

AMENDMENT NO. 2  
 AGREEMENT FOR PROFESSIONAL SERVICES  
 FOR  
 BEAR RIVER LEVEE SETBACK DESIGN  
 BETWEEN  
 THREE RIVERS LEVEE IMPROVEMENT AUTHORITY AND  
 BOOKMAN-EDMONSTON/GEI CONSULTANTS

THIS AMENDMENT TO AGREEMENT is made ~~effective February 23, 2005,~~ <sup>effective July 5, 2005</sup> by and between Three Rivers Levee Improvement Authority ("TRLIA") and Bookman-Edmonston/GEI Consultants ("Consultant"), who agree as follows:

*REW  
Herbert W. Edmonston  
for Ray Hart*

1. **Recitals.** This Amendment is made with reference to the following background recitals:

- 1.1. Effective January 18, 2005, the parties entered into the Agreement for Professional Services relating to TRLIA's Bear River Levee Setback design.
- 1.2. Effective February 23, 2005, the parties entered into Amendment No. 1 to the Agreement for Professional Services relating to TRLIA's Bear River Levee Setback design for a total of \$2,893,160.
- 1.3. The parties now desire to amend the Professional Services Agreement to expand scope of services and contract fee.

2. **Second Amendment to Agreement.** The Professional Services Agreement is ~~hereby~~ <sup>hereby</sup> amended as follows:

*REW  
Herbert W. Edmonston  
for Ray Hart*


- 2.1. The scope of services (Attachment A to the Agreement for Professional Services between TRLIA and B-E/GEI, dated January 18, 2005) is amended to expand and supplement the scope of work as described by letter dated May 25, 2005 (Exhibit A) to include the following:

Task	Total
Restoration Design of Orchard Area	\$126,119
Restoration O&M Plan	\$64,700
CEQA/NEPA Construction Mitigation Plan	\$51,119
Reclamation Board Permit for Levee Degrading	\$29,775
EA Preparation for Corps	\$52,215
Acceleration/Additional Coordination Requirements	\$319,000
Bear River Low-Flow Modeling/Expanded Geomorphic Assessment	\$105,387
Wildlands Coordination	\$14,400
Detention Basin Evaluation	\$51,900
CEQA Compliance—Project Changes	\$8,333
<b>Total</b>	<b>\$822,845</b>

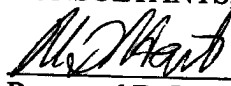
- 2.2. The payment, budget, and not-to-exceed amounts (Professional Services Agreement Attachment B) are amended to include the additional amounts of \$822,845 for a total contract of \$3,716,005.
- 3. **No Effect on Other Provisions.** Except for the amendments in Section 2, the remaining provisions of the Professional Services Agreement shall be unaffected and remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on July 5, 2005.

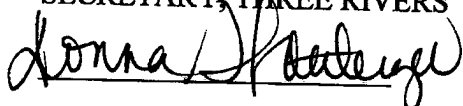
THREE RIVERS LEVEE IMPROVEMENT  
AUTHORITY OF YUBA COUNTY

  
Richard E. Webb  
Chairman

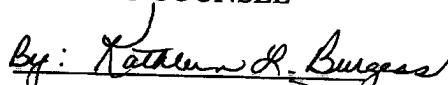
BOOKMAN-EDMONSTON, A  
DIVISION OF GEI  
CONSULTANTS, INC.

  
Raymond D. Hart  
Senior Vice President

ATTEST:  
DONNA STOTTLEMEYER  
SECRETARY, THREE RIVERS



APPROVED AS TO FORM:  
DANIEL G. MONTGOMERY  
COUNTY COUNSEL

By:   
Chief Deputy



Geotechnical  
Environmental and  
Water Resources  
Engineering

May 25, 2005  
050110

Mr. Charles K. McClain, Executive Director  
Three Rivers Levee Improvement Authority  
915 Eighth Street, Suite 115  
Marysville, CA 95901

Dear Mr. McClain:

Re: Change Order Request No. 2, Agreement between TRLIA and B-E/GEI dated  
January 8, 2005

This letter a follow up to my advisory comment at our monthly meeting on April 27 regarding the need to increase the Scope of Services and budget under our agreement dated January 18, 2005 (B-E/GEI Contract Number 050110). Specifically, B-E/GEI requests an additional \$822,845 be added to our contract for a new amount of \$3,716,005.

The basis for the requested change in scope is described below, and the estimated budget is summarized in Table 1.

**Additional Assignments**

TRLIA has requested that B-E/GEI add additional work tasks to our current scope of work. These additional work tasks include the following:

- **Restoration Design of Orchard Area** – Our original scope of work included restoration design of only the setback area because it was then assumed that the trees would be removed and the area would be planted to grass and/or forbs for hydraulic efficiency. At the March 29, 2005 Setback Levee Management meeting, you requested that B-E/GEI include the walnut orchard area in the restoration design. The restoration design will also include development of an Operation and Maintenance (O&M) Plan, and development of associated long-term O&M costs.
- **CEQA/NEPA Construction Mitigation Plan** – Prior to construction, a survey to identify endangered species and define construction constraints is required. This activity was not included in our original scope of work because it is considered a construction related activity and not a design related activity. In order to begin construction of the setback levee foundation this year under the accelerated schedule, these surveys need to be conducted over the next few months. TRLIA requested that B-E/GEI add these

surveys to our scope of work during the March 29, 2005 Setback Levee Management meeting.

