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First Year Scope of Work

Regional Water Plan

for the

Middle Rio Grande Water Planning Region

First Year
SCOPE OF WORK

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Introduction

This Scope of Work sets forth the requirements for specific components of the Middle Rio Grande Regional Water Plan. The Water Plan is being developed in accordance with the Regional Water Planning Handbook as adopted by the New Mexico Interstate Stream Commission and pursuant to the Memorandum of Understanding between the Middle Rio Grande Council of Governments and the Middle Rio Grande Water Assembly establishing a collaborative process for development of the regional water plan. This Scope of Work is comprised of three Tasks: Water Demand Study, Public Involvement Process, and Preliminary Alternatives Analysis. These tasks, where applicable, will be supported with data bases designed for Geographic Information System (GIS) coverages and applications.

In addition, the project work tasks and studies for the Middle Rio Grande planning region will reflect a distinction between the rural and urban sectors. These rural and urban sectors of the planning region will be characterized in terms of land use and development statistics and will be defined geographically. Work activities will be conducted to ensure adequate consideration is given to both the rural and urban sectors of the water planning region.

All deliverables identified in this Scope of Work shall be subject to prior review and recommendation by the Action Committee of the Middle Rio Grande Water Assembly. This review and recommendation shall be completed within a fixed number of days following receipt of the deliverable by the Action Committee. The number of days for the review and recommendation of each deliverable shall be jointly determined by the Executive Committee of the Action Committee and the CONTRACTOR, in cooperation with the ISC.

Task 1. Water Demand Study

The purpose of the Water Demand Study will be to complete an analysis of historical and current water use and future water demand in the entire water planning region. The water planning region is comprised of three watershed areas: the Middle Rio Grande watershed in Sandoval, Bernalillo, and Valencia Counties from Cochiti Reservoir to the Socorro County line; the Rio Puerco watershed in Sandoval, Bernalillo and Valencia Counties; and the Rio Jemez watershed in Sandoval County (See Figure 1). Water use and demand in the planning region will be characterized as withdrawals and depletions from the water supply presently available to the region. A consultant will be subcontracted for the historical water use component of the Water Demand Study. The current water use and future demand components of the Water Demand Study will be conducted by MRGCOG staff with input from a Water Demand Subcommittee of the Middle Rio Grande Water Assembly. The study shall include relevant GIS coverages and associated data.

Subtask 1.1 Historical and Current Water Use.

A report documenting a definitive accounting of historical and current water use within the Middle Rio Grande water planning region will be provided. Requirements for this subtask include the following:

1. Three watersheds within the water planning region will be investigated: Middle Rio Grande Valley, Rio Jemez, and Rio Puerco. A map of these watersheds is presented in Figure 1 attached and hereby made a part of this Scope of Work.
2. Existing studies and background records available from various sources including the USGS well pumping background data in the groundwater model for the Albuquerque Basin and the Bureau of Reclamation Water Assessment for the Middle Rio Grande Valley will be utilized. Metering information from files in the Office of the State Engineer, USGS, and diversion data from the Middle Rio Grande Conservancy District will be used to the maximum extent.
3. Water use data will be entered into a GIS database and disaggregated by point of diversion, water source, watershed areas (see Figure 1) and year, and described in terms of diversion and depletion amounts in order to compare and contrast historical and current water use.
4. The water use data will be verified with other sources of information such as records from the Office of the State Engineer and various studies on water use in the region.
5. The resulting database shall be formatted into GIS coverages by diversion location and aggregated for the water planning region, subregions, and data analysis zones to be defined by MRGCOG.
6. Factors of water withdrawal and depletions will be applied to land use activities in each watershed area in order to estimate water use in the

water planning region. A series of data sets, in GIS format, comprising land use categories will be developed by MRGCOG to be used as a basis for the water use and demand coverages. The data shall be further disaggregated to differentiate the urban and rural sectors of the water planning region.

