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CIMARRON WATERSHED ALLIANCE, INC.

**CIMARRON HIGH SCHOOL GEOGRAPHIC INFORMATION
SYSTEM SOFTWARE PROPOSAL**

**A COLLABORATIVE PROJECT WITH CIMARRON HIGH
SCHOOL**

FOR PRESENTATION TO BOARD OF DIRECTORS

DECEMBER 6, 2006

PROJECT NAME: CIMARRON HIGH SCHOOL GEOGRAPHIC INFORMATION SYSTEM SOFTWARE PROPOSAL

GRANT SUBTASK & CORE WORK PLAN TASK:

- Grant: Federal Clean Water Act Section 319 (h), FY 03 Cimarron Watershed Alliance, Inc. Project; Contract No. 05-667-5000-0009.
- Core Workplan Task III: Communicate with stakeholders, agencies, municipalities, and businesses to improve the health of the watershed and water. Subtask a: Include at least one demonstration project per year to build capacity for additional development of like projects and Subtask c: Educate the public on watershed issues and Best Management Practices (BMPs); March 18, 2006 Revision.
- Core Workplan Task IV: Evaluate projects for completion and success, evaluate compliance with standards, and monitor the state of the water and watershed. Subtask b: Compile and summarize existing data from monitoring in an effort to understand trends, BMP effectiveness, and project success in the watershed.
- Deliverables: Procurement of instructive software that will assist teachers in providing high quality Geographic Information System (GIS) educational experiences that deal with real life learning through the use of layered spatial, temporal, ecological, and socio-economic information in a multimedia format.
- Amendment: This project will be added as Amendment III.c.7 to the Cimarron Watershed Alliance Core Work Plan, March 18, 2006 Revision.

OBJECTIVE OF PROJECT: The primary objective of this project is to provide the software recourses that will give students analytical tools that can be used in developing a comprehensive understanding of issues and best management practices applications relating to the continued

maintenance and enhancement of water quality and quantity in the Cimarron River Watershed. This will yield a greater awareness and more in-depth understanding of the consequences of human use and management of riverine, lake, and wetland ecosystems. This understanding will in turn result a more informed natural resource use decision-making process in the watershed's youth.

This objective will be enhanced by Cimarron High School teachers who will implement lessons focusing on water quality, wildlife, and riparian restoration projects while using technology as an instructional tool. This project will provide on-going educational opportunities for secondary students in the Cimarron River Watershed.

BACKGROUND AND PROJECT DESCRIPTION: The Cimarron Watershed Alliance, Inc.

(CWA) has expressed an interest in purchasing GIS software for use by both students in our community and by CWA members. Cimarron High School (CHS) supports this proposal; access to GIS software would be a valuable teaching and research tool for science and other courses. Students would also be introduced to new, in-demand career opportunities in geotechnology.

Cimarron High School science students have participated in New Mexico Watershed Watch (NMWW) water monitoring studies in the Cimarron Watershed for the past five years. We would like to expand the scope of our research and enhance our data analysis capabilities. Possible applications of GIS in our current environmental studies include mapping and analysis of water quality data and 3-dimensional investigations of our watershed. Concurrent with the development of an online database for all NMWW data, students could study and compare data collected from other watersheds around the state. Future applications of GIS could include projects such as the mapping of invasive plant species, analysis of climate patterns, and watershed management.

The Cimarron High School administration has agreed to house the ArcView GIS

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software on our server for use by students and CWA members. Details will be worked out regarding access to the school building and computers by the CWA. The CHS science department will also receive new GPS units through a grant from the High Plains Regional Education Cooperative. We hope to coordinate with the CWA on developing research projects that support the work you are doing in the watershed.

Thank you for considering this proposal. That "students will utilize a variety of technologies in district classrooms, labs and library-media centers" is a primary goal of the Cimarron Municipal School District. The opportunity to learn and use this important new technology will benefit both our students and our community.

Attached is a formal quote from Environmental Systems Research Institute, Inc. (ESRI) for the purchase and licensing of 9.2ArcView, extensions, books, and maintenance.

SITE AND LOCATION: This project will be implemented under the direction of the Cimarron High School.

COST: (To include Grant and CWA In-Kind Matching)

Grant: Cost to the Cimarron Watershed Alliance Grant will be **\$1,533.21** for the purchase of project supplies, project development, and initial maintenance (see Appendix A for cost structure).

CWA Match: **\$613.28**, which will be generated by project and CWA in-kind activities

Total Project Economic Activity: **\$2,146.49**

SCHEDULE AND TIMELINE: The administration and implementation of this project will commence upon the approval of the Cimarron Watershed Alliance, Inc. Board of Directors.