- **Reclamation Board Permit for Levee Degradation** – The initial Reclamation Board permit was prepared by HDR for construction of the Upper Bear/WPIC/Yuba and Setback Levee projects. This permit did not include degradation of the existing levee and restoration of the setback area. A second Reclamation Board permit will be required for these activities. TRLIA requested that B-E/GEI include preparation of the second Reclamation Board permit in our scope of work during the March 29, 2005 Setback Levee Management meeting.

#### Project Acceleration

TRLIA has requested that B-E/GEI proceed with an accelerated schedule that would allow for construction of the setback levee foundation and Feather River tie-in in 2005. As described in the acceleration matrix issued to TRLIA in March 2005, the accelerated schedule is expected to increase design costs up to about 20%. The first contract change order included \$30,000 in acceleration related costs for expediting the field exploration program. We have identified several other issues that have and will continue to increase our costs in implementing the accelerated schedule.

- **Preparation of the Environmental Assessment** – We were advised that the Corps would be the lead in preparation of the NEPA Environmental Assessment (EA), therefore our scope of work was limited to providing a minor amount of assistance to the Corps. At the March 17, 2005 meeting with the Corps, the Corps stated that they had not yet initiated NEPA compliance. Corps Regulatory Section personnel confirmed that the Corps would likely need assistance in the NEPA compliance effort in order to meet the accelerated project schedule that requires NEPA compliance be completed by August 2005. To meet the target schedule, TRLIA requested that B-E/GEI undertake an expanded role in preparation of the EA. To complete the EA under the accelerated schedule, it will be necessary to substantially increase the pace of document preparation over the levels previously assumed for this task, including NEPA evaluation of effects of the project on air quality, agricultural land conversion, socioeconomic, and environmental justice. Substantial additional personnel and coordination effort are expected to be required to complete new aspects of the environmental analysis for NEPA compliance and to ensure that the various components of the NEPA document are internally consistent.
- **Project Coordination Requirements** – Implementation of the accelerated schedule has required increased project management coordination as we manage the design and environmental activities across multiple B-E/GEI offices and among our subconsultants. We have expanded our use of staff in more B-E/GEI offices, now five, with a corresponding increase in costs to manage these resources. Substantial additional coordination effort on our part is required to coordinate with and support the efforts of our subconsultants, other TRLIA consultants, regulatory agencies, landowners, and other personnel to ensure accurate and timely completion of all design, permitting and environmental compliance tasks. Through April 2005, our project management costs were more than twice the rate assumed in preparation of the current scope of work.

**New Data / Design Concepts / Developments**

As the setback levee project has progressed, new data, concepts and developments have evolved that will require additional budget to resolve. These include:

- **Bear River Geomorphic Modeling** – Initial assessments and detailed mapping of the levee setback area have revealed a greater than anticipated degree of complexity in site conditions and possible geomorphic impacts. These impacts include the discovery that, based on the new site topography, the new floodway in the setback area is three to four feet lower than the existing Bear River floodway, and is sloped toward the setback levee alignment, creating the potential for a channel avulsion that could impact the new levee. Recent discussions with landowners have also revealed that the orchard area soils are quite erosive. These conditions require a more detailed geomorphic evaluation to assess impacts to the setback levee and determine remedial measures, if necessary.

In addition, a cross section survey and low-flow modeling of the Bear River Channel is required. The low-flow modeling is needed to assess the geomorphic processes during floods less than the 25-year event, and the subsequent potential impacts on the setback levee. This information is also needed in developing the restoration design. It was originally anticipated that the existing Corps model used for the large flood modeling would be appropriate for the low-flow modeling. In reviewing the Corps model it has been determined that the model cannot be calibrated to low flows, and the river channel geometry has essentially been omitted from the model. While this is a conservative assumption for large flood events where the bulk of the flow is carried in the floodplain, the model is not suitable for low flow analyses.

- **Wildlands Coordination** – The entry of Wildlands in the land acquisition and environmental restoration process has required additional coordination by the setback levee team. The additional coordination requirements to date have included several specific meetings and planning sessions. Additional coordination is anticipated as the acquisition and restoration process evolves.
- **Detention Basin Evaluation** – During preparation of the feasibility report a study was conducted by the consultant to RD 784 that prepared the Master Drainage Plan (Mead and Hunt) to evaluate the required detention basin size that would mitigate for lost ponding storage due to the setback levee project. The resulting letter report was to form the basis for the design of detention basins for the project. During the February 2005 TRLIA Management meeting we were informed by MHM Engineers that RD 784 had subsequently adopted a modified drainage plan prepared by Watermark Engineers. This updated RD 784 drainage study has required us to perform additional studies to evaluate detention basin capacity requirements and assess additional detention basin locations.
- **CEQA Compliance for Project Changes** – Due to changes to the project since preparation of the environmental impact report (EIR), including the redesign of the detention basins, an addendum to the certified EIR is required. It is assumed that the changes will not result in the identification of any environmental impacts that were not identified in the certified EIR and addressed in the adopted mitigation monitoring plan.