7. A report incorporating GIS coverages and the associated data base to quantify the historical and current water use within the watersheds of the Middle Rio Grande water planning region, by water use category as defined in the Regional Water Planning Handbook, will be provided. The report shall also identify those data applicable to the rural and urban sectors of the water planning region.

[Deliverables: Report on Historical and Current Water Use; GIS data base and coverages of historical and current diversion locations and depletions; Spreadsheet and Database formats as approved by ISC]

Subtask 1.2 Future Water Demand.

A report quantifying future water demand in the Middle Rio Grande water planning region in ten-year intervals from year 2010 to year 2050 will be provided. The report will also summarize the historical and current water use for the planning region. This subtask will include the following elements:

1. Water demand factors and forecast assumptions will be developed by MRGCOG staff with input from the Water Demand Work Group of the Middle Rio Grande Water Assembly Action Committee representing both the rural and urban sectors of the planning region. The baseline population and water demand projections will be defined with the assumption that existing trends will continue with the current level of water conservation measures. Other projections will reflect the preliminary alternatives described in Task 3 of this Scope of Work.
2. Demographic and socioeconomic forecast data will be developed by MRGCOG staff with input from the Water Demand Work Group of the Middle Rio Grande Water Assembly Action Committee representing both the rural and urban sectors of the planning region. Forecast data will be disaggregated and coordinated with the appropriate Focus 2050 Plan Data Analysis Zones of the entire water planning region. This forecast data will be projected at ten-year intervals to provide a basis for the future water demand calculations.
3. Factors for converting land use activities into water withdrawal and depletion in each watershed subregion, and with reference to the rural and urban sectors of the planning region, will be developed by MRGCOG staff with input from the Water Demand Work Group of the Action Committee

for the Middle Rio Grande Water Assembly representing both the rural and urban sectors of the planning region.

4. Water withdrawals and depletions for all water use categories will be estimated and aggregated to determine the total annual water demand for each of the forecast years. Forecasts of water demands will be prepared to reflect the impacts of varying degrees of water conservation strategies in comparison to a baseline projection for both the urban and rural sectors in each of the watershed subregions. Feasible water conservation strategies will be defined by the Middle Rio Grande Water Assembly and the Middle Rio Grande Water Resources Board for evaluation.
5. A GIS coverage to be prepared by MRGCOG staff will identify the forecast distribution of types of water uses and the relative extent of public water supply systems and location of individual or self-supplied water systems.

[Deliverables: Report on Future Water Demand, Specified GIS database coverages]

Subtask 1.3 Liaison with Water Supply Study.

This subtask provides for linkage between the Interstate Stream Commission's Middle Rio Grande Water Supply Study and the Water Demand Study. Components of this subtask include:

1. Maintenance of direct and ongoing contact with the ISC contractor(s) in the Water Resources Planning Study for the Middle Rio Grande Valley as executed by agreement between the Interstate Stream Commission and the U.S. Army Corps of Engineers.
2. Timely provision of water use and demand data to the subcontractor for the Middle Rio Grande Water Supply Study.
3. Information and data from the Middle Rio Grande Water Supply Study will be obtained to provide input to the development of the Water Demand Study. This task will also insure that the database components between the water demand and supply studies are compatible.

[Deliverables: Progress Reports; Summary Report]

Task 2. Public Involvement Program

The purpose of the Public Involvement Program is twofold: 1) to create opportunities for public involvement and participation in the water planning

activities throughout the region; and 2) to develop an informed public that is knowledgeable about relevant water resource issues. All public involvement activities will be conducted in ways that strengthen the relationships with the Water Assembly and the MRGCOG to assure quality deliverables and a relationship conducive to plan completion and implementation.

The Public Involvement Program will be conducted in a manner that will ensure significant participation from both rural and urban sectors of the planning region. The Public Involvement Program will be carried out by the Public Involvement Work Group designated by the Action Committee of the Middle Rio Grande Water Assembly, representing both the rural and urban sectors of the planning region, with staff support provided by MRGCOG. Small contracts may be negotiated for meeting facilitation, database development, and publications, if needed.