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The ArcView software will be purchased in the 2006-07 school year. Use of the software will be on-going.

PROJECT EVALUATION & MAINTENANCE PLAN: This project will be evaluated by information produced by student usage and feedback as compiled by the Team Leader under the direction on the CWA Monitoring Committee. The Team Leader will report to the Cimarron Watershed Alliance Stakeholders on project effectiveness as directed by the CWA Monitoring Committee.

TEAM LEADER AND PARTICIPANTS:

Team Leader: Leigh Hedderman

Participants: Cimarron High School and the Cimarron Watershed Alliance.

PERMISSIONS AND PERMITTING:

Dredge & Fill Clearance Required? __ Yes X No

Is any work proposed within the high water mark of a river, stream or Arroyo __ Yes X
No

Cultural Resource Clearance Required? __ Yes X No

Does this proposal involve any earth disturbing activity? __ Yes X No

LIABILITY: *(None foreseen; please add your comments about same).*

**CIMARRON WATERSHED ALLIANCE, INC
PROJECT ACHIEVEMENT EVALUATION**

Date Submitted:

**PROJECT NAME: CIMARRON CANYON AND EAGLE NEST STATE PARKS
EDUCATIONAL OUTREACH PROJECT PROPOSAL**

**SUBTASK GRANT & WORK PLAN TASK: (Did the results address original proposal's
subtask(s), If not explain the variation, to include additional subtasks addressed)**

OBJECTIVE EVALUATION: (Compare original objective with the end result)

**SITE AND LOCATION: (Was there any variance from project proposal in the treatment location
or size?)**

**FINAL PROJECT DESCRIPTION: (Were results as expected? Did they meet the objective? If
not, why.)**

**FINAL COST: (Include Grant, Matching In-Kind. Explain any deviation from original
proposal):**

**FINAL SCHEDULE AND TIMELINE: (Was the project completed in the expected time frame?
If not, why.)**

TEAM LEADER AND PARTICIPANTS: (Restate who. Did this change? If so, why?)

EVALUATION: (Did the evaluation metrics change? If so, why?)

PROJECT MAINTENANCE PLAN: (N/A?)

**TEAM LEADER COMMENTS: (Team leader to add any additional comments and observations
here, to include the performance of CWA administration)**

CWA COMMENTS:

**NMED COMMENTS: (NMED to add any additional comments and observations here, to include
the performance of CWA administration)**

ACKNOWLEDGMENTS:

TEAM LEADER

DATE

CWA EXECUTIVE OFFICER

DATE

Appendix A



ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE, INC.
 ESRI, Inc.
 One International Court
 Broomfield, CO 80021-3200
 Phone: 303-449-7779
 Fax: 303-449-8830

To expedite your order, please attach a copy of this quotation to your purchase order.
 Quote is valid from: 10/31/2006 To: 01/29/2007

Quotation # 20241731

Date: October 31, 2006

Customer # Contract #

CIMARRON HIGH SCHOOL
 165 N. COLLISION AVE
 CIMARRON, NM 87714

ATTENTION: Leigh Hedderman
 PHONE: (505) 376-2241
 FAX:

Material	Qty	Description	Unit Price	Total
88141	1	ArcView Schools and Libraries Single Use Building License Bundle, ArcGIS ArcView 9.2.	500.00	500.00
93378	1	ArcGIS Spatial Analyst Single Use Schools and Libraries Unkeyed Building License	250.00	250.00
95589	1	ArcGIS 3D Analyst Single Use Schools and Libraries Unkeyed Building License	250.00	250.00
98803	1	Mapping Our World ArcGIS Desktop Edition Book with CD	79.95	79.95
102697	1	GIS Tutorial Book: Workbook for ArcView9	69.95	69.95
Item Total:				1,149.90
Subtotal:				1,149.90
Estimated Shipping & Handling (2 Day Delivery) :				33.31
Contract Pricing Adjust:				0.00
Total (excludes applicable sales tax):				\$1,183.21

The following items are optional items listed for your convenience. These items are not included in the totals of this quotation.

Material	Qty	Description	Unit Price	Total
98744	1	ArcView with Extension Single Use Schools and Libraries Building Bundle Maintenance. First year of maintenane is included with purchased. A quote will be sent to the school about 3 months before due date for the 2nd year.	350.00	350.00

Quoted By: Esther Worker, (303) 449-7779 x8216 Email: eworker@esri.com	Account Manager: Esther Worker Email: eworker@esri.com
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