$ 240.00	$ 3,812.26
Rental Car (including gas)	$125 /day		$ -		$ -	5	$ 625.00		$ -		$ -	$ 709.13
GPS Survey Equipment/Sonic Sounder/ADCP	$3,925 /week		$ -	1	$ 3,925.00		$ -		$ -		$ -	$ 4,453.31
Level and Sonic Sounder	$10 /day		$ -	5	$ 50.00		$ -		$ -		$ -	$ 56.73
Boat (16-ft inflatable)	$125 /day		$ -	5	$ 625.00		$ -		$ -		$ -	$ 709.13
Inflatable Kayak	$10 /day		$ -	5	$ 50.00		$ -		$ -		$ -	$ 56.73
Current Meter	$50 /day		$ -	2	$ 100.00		$ -		$ -		$ -	$ 113.46
Lab. Analysis of Bed and Bar Material Sediment Sam	$50 /sample		$ -		$ -		$ -	60	$ 3,000.00		$ -	$ 3,403.80
Lab. Analysis of Suspended Sediment Samples	$85 /sample		$ -		$ -		$ -	24	$ 2,040.00		$ -	$ 2,314.58
Expendable Field Supplies	LS		$ -		$ 150.00		$ 250.00		$ -		$ -	$ 453.84
TOTAL DIRECT COSTS			**$ 1,085.00**		**$ 6,645.00**		**$ 3,515.00**		**$ 5,330.00**		**$ 290.00**	**$ 19,135.03**

TETRA TECH

EXHIBIT C
RATE SCHEDULE

Effective through December 2012

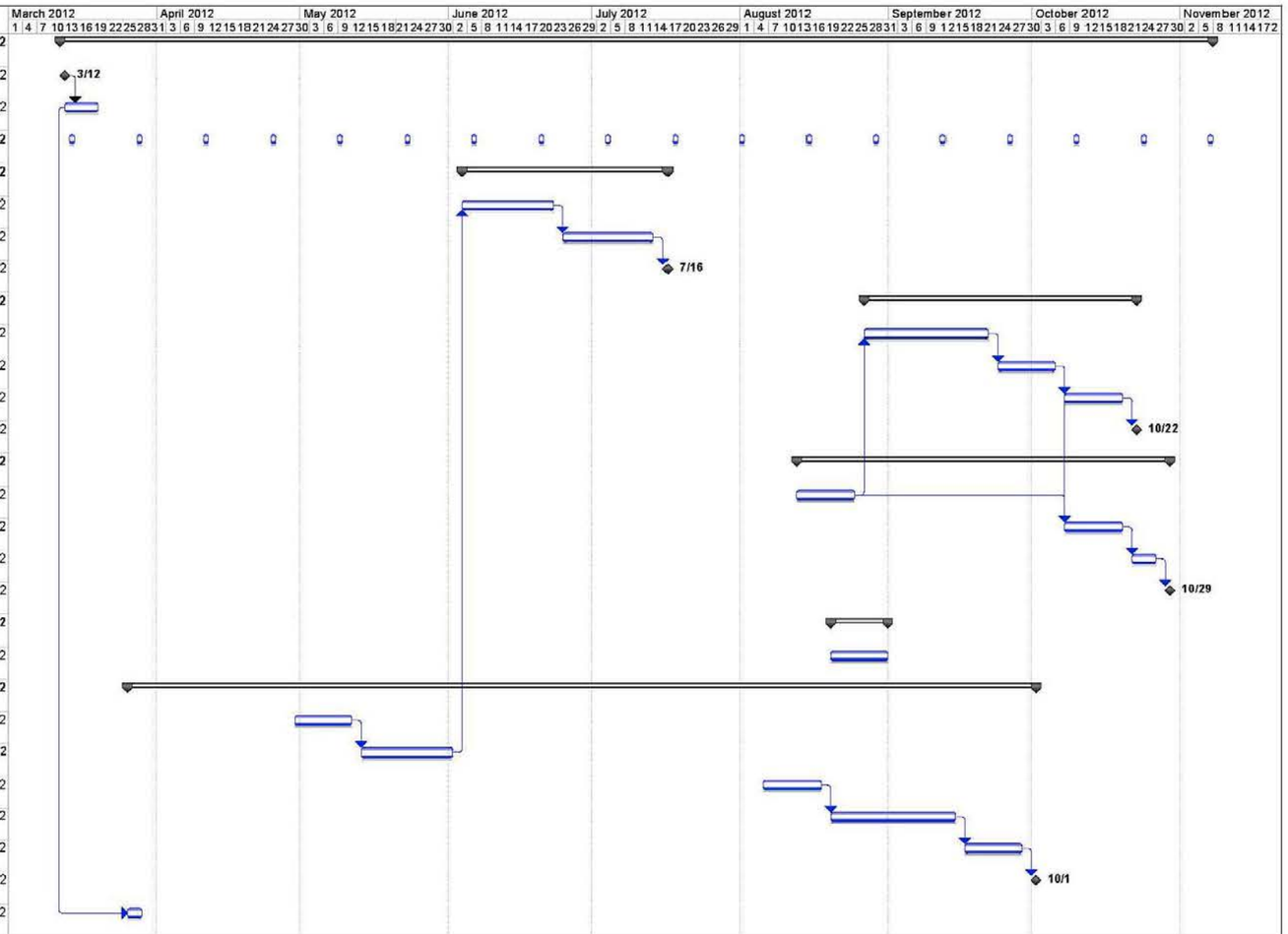
PERSONNEL:	**Hourly Rate***
Principal Engineer/Geomorphologist	$228.10
Senior Biologist	$176.65
Statistical Ecologist	$156.05
Senior Engineer/Scientist	$114.85
Engineer/Scientist	$106.61
Junior Engineer/Scientist	$99.40
Draftsman/Technician II	$68.50
Word Processor/Clerical	$78.80
IN HOUSE EQUIPMENT:	**Rate**
Computer charges	$1.64 per labor hour
Truck (4 x 4)	$1.00/mile
Automobile	Approved GSA Rates for Privately Owned Vehicles
Boat (16-ft inflatable)	$125.00/day
Jet boat (18-ft)	$225.00/day
Inflatable kayak	$10.00/day
Level & Sonic Sounder	$10.00/day
RTK GPS equipment	$1,800/week
Echosounder	$625/week
ADCP Unit	$1,500/week
ADCP with GPS equipment	$3,000/week
ADCP with GPS equipment and Echosounder	$3,500/week
Total Station	$10.00/hour
Current Meter	$50.00/day
Water Quality Meter	$30.00/day
IN HOUSE REPRODUCTION:	
8 ½ x 11 paper	$ 0.10/sheet
Plotter (black & white)	$5.00/sheet
Plotter (color)	$7.50/sheet