Subtask 2.1 Urban and Rural Sector Participation; Linkage between watersheds.

Subregional committees will represent the rural interests of the Jemez watershed, the Rio Puerco watershed, and the rural sectors of the Middle Rio Grande watershed to provide input to the regional water plan. These subregional committees will serve to involve rural sectors in all phases and activities of the water planning process.

[Deliverables: Establish Committees, Meeting Support; Progress Reports]

Subtask 2.2 Public Involvement Program.

Participation and guidance by the general public is essential to the development of the regional water plan. The activities for this subtask are listed as follows:

1. A series of three workshops to be known as "Community Conversations" will be conducted in no less than six (6) locations covering both urban and rural sectors of the water planning region. The Community Conversations will be conducted in a structured workshop format and will be utilized for issues identification, development of problem statements, scoping goals and objectives, and gaining feedback on alternatives. Community Conversations may also be used to present a limited amount of relevant water-related information.
2. No less than four (4) Focus Groups will be convened to facilitate problem-solving regarding specific regional water issues that emerge in the water planning region. Water issues that affect both rural and urban sectors will require joint problem solving sessions to assure a collaborative solution to mutual problems where those issues arise.

3. A Public Comments Database will be created to collect and analyze the expressed public comments derived from Roadshow presentations (see Subtask 2.3), comments submitted in writing to the Assembly or to the Interstate Stream Commission, the Community Conversations, and the Focus Groups. Public comments shall be sorted and organized by issues, geographic location, and by rural and urban sectors for purposes of analysis. All public comments shall be addressed regardless of frequency.

[Deliverables: Summary Reports of the Community Conversations and Focus Groups, Problem Statements, Goals and Objective Statements, and the Public Comments Database Summary Report]

Subtask 2.3 Public Education Program.

This subtask includes a community outreach program called the "Roadshow," extensive publication and distribution of informational materials relevant to both urban and rural sectors in the water planning region, a newsletter to be published quarterly, and establishment of the Middle Rio Grande Regional Water Plan website. The activities involved in this subtask are described as follows:

1. The Roadshow is a standardized presentation about the regional water planning program. The Roadshow will be presented upon request to local governments, community groups, Soil and Water Conservation Districts, Pueblos, acequias, schools, and other organizations.
2. The regional communications network will provide notices and information about regional water plan progress, Community Conversation meetings, and relevant Assembly activities. Records of all contacts will be maintained. Notices and information will be channeled through public service announcements in various media, a phone and FAX network including the e-mail listserve to be activated as needed, a webpage for the Water Assembly that is kept up-to-date, newspaper articles, and mail-out or handout materials such as fact sheets and brochures. Public relations firms may be utilized to provide media contacts and services.
3. Distribution of information will be relative to the rural and urban sectors of the water planning region. Identified issues, the proposed goals and objectives, and summaries of the Water Supply Study, the Water Demand Study, the Public Participation Program, and the proposed Alternatives will be communicated to the public.
4. A Water Assembly Newsletter will be published quarterly and distributed to the entire mailing list database (approximately 2000 entries). The Newsletter will be written by members of the Assembly/Action Committee and will be printed and mailed by the MRGCOG.
5. The Regional Water Plan Webpage will be established and maintained by the MRGCOG and the State Engineers Office.

[Deliverables: Roadshow Package, Four Water Assembly Newsletters, Fact Sheets and Brochures, and Webpage Installation]

Subtask 2.4 Middle Rio Grande Water Assembly.

The purpose of this subtask is to provide operational support to the Middle Rio Grande Water Assembly and its Action Committee. The Action Committee will play a key role in the development of the regional water plan and will insure public input to the planning process. Significant in-kind contributions are anticipated to cover the costs of this subtask. Components of this subtask include:

1. The conduct of scheduled meetings of the Action Committee and its Executive Committee and various Work Groups of the Assembly organization. Costs associated with these activities are administrative and clerical in nature and include mailings, documentation, public announcements, and copy services. A membership data base and mailing list will be maintained and expanded upon request by interested individuals.
2. Two Water Assemblies will be conducted during the program period. These Assemblies will be major regional conferences and will be utilized to present components of the regional water plan for extended public feedback and recommendations. A conference coordinator will be assigned or hired to make arrangements for the conference site and events.

