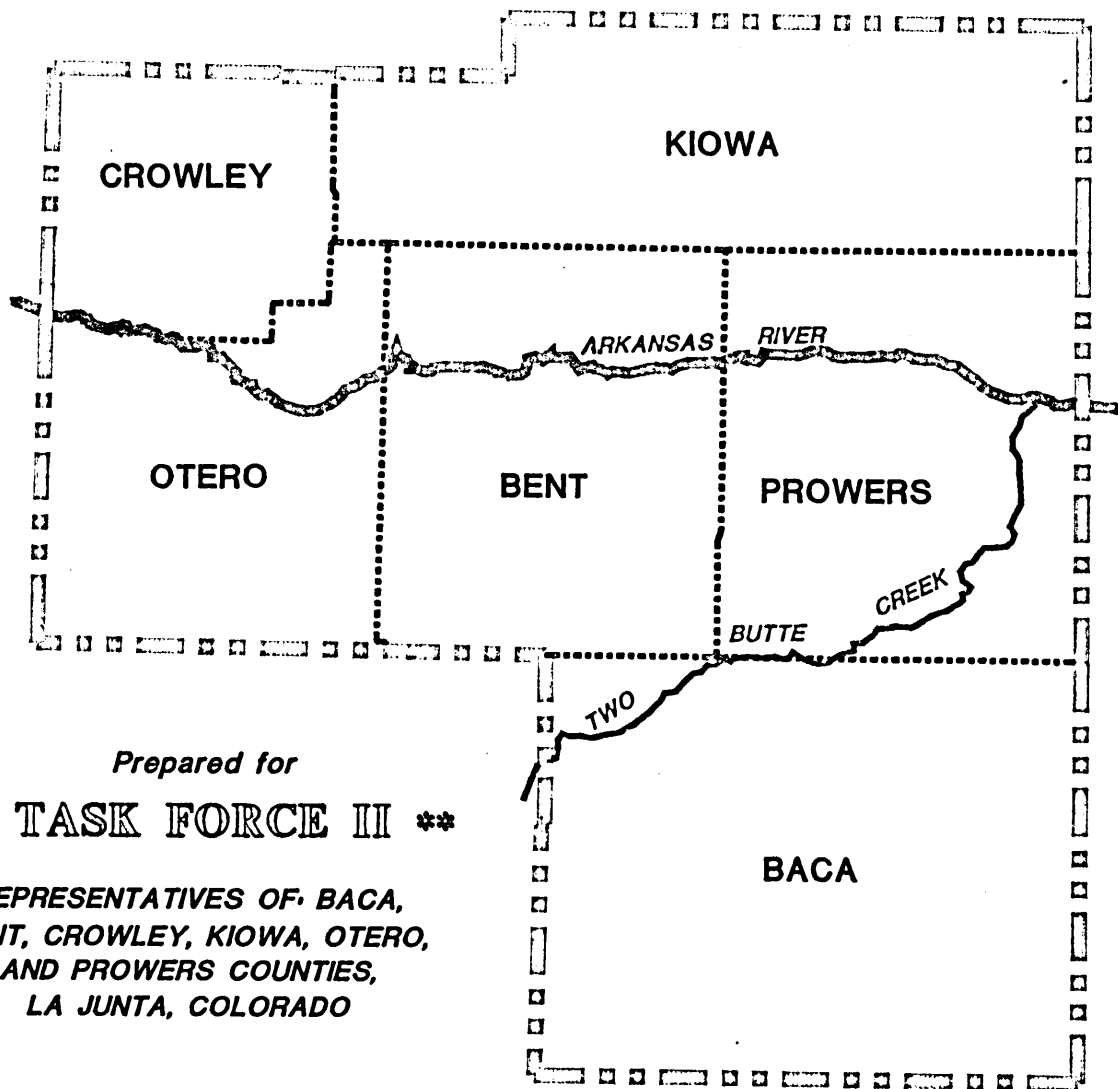


*Proposal and  
Statement of Qualifications*

ALTERNATIVES TO THE  
REMOVAL OF IRRIGATION WATER:  
FEASIBILITY STUDY



*Prepared for*  
**\*\* TASK FORCE II \*\***  
*REPRESENTATIVES OF BACA,  
BENT, CROWLEY, KIOWA, OTERO,  
AND PROWERS COUNTIES,  
LA JUNTA, COLORADO*