*****Hourly rates for deposition and court time associated with expert witness support will be charged at 1.5 times the indicated rate. Permit fees, processing fees, bonds, etc. will be the responsibility of the client. All other direct costs including travel, lodging, meals and incidentals for personnel, special photography, postage, delivery services, express mail, out-of-area telephone calls, printing by outside vendor, laboratory analysis, and any other services performed by outside vendor will be billed at cost plus G&A of 13.46%. Subcontract services will be charged to the client with a 10% service fee.

Tetra Tech (TT) is not liable for damages caused by delays in performance of the above work, which arise from events beyond our reasonable control. TT is not responsible for damages or losses incurred through the use of studies, plans, recommendations or cost estimates in excess of the fees paid to TT for these services.
Monthly progress payments shall be due and payable by the Client within 30 days after submittal of the bill for such work by TT. The progress payment shall include the portion of the fee earned based upon the percentage of work performed, as determined by TT. Payment due but unpaid within 30 days after submission of the bill shall bear interest at the rate of 1½% per month until paid. If client should fail to pay within ninety (90) days after the bill is rendered, TT shall have the right, upon seven (7) days written notice to the Client, to stop work on the project until payment of the amount owed, including all interest charges, has been received.

EXHIBIT D
Project Timeline

ID	Text1	Task Name	Start	Finish
1	100	**Project Management**	**Mon 3/12/12**	**Wed 11/7/12**
2	100.1	Notice-to-proceed	Mon 3/12/12	Mon 3/12/12
3	102	Develop Final Scope of Services and Fee	Tue 3/13/12	Mon 3/19/12
4	103	**Project Management, Meetings & Biweekly Conf Calls**	**Wed 3/14/12**	**Wed 11/7/12**
23	200	**AM Design - 2 Dimensional Hydraulic and Sediment-Transport Modeling**	**Mon 6/4/12**	**Mon 7/16/12**
24	201	Update and re-calibrate SRH 2-D Hydraulic Model	Mon 6/4/12	Fri 6/22/12
25	202	Technical Memorandum	Mon 6/25/12	Fri 7/13/12
26	202.1	Submit Technical Memorandum	Mon 7/16/12	Mon 7/16/12
27	400	**AM Design - Model Application**	**Mon 8/27/12**	**Mon 10/22/12**
28	401	Apply 2-D Hydraulic and Sediment-transport Model	Mon 8/27/12	Fri 9/21/12
29	402	Evaluate model results to access likely response to management actions	Mon 9/24/12	Fri 10/5/12
30	403	Prepare technical memorandum	Mon 10/8/12	Fri 10/19/12
31	403.1	Submit draft technical memo	Mon 10/22/12	Mon 10/22/12
32	500	**AM Design - Management Experiment Statistical Design**	**Mon 8/13/12**	**Mon 10/29/12**
33	501	Identify potential channel manipulation actions	Mon 8/13/12	Fri 8/24/12
34	502	Perform statistical analysis	Mon 10/8/12	Fri 10/19/12
35	503	Prepare technical memorandum	Mon 10/22/12	Fri 10/26/12
36	503.1	Submit draft technical memo	Mon 10/29/12	Mon 10/29/12
37	600	**AM Design - Performance Evaluation Decision Tree**	**Mon 8/20/12**	**Fri 8/31/12**
38	601	Review and input to ED Office on Decision Tree	Mon 8/20/12	Fri 8/31/12
39	700	**AM Monitoring and Data Analysis**	**Mon 3/26/12**	**Mon 10/1/12**
40	701a	Pre-runoff Monitoring	Mon 4/30/12	Fri 5/11/12
41	702a	Data Analysis	Mon 5/14/12	Fri 6/1/12
42	701b	Post-runoff Monitoring	Mon 8/6/12	Fri 8/17/12
43	702b	Data Analysis	Mon 8/20/12	Fri 9/14/12
44	703	Prepare annual report	Mon 9/17/12	Fri 9/28/12
45	703.1	Submit Annual Technical Report	Mon 10/1/12	Mon 10/1/12
46	704	Attend AM Reporting Session	Mon 3/26/12	Wed 3/28/12



Project: ElmCreekSchedule_Year2_2-2
Date: Tue 2/21/12

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