[Deliverables: Meeting Support, Assembly Conferences]

Task 3. Preliminary Alternatives Analysis

The purpose of the Preliminary Alternatives Analysis is to establish a formal and structured decision process for identifying and evaluating feasible alternatives for regional water management to meet anticipated water demand. As alternatives are formulated, they will be subject to screening criteria that have been ranked or weighted for relative importance and technical merit. A selection of preliminary alternatives for regional water management will be compiled and analyzed for public review. This task will be accomplished through the combined efforts of the Alternatives Work Group of the Middle Rio Grande Water Assembly Action Committee representing both the rural and urban sectors of the water planning region, and MRGCOG staff.

Negotiation for subcontracts may be required in order to carry out this task.

Subtask 3.1 Survey Research and Public Comment Database.

This subtask directly supports the development of screening criteria and alternatives analysis and provides necessary background information and validation to the alternatives. Requirements for this subtask are as follows:

1. Two survey instruments will be designed to gage public opinion and provide input to: 1) the problem statements, goals and objectives of the regional water plan; and 2) the alternatives analysis. All surveys will have a valid statistical basis and methodology and will be pre-tested for bias or skew. Surveys will also reflect any variances between the rural and urban sectors of the water planning region. The surveys will be designed to identify issues and beliefs and values related to community development and water resources management in the region.
2. The response from the initial survey(s) will be used to develop the problem statements, identify goals and objectives of the regional water plan. The second survey shall be used to aid in the development of the preliminary alternatives. Urban and rural sector differences will be identified.
3. Information from the surveys will be compiled and categorized for input to the Public Comments Database and will describe any rural/urban sector differences. This subtask includes an overall analysis of the Public Comments Database in order to provide essential input for the development of preliminary alternatives.

[Deliverables: Water Survey Report(s) including questionnaires and methodology, Analysis of the Public Comments Database]

Subtask 3.2 Screening Criteria for the Evaluation and Testing of the Preliminary Alternatives.

The screening criteria and methodology for the evaluation and testing of preliminary alternatives for water management in the water planning region will be developed by MRGCOG staff with input from the Alternatives Work Group of the Middle Rio Grande Water Assembly Action Committee representing both the rural and urban sectors of the water planning region. Screening criteria demonstrating the ability to implement an alternative may include, but are not limited, to the following:

1. Analysis of the Public Comment Database in terms of social, cultural, and political beliefs and perceptions and quality-of-life issues.
2. Technical feasibility of the proposed preliminary alternative(s).
3. Reasonable cost and cost/benefit of proposed preliminary alternative(s).

4. Potential environmental impacts of the preliminary alternative(s).
5. Legal and institutional constraints to the preliminary alternative(s).

[Deliverables: Criteria and Methodology for Alternatives Analysis]

Subtask 3.3 Analysis of Preliminary Alternatives.

The objective of this subtask will be to identify a selection of feasible alternatives for water management in the water planning region. These preliminary alternatives will be presented for further review and ranking to the Alternatives Work Group of the Middle Rio Grande Water Assembly Action Committee representing both the rural and urban sectors. The requirements for completion of this subtask include the following:

1. Preliminary alternatives will be developed through the formal screening process established by Subtask 3.2 above. The most reasonable and feasible preliminary alternatives will be identified.
2. The preliminary alternatives will illustrate a range of choices for regional water resources management in both the urban and rural sectors of the water planning region which may include, but are not limited to, the influences of economic development, new water supply sources, recycling and reuse of water, water harvesting, retirement of water rights, water banking, etc. Differences between urban and rural sectors will be identified in the report on the preliminary alternatives.

[Deliverables: Report on Preliminary Alternatives for Regional Water Management]