*By*  
**Arkansas Valley Water Consultants  
A Professional Consortium**  
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May 26, 1992

Mr. Bob Knight  
Task Force II  
PO Box 511  
La Junta, Colorado 81050

RE: FEASIBILITY STUDY: PROPOSAL AND STATEMENT OF QUALIFICATIONS

Dear Mr. Knight:

The interdisciplinary team, denoted the Arkansas Valley Water Consultants, is pleased to submit our proposal for professional services entitled:

ALTERNATIVES TO THE REMOVAL OF IRRIGATION WATER:  
ARKANSAS RIVER VALLEY, COLORADO

The professional consortium integrates the expertise of the following Colorado organizations:

Kevin B. Pratt, Water Attorney and Project Manager  
Gronning Engineering Company  
Milliken Research Group, Inc.  
Milenski Ag Consulting Service

The team will provide a comprehensive and focused approach to the problem of defining alternatives to export of water from Arkansas Valley agriculture. We look forward to discussing the proposal in detail with Task Force II during the selection process. Please call if you have questions about our proposal.

Sincerely,



Kevin B. Pratt, Esq.  
Project Manager  
Arkansas Valley Water Consultants

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FEASIBILITY STUDY

Prepared for:

Task Force II

Representatives of  
Baca, Crowley, Kiowa, Otero  
and Prowers Counties  
La Junta, CO

Prepared by:

Arkansas Valley Water Consultants

A Professional Consortium  
480 Holly Sugar Building  
2 North Cascade Avenue  
Colorado Springs, CO 80903-1623

May 29, 1992

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## PURPOSE AND SCOPE

The Arkansas Valley of Colorado has for many years been in a state of change with regard to its water resource base. The last two decades have seen an acceleration of this change; there is movement of water out of agricultural use and exported from the basin. This water is then permanently lost for agricultural uses. The purpose of this study is to assess alternatives to out-of-basin water export and dry-up of valley farms. This will be accomplished through the formation of a water management district or similar entity to influence change and exert some control over the valley water resources. Feasibility of alternative management entities will be addressed as to:

- Legal feasibility and statutory requirements
- Fiscal structure, debt service and funding sources
- Political and popular support
- Economic and environmental consequences
- Technical evaluation of water resource assets
- Evaluation of water resource management alternatives

The geographic scope of the study will be focused on the Southeastern Colorado region of Baca, Bent, Kiowa, Otero, and Prowers counties. Development will proceed from an assessment of the sources of water and the existing water management agencies in the entire Arkansas Valley system. The analysis will utilize existing and on-going studies to the maximum extent possible. The work product will be a final report and presentation which will include recommendations for action.

The following sections include the details of our project approach, a description of the project team, project organization, and experience with similar work. The project plan is further defined by a project cost breakdown and a preliminary schedule.

## PROJECT APPROACH

### Review of Existing Studies and Assessment of Current Conditions

The initial work consists of gathering and review of available information. Information about the Arkansas Valley of Colorado is considerable.

Examples are:

- Kansas/Colorado lawsuit
- U.S. Bureau of Reclamation and U.S. Geologic Survey data
- Southeast Colorado Conservancy District data
- CSU, and CU studies of the Arkansas River Basin
- Kiowa County/Great Plains Study
- Other agency and local data sources

In addition Gronning Engineering Company as a result of its work on behalf of the State of Colorado in the Kansas/Colorado lawsuit and its development of a mainstream Arkansas River model from Leadville to John Martin Reservoir has detailed information concerning historical irrigation water diversion and usage. Additionally, team members are generally familiar with water usage practices as a result of many years of study and field observation. Gronning Engineering Company has previously developed straight line diagrams for Water Districts 17 and 67 which are utilized by the Division Engineer's Office (Appendix B). As a result the data acquisition will be performed in a focused and efficient manner.

### Development of Area Water Authority/District Alternatives

Alternatives for water management and water marketing organizational structures will come from several sources:

- a) Water Conservancy District
- b) Economic Development Corporation
- c) Special District (Water District or multi-purpose district)
- d) Intergovernmental Agreement
- e) Water authority
- f) County wide water system
- g) Irrigation district
- h) Existing districts and municipal entities within the state of Colorado.
- i) Experience in other western states with special water management and marketing. Mechanisms such as the Snake River Water Bank in Idaho and California water banks of 1977 and 1991 will be included.