Mr. Charles K. McClain

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May 25, 2005

A summary of the additional costs which cannot be absorbed in our budget is included in the attached table. We request that you approve a contract increase in the amount of \$822,845 for a new amount of \$3,716,005. We will continue to manage the project to respond the TRLIA's needs, minimize cost increases to the extent practical, and communicate issues of concern to TRLIA as they occur.

Please call me or Herb Greydanus if you have any questions.

Sincerely,

BOOKMAN-EDMONSTON



Raymond D. Hart  
Senior Vice President

Enclosure

**Table 1**  
**Bear River Setback Levee Project**  
**Change Order Request No. 2**  
**5/24/2006**

Task	Item	Estimated Cost						Scope Item Break					
		EDAW	MBK	MPM	PVA	RP	Wetland	Subtotal	COO's	Hours	G&L Labor	Cost	Total
<b>Additional Assignments</b>													
25	Restoration Design of Orchard Area	\$21,025				\$63,000		\$84,025	\$12,664	180	180	\$28,800	\$128,119
26	Restoration O&M Plan					\$50,000		\$50,000	\$7,500	40	180	\$7,200	\$64,700
40	CEQA/NEPA Construction Mitigation Plan - endangered species identification and required construction constraints	\$38,180						\$38,180	\$5,728	40	180	\$7,200	\$51,118
40	Rec Board Permit for Levee Degrading	\$7,630						\$7,630	\$1,145	140	160	\$21,000	\$33,775
<b>Subtotal</b>		<b>\$67,445</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$113,000</b>	<b>\$0</b>	<b>\$180,445</b>	<b>\$27,067</b>	<b>390</b>	<b>\$980</b>	<b>\$84,200</b>	<b>\$271,712</b>
<b>Accelerations</b>													
40	EA Preparation for Corps	\$42,000						\$42,000	\$8,435	16	180	\$2,880	\$82,215
51	Acceleration / Additional Coordination Requirements	\$52,000						\$52,000	\$7,800	1440	180	\$259,200	\$319,000
<b>Subtotal</b>		<b>\$94,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$94,000</b>	<b>\$14,235</b>	<b>\$1,456</b>	<b>\$360</b>	<b>\$262,080</b>	<b>\$371,218</b>
<b>New Data / Design Concepts / Developments</b>													
23	Bear River Low-Flow Modeling / Expanded Geomorphic Assessment	\$32,880		\$10,000	\$42,000			\$85,360	\$12,897	40	180	\$7,200	\$106,357
25	Wetlands Coordination							\$0	\$0	80	180	\$14,400	\$14,400
28	Detention Basin Evaluation			\$10,000				\$10,000	\$3,000	180	180	\$28,800	\$51,800
40	CEQA Compliance - Project Changes	\$4,740	\$32,040	\$20,500	\$42,000	\$0	\$10,000	\$110,280	\$16,618	15	180	\$2,880	\$8,331
<b>Subtotal</b>		<b>\$107,088</b>	<b>\$32,040</b>	<b>\$20,500</b>	<b>\$42,000</b>	<b>\$0</b>	<b>\$10,000</b>	<b>\$336,468</b>	<b>\$67,520</b>	<b>2132</b>	<b>1770</b>	<b>\$376,680</b>	<b>\$622,848</b>
<ul style="list-style-type: none"> <li>- Scope not included in original RFP</li> <li>- Requested by TRLIA to include in SOV at March Management Meeting</li> <li>- Not in original SOV</li> <li>- Need to develop O&amp;M Plan and costs for Setback and orchard areas</li> <li>- Scope not included in original RFP (Implementation grant)</li> <li>- Intended to be part of construction activities</li> <li>- Requested by TRLIA to include in SOV at March Management Meeting</li> <li>- Scope not included in original RFP</li> <li>- Requested by TRLIA to include in SOV at March Management Meeting</li> <li>- Scope not included in original RFP</li> <li>- Original plan called for Corps to prepare EA</li> <li>- Due to need to accelerate, requested by TRLIA to include in SOV after March Corps Meeting</li> <li>- Extra time for coordination, team management, sub management due to schedule acceleration</li> <li>- Acceleration matrix noted a 10-20% design cost increase due to acceleration</li> <li>- Existing hydraulic model from Corps does not have low-flow river channel, not calibrated for low flows</li> <li>- New topography and field reconnaissance indicates a potential tendency for Bear River northern avulsion</li> <li>- Meeting with DeValentine indicates orchard area soils more erosive than anticipated</li> <li>- Coordination with Wetlands line intensive - not anticipated in original scope</li> <li>- Feasibility Report assessment based on original RD 784 drainage study by Mead and Hunt</li> <li>- Informed of updated Wetmark study at February Management Meeting</li> <li>- Due to updated study, need to perform updated evaluation, modify basin sizes, evaluate additional detention areas</li> <li>- Design changes (eg detention basins) require CEQA submittal</li> </ul>													