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PRELIMINARY DRAFT

RED RIVER VALLEY WATER SUPPLY PROJECT

FINANCIAL ANALYSIS

SPECIFIC PLAN OF STUDY

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INTRODUCTION

Dakotas Water Resources Act (DWRA) directs the Secretary of the Interior to conduct a comprehensive study of the water quality and quantity needs of the Red River Valley in North Dakota and possible options for meeting those needs. The Financial Analysis specific Plan of Study (Financial SPOS) identifies tasks which, when completed, will establish a range of costs (depending on the alternative) that participant water systems could expect to pay if they are served by the proposed Red River Valley Water Supply Project (Red River Project).

The DWRA directs the Secretary of the Interior to generate two Red River Project related products: the Report on Red River Valley Water Needs and Options (Needs and Options Report) and the Red River Project Environmental Impact Statement (EIS). Reclamation has sole responsibility for the Needs and Options Report while Reclamation and the State of North Dakota will jointly prepare the EIS. The financial analysis of each alternative will be presented in the Needs and Options Report and maybe used as one of the evaluation criteria in the EIS.

The general outline for the development of the Needs and Options Report and EIS is provided in the Master Plan of Study (MPOS). The MPOS provides more study background, authority, scope, process, purpose, and an overview of all study activities.

Purpose and Objective

The purpose of this Financial SPOS is to describe the process used in performing a comprehensive and detailed analysis of the financial and repayment costs associated with the Red River Project. The analysis is intended as a basis of comparison among alternatives and does not represent the final repayment rates. A Red River Project repayment contract will be negotiated after selection of an alternative (Record of Decision) by the Secretary of the Interior (assuming the No-Action alternative is

not selected and the project is authorized). The repayment contract will be publicly negotiated and based on the requirements as set forth in DWRA and Reclamation law.

Project costs will be developed for each of the alternatives presented in the Needs and Options Report. The DWRA, as interpreted by Reclamation, in addition to other Reclamation laws, policies, and regulations will provide the guidance required to estimate the project repayment costs.

The objective of the Financial SPOS is to provide the Red River Project beneficiaries an accurate analysis of the financial implications of their participation. This includes water service cost breakdowns for each water system and/or typical end water user. This type of cost data, in addition to other alternative data, will be used to secure a level of commitment from each municipal, rural, and industrial (MR&I) water system interested in being served by the proposed Red River Project. The financial and repayment cost data could also be used in the EIS as one of the screening criteria to identify *reasonable* alternatives. *Reasonable* alternatives are defined as those alternatives that are practical and feasible. Financial analysis of *reasonable* alternatives is conducted in Financial 3.

The financial and repayment data required to conduct this analysis will be derived from a variety of sources including:

- Bureau of Reclamation (Reclamation) Red River Valley Water Financial and Repayment, Phase 1A; *Appraisal Report* (April 1998)
- Bureau of Reclamation (Reclamation) Red River Valley Water Financial and Repayment, Phase 1B; *Instream Flow Financial and Repayment* (August 1999)
- Reclamation Red River Valley Water Financial and Repayment, Phase II; *Appraisal of Alternatives to Meet Projected Shortages* (January 2000)
- Other sources as may be needed

Financial SPOS Organization

The Financial SPOS covers three main study tasks:

- Disclose assumptions to be used in financial analysis and the type of output or results required for the Needs and Options Report (Financial 1).

- Conduct financial and repayment cost analysis for each of the alternatives developed at appraisal-level in the Needs and Options Report. This includes alternatives developed in the previous Phase II Report in addition to any new alternatives identified by Reclamation or through public scoping of the EIS (Financial 2).

- Conduct financial and repayment analysis at a feasibility-level (Financial 3) for all reasonable alternatives selected in the EIS (EIS 5.7).

FINANCIAL 1 – FINANCIAL ANALYSIS ASSUMPTIONS

Chapter 8 of the Phase II Report established a method for conducting financial analysis for earlier phases of the Red River Valley studies. The same methods will be used in the Needs and Options Report. However, as the Needs and Options report progresses, some adjustments in the methods may be necessary to account for changes in financial assumptions or in the manner in which the financial results are reported.

Financial 1.1 – Financial Analysis Assumptions

A number of assumptions are incorporated into the financial analysis work conducted for the Needs and Options Report. Some of these assumptions include; interest rates, specific water use and rate structures, financial options, and length of repayment period.

The following are some of the assumptions used in the Phase II Report (Chapter 8 and Appendix A). These assumptions will also be used in the Needs and Options Report financial analysis:

- The interest rate applied to any uses of Garrison Diversion Unit (GDU) facilities for municipal, rural, and industrial water supplies is 3.225 percent.

- The interest rate used for the non-Federal share of distribution systems is 6 percent (approximates current bonding rates in North Dakota).

- The annual or monthly repayment estimates will be based upon a 40-year term (same as provided for in the current master repayment contract with the Garrison Diversion Conservancy District).

- Alternatives which provide improved instream flow rates for the benefit of recreation, fish and wildlife, and water quality will have a portion of costs allocated to these purposes.

- Costs used in financial analysis are based on the cost estimates for each alternative plus actual GDU principal supply works expenditures to date.