The boundaries of an entity will be determined by the common interests of the citizens within the boundaries, the financial needs of the entity, and legal requirements. We will further investigate any legal prohibitions or limitations on overlapping of the entity with existing entities or districts. We will also outline the financial implications of different boundaries with respect to tax revenues.

Options for possible future additional investigations would include:

- a) the possibilities of a municipality based district for potable municipal and industrial water supply through a metropolitan water district, or
- b) the creation of a new type of district (perhaps a "water management district") with the necessary and appropriate powers and limitations to meet the specific needs of the 6 county group, and drafting of proposed legislation to accomplish the authorization of that district.

Membership in the entity generally is not necessarily constrained by the legal framework selected. Most entities can allow "associate" members even if formal membership is disallowed. In some contexts membership implies control for governance purposes. In other contexts it does not. The purposes of the entity and political reality must determine the preferred membership structure, and if the preferred membership is permitted. Membership can be used to build public support and consensus on public issues. However, an entity seeking too broad a membership can find it has admitted strong factions which vie for control with loud and acrimonious values.

The governance of the entity is key to the effectiveness of the entity to be formed. Political concerns drive the governance, but again the legal framework must allow the preferred governance. In some legal frameworks, the governing body must be elected, in others the governing body is appointed by other governmental bodies or the courts. Also, in some frameworks, representation is required by geographic units such as counties. Such a distribution of representation may be inappropriate if, for example, the entity is making water management decisions with respect to certain irrigators or certain ditches. We will review the legal requirements to assure that the selected entity will meet the identified objectives of the entity and the political needs of the membership and governing body of the entity.

#### Acquisition and Preliminary Valuation of Water Resource Assets

The water rights associated with irrigation in the lower Arkansas Valley have various legal components which make valuation and the management of those rights extremely complex. For instance, an irrigator may hold shares which represent direct flow rights, storage rights, storage space rights, exchange rights, winter storage rights, Fryingpan-Arkansas supply, as well as tributary wells and decreed and un-decreed seepage supplies.

Valuation must consider the nature of water rights, as well as the useability of those rights under the legal and administrative regime which includes the Rules and Regulations for wells, the Pueblo Winter Storage Program, and the Arkansas River Compact, and 1980 Operating Plan for John Martin Reservoir. Limitations on use must also be considered and evaluated, including the Reclamation Reform Act provisions regulating the Fryingpan Arkansas water and the various conservation reserve program and set-aside programs. Single ownership of land by an entity has definite Reclamation Reform Act implications which must be considered.

The preliminary valuation study will include an analysis of diversion records for all rights to be valued. The reliability of the yield, water right seniority, locations, and market demand will be utilized to develop a preliminary value of the water rights. Water rights to be preliminarily valued will include the Fort Lyon Canal system, Amity Canal system and other representative rights on the mainstream Arkansas.

The appropriate legal mechanisms for obtaining development rights will be researched, as well as other limited rights such as easements, and life estate remainders, which could be obtained. These limited rights could be better choices for acquisition than water rights because they are:

- less expensive to acquire
- more acceptable to sellers
- more gradual in the change of ownership
- more flexible for water management purposes
- tax advantages
- more acceptable to funding sources

#### Operational, Economic and Environmental Impact Issues

Any change in water usage may directly affect the legal rights of other individual farmers under the lateral or ditch. Feasible proposals must respect the legal rights of others including those of the State of Kansas embodied in the Arkansas River Compact. While some ditch company bylaws include protections for persons desiring to continue to irrigate, a purchase or management proposal must comply with those bylaws, and must be fair to irrigators in any event. The alternative or alternatives recommended by the group will be reviewed for legal impacts on affected ditch companies, Kansas, and other water users.

Impacts of importance could include:

- increased seepage
- loss of head
- increased operation and maintenance
- loss of storage opportunity
- loss of operational flexibility
- loss of water supply
- greater transit losses
- legal liability on the part of a ditch such as the Ft. Lyon which carries water to Great Plains under agreements with the Amity Company.

Water has traditionally supported an agricultural economy in the lower Arkansas valley. Recently, the Governor's appointment of the Lower Arkansas Valley Commission to study the implementation of a John Martin permanent pool and Great Plains state park, and growing interest by environmental groups in the ecology and wildlife of the area suggest that agricultural water use will share its resource with recreation and wildlife in coming years.