Two different methods will be used to generate repayment estimates:

- The "total demand method" is based on assigning the various costs across the entire study area based on Reclamation's year-2050 water demand (117,000 acre feet) and population estimates.

- The "shortage method" assigns the various costs based on the worst-year shortage (1934), which is 61,286 acre-feet.

Financial 1.2 – Financial Analysis Format

The financial analysis data will be presented in the same format as Table 8.1 and 8.2 in Chapter 8 of the Phase II Report and will include alternative cost data for the following:

- Estimated monthly water rate costs will be developed based on a per household and per 1000 gallon breakdown.

- Alternative costs broken into five major categories:

    - GDU and Red River Valley nonreimbursable supply work costs (Federal).

    - GDU and Red River Valley reimbursable supply work costs (non-Federal).

    - GDU deferred (unused capacity) reimbursable supply costs.

    - Alternative distribution-system facility costs (Federal @ 65 percent).

- Alternative distribution-system facility costs (Non-Federal - using current state policy of 35 percent sponsor costs).

Financial 1.3 – Review Financial Analysis Assumptions

The financial assumptions and format from Financial 1.1 and 1.2 will be reviewed prior to being used in other specific plans of study (SPOS) tasks (Needs 8.1 and EIS 5.7). Draft products associated with tasks within Financial 1will be reviewed by Reclamation and/or study teams, changes incorporated where appropriate and final task products provided for use in other SPOS tasks.

FINANCIAL 2 – FINANCIAL ANALYSIS OF APPRAISAL-LEVEL ALTERNATIVES

The Phase II Report included a financial analysis of each alternative developed at the appraisal-level (Chapter 8 and Appendix A, *Phase II, Appraisal of Alternatives to Meet Projected Shortages*). This task reviews and updates financial and repayment cost analysis for each of the appraisal-level alternatives presented in the Phase II report. Additional financial and repayment analysis will be conducted for new appraisal-level alternatives identified by Reclamation or during public scoping. The results of the financial analysis will be presented at follow-up water user meetings, as described in Needs 8.1, and the selection of reasonable alternatives to be studied in more detail as described in EIS 5.7.

Financial 2.1 – Update Financial Analysis of Phase II Alternatives

This task includes reviewing and updating, as necessary, the financial analysis originally presented for each alternative in Chapter 8 and Appendix A of the Phase II Report. The financial analysis will use assumptions and guidance provided in the Financial 1 section.

Financial 2.2 – Financial Analysis of New Appraisal-Level Alternatives

This task describes the methods used to estimate costs for each of the new alternatives developed at the appraisal-level in the Needs and Options Report. The new alternatives are summarized in Engineering 2.2. The financial analysis uses assumptions and guidance provided in the Financial 1 section.

Financial 2.3 – Review Financial Analysis of Appraisal-Level Alternatives

Results of the financial and repayment analysis conducted under Financial 2.1 and 2.2 will be reviewed prior to being used in other specific plans of study tasks (Needs 8.1 and EIS 5.3). The financial analysis of appraisal-level alternatives will be reviewed by Reclamation and/or study teams, changes incorporated where appropriate, and final task products provided for use in other SPOS tasks.

FINANCIAL 3 – FINANCIAL ANALYSIS OF REASONABLE ALTERNATIVES

Engineering 2 (Development of Alternatives at the Appraisal-Level for selection in EIS) describes the work required to develop previously studied and newly developed alternatives at the appraisal-level. These appraisal-level alternatives will be evaluated in the EIS (EIS 5.7 – Identify Alternatives for Detailed Study) to determine which are reasonable (practical and feasible) and should be studied in more detail. Each of the alternatives selected in the EIS will be evaluated at a feasibility-level (Engineering 5) and associated costs estimated (Engineering 6). This section will describe the financial analysis work to be conducted on each reasonable alternative at the feasibility-level.

Financial 3.1 – Financial Analysis of Reasonable Alternatives

This task estimates costs for each of the reasonable alternatives selected in the EIS and developed at the feasibility-level. The financial analysis follows assumptions and guidance provided in the Financial 1 section.

Financial 3.2 – Review Financial Analysis of Reasonable Alternatives

The financial and repayment analysis conducted under Financial 3.1 will be reviewed prior to being used in other SPOS tasks. The financial analysis of reasonable alternatives will be reviewed by Reclamation and/or study teams, changes incorporated where appropriate, and final task products incorporated in the Needs and Options Report.

FINANCIAL 4 - PREPARATION OF FINANCIAL APPENDIX

The Financial Appendix will document work conducted under the Financial SPOS.

Financial 4.1 - Compile and Write Financial Appendix

This task develops the Financial Appendix and summarizes the results of tasks identified in the Financial SPOS. The Financial Appendix will include the following sections:

- Financial SPOS Purpose, Objective and Organization
- Financial Analysis Assumptions and Results
- Financial Analysis at the Appraisal-Level for all Alternatives
- Financial Analysis of reasonable Alternatives
- Conclusions
- Review and Comment Appendix

Financial 4.2 - Review Financial Appendix

The draft Financial Appendix as outlined in Financial 4.1 will be reviewed by Reclamation and/or study teams, as necessary.

Financial 4.3 - Complete Financial Appendix

Reclamation will incorporate review comments where appropriate and complete the Financial Appendix for inclusion in the Needs and Options Report.