Recreational and environmental groups will demand more input into governmental decision making and resource allocation, and will compete with agriculture for water in some circumstances. However, recreation and environmental groups bring significant funding and political power which can assist local water management, water conservation, and economic development initiatives if harnessed



properly. It may be important to include recreational and environmental groups as participants in the entity to be formed, but local control must not be sacrificed in the process. Again, the legal framework chosen should accommodate these concerns and opportunities.

#### Recommendation of Water Resource Management Alternatives

Irrigated agriculture has historically used and managed most of the water resources in the six county area. To support agriculture, towns were established and a local economy developed. The threat of removal of water and the loss of a portion of the agricultural base of the region has caused Task Force II to seek recommendations on how the six county group can assist both its agricultural, rural citizens and its townspeople so that together they can persist and thrive. Water is the key to the future.

The recommendations to Task Force II will synthesize the research described above with the diverse, extensive expertise and experience of AVWC team members.

The recommendations will recognize the need for:

- A solid legal organization
- Financial feasibility and funding
- Consistency with water rights hydrology and law
- Beneficial economic impact
- Political and operational obtainability

The recommendation will not be theoretical or academic, but rather will seek to offer proposals which can be implemented by Task Force II.

#### Conclusions, Recommendations and Work Product

Results of analysis should be summarized into a format for presentation to a diverse readership. The study report will contain such a summary. Recommendations will include proposed actions and any needs for follow-up research. After initial review of the study results, twenty-five (25) copies of the study will be forwarded to the client.

## PROJECT TEAM

### Interdisciplinary Approach

An inter-disciplinary team is a group of professionals with different skills who work together toward a common project with a blending of functions and mutual support.

The Task Force II project will require the diverse professional skills offered by this team approach because the study topic is complex and not highly defined. The team approach has a good success rate of producing a comprehensive yet focused work product which is useful to a client with diverse interests such as Task Force II. The team also provides an economical, flexible and accessible organizational structure.

### Project Management and Client Contact

Project Management will be directed by Kevin Pratt to assure that all participants proceed in a focused and coordinated manner and on schedule. The Arkansas Valley Water Consultants is a group of experienced, non-academic professionals with superior expertise in their respective areas. The group is organized to assure maximum effectiveness without redundancy. The group has experience in accomplishing tasks and recommending practical and effective courses of action.

The AVWC will meet initially with Task Force II to review and customize this feasibility study to assure proper prioritization of the study tasks. The AVWC recognizes that other ongoing studies by the Department of Natural Resources, Water Conservation Board, and perhaps others make it important to work closely with Task Force II to avoid duplication of effort by other agencies.

Monthly, and before preparation of the final recommendations and report, the AVWC will meet with Task Force II, or its representatives, to discuss the preliminary results and to receive direction on which areas should receive the most attention in the final report and presentation.

The AVWC will submit final reports to Task Force II and make a detailed presentation by all study participants. Extensive explanation of the study, results, and recommendations will be given, and questions will be welcomed.

Brief written reports of progress will accompany the monthly billings. Contact for data and client input shall be on an as needed basis as the work progresses.

### Team Members

**Kevin B. Pratt, J.D.** -- Mr. Pratt is an attorney emphasizing water and water quality law. Most of his work over the past 12 years has been in the Arkansas River basin. He will act as project manager and legal counsel on this study.

**Lloyd J. Gronning, P.E.** -- Mr. Gronning is a professional engineer specializing in water resources planning and management. As principal of Gronning Engineering Company he will be responsible for the technical, water management, and water valuation portions of the study. Mr. Gronning has significant experience in the Arkansas River Basin and significant experience in the valuation and acquisition of agricultural water by municipalities. He has been qualified as an expert witness in Water Resources Engineering and in the Valuation of Water Rights. **John R. Clark, P.E.**, a water resources

analyst, and John N. Winchester, a water resources engineer, will assist Mr. Gronning in the data gathering, water inventory, and impact assessment portions of the work.

Dr. J. Gordon Milliken, P.E., is a principal of Milliken Research Group, Inc. and research economist. He will assess water markets, water marketing strategies, and economic impacts which may result from implementation of the alternative water management entities.

Bill Milenski is an experienced agricultural and real estate appraiser and a long-time resident of the Arkansas Valley. He will manage data gathering activities and provide liaison to local farming and financial interests within the study area.

More detailed information about team members is provided in Appendix A.

### PROJECT ORGANIZATION CHART

