FINAL

ENVIRONMENTAL IMPACT STATEMENT

LINCOLN-PIPESTONE RURAL WATER

Lake Benton, Minnesota

Existing System North/Lyon County Phase
Northeast Phase Expansion

United States Department of Agriculture

RURAL UTILITIES SERVICE

(THE LEAD AGENCY)
and

U. S. ENVIRONMENTAL PROTECTION AGENCY REGION 8

(A COOPERATING AGENCY)

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INTRODUCTION

On February 23, 1998 the Rural Utilities Service announced the availability of the Draft Environmental Impact Statement (DEIS) in the Federal Register (63 FR 8901) for the Lincoln-Pipestone Rural Water Existing System North/Lyon County Phase project and Northeast Expansion Phase project proposal. In addition to the Federal Register, public notices were published in the following newspapers in Minnesota: Ivanhoe Times (February 26 and March 5, 1998); Marshall Independent (February 27-29, 1998); Canby News (February 25 and March 4, 1998); and the Lincoln County Valley Journal (February 25 and March 4, 1998); and in South Dakota: Gary International (February 25 and March 4, 1998); Clear Lake Courier (February 25 and March 4, 1998); and the Brookings Register (February 26-28, 1998). The DEIS was also made available for public review at a number of locations throughout the area in both Minnesota and South Dakota and was available over the Internet at RUS's website (http://www.usda.gov/rus/water/ees/eis.htm). Subsequent to a 60-day public review period, RUS sponsored a public meeting to solicit comments from the public. This meeting was held on July 30, 1998 in Canby Minnesota. The public meeting was announced in the Federal Register (63 FR 3461) on June 24, 1998 and in the above newspapers.

RUS received comments from 26 Federal and State agencies, Congressional representatives, public bodies, individuals, and environmental interest and industry groups. The following table outlines the commenters, commenter affiliations, and the number of pages of comments received:

Table 1 - Summary of Comments

Commenter	Affiliation	Number of Pages
Minnesota Department of Natural Resources	State Environmental Regulatory Agency	17
South Dakota Department of Environment and Natural Resources	State Environmental Regulatory Agency	4
Minnesota Historical Society		1
	3	**22**
Region 8	Federal Environmental	3
U. S. Department of Interior	Federal Natural Resource Mgmt. Agency	7
U.S. Army Corps of Engineers, Omaha District	U. S. Army	2
U.S. Army Corps of Engineers, St. Paul District	U.S. Army	1
Subtotal Federal Agencies	**4**	**13**
East Dakota Water Development District (2 letters)	Public Body	9
Lincoln-Pipestone Rural Water	Public Body	7
City of Minneota, Minnesota	Public Body	1
City of Hazel Run	Public Body	2
Marshall Municipal Utilities (2 letters)	Public Body	3
Minnesota Southwest Regional Development Commission	Public Body	3
Subtotal Public Bodies	**6**	**25**
U. S. Senator Paul Wellstone/U. S. Congressman David Minge	U.S. Congress	1
State Senator Bernie Hunhoff	South Dakota State Legislature	1
Subtotal Congressional	**2**	**2**
Natural Audubon Society	Environmental Interest Group	2
Marshall Industries	Industry Interest Group	1
Subtotal Environmental and Industry Interest Groups	**2**	**3**
Minnesota Corn Processor	Industry	1
Subtotal Industry	**1**	**1**
Jim Thompson	Citizen	3
Lyle Tobin, Lake Cochrane Improvement Association	Citizen	3
Clayton Holt	Citizen	2
Eugene Eiler	Citizen	1
John Lentz	Citizen	1
Charlotte Baum	Citizen	1
Jim and Sheryl Irvine	Citizen	1
Bob and Joyce Otkin	Citizen	1
Subtotal Private Citizens	**8**	**13**

The following table summarizes the type of commenter and the total number of pages received from the DEIS's public comment period and subsequent to the public meeting:

Table 2 - Summary of Commenter Affiliations

Commenter	Type	Number of Pages
State Agencies	3	22
Federal Agencies	4	13
Public Bodies	6	25
Congressional	2	2
Environmental and Industry Interest Groups	2	3
Industry		1
	8	13
Total	**26**	

RUS has determined that the comments, while extensive on a few issues, does not warrant a revision to the DEIS. RUS proposes, where comments where determined to

each commenter. Where similar comments are raised by more than one commenter, later comments will be referenced to the first time the comment is responded to. In

observation wells in aquifers utilized by the Burr Well Field and in piezometers from selected fens and this information will be referenced as appropriate in general or in

Copies of all comments received as part of the DEIS's public comment period and

to A-26)

In Appendix E of the DEIS, RUS included comments from the MDNR from a preliminary

from the South Dakota Department of Environment and Natural Resources (SDDENR) were inadvertently excluded. For those interested parties, the
are now included in Appendix A-27.

Graphs and hydrographs from recent data collection efforts can be found in Appendix B.

Table 3 - Summary of Appendix B Documents

Document No.	Document
	Annual Precipitation 1988-98, Canby, MN
B-2	Long-Term Precipitation Records, Canby, MN (1917-1998)
B-3	Cumulative Burr Aquifer Pumpage
B-4	Average Daily Burr Aquifer Pumpage
B-5	1998 LPRW Use at Burr Water Treatment Plant, Total Water Supplied From All Wells
B-6	1998 LPRW Use at Burr WTP, Individual Well Production
B-7	LPRW Total System Use Per Month
B-8	Omitted
B-9	Omitted
B-10	Water Elevation Trends for Observation and Production Wells
B-11	Observation Well (OW) 3-90 Water Elevations
B-12	OW 1-93 Water Elevations
B-13	OW 2-93 Water Elevations
B-14	OW 3-93 Water Elevations
B-15	OW 4-93 Water Elevations (B.A. Liesch Data)
B-16	OW 4-93 Water Elevations (MDNR Data)
B-17	OW 5-93 Water Elevations (B.A. Liesch Data)
B-18	OW 5-93 Water Elevations (MDNR Data)
B-19	Sioux Nation - Deep Steel OW Water Elevations
B-20	Comparison of Sioux Nation Deep Steel OW and OW 5-93
B-21	OW R2 93-10 Water Elevation, SD/MN State Line OW
B-22	OW R2 94-26 Water Elevation, West End of Lake Cochrane
B-23	OW R2 94-33 Water Elevation, 2.25 Miles West of Lake Cochrane
B-24	Fairchild Fen Water Table Well
B-25	Fairchild Fen Deep Well, Hand Readings

RUS RESPONSES TO PUBLIC COMMENTS

In accordance with 40 CFR 1503.4, Response to Comments, RUS has individually and collectively assessed and considered all of the comments received from all parties. As mentioned earlier, where substantive comments were determined by the Agency to merit individual responses, RUS will provide a direct response. Where applicable, for issues determined to be outside the scope of the EIS or not particularly relevant to the decisions regarding the proposed action, RUS will briefly state the reasons why the issue does not warrant further agency response. All other comments were considered, as appropriate.

Readers are reminded that the only issue subject to a RUS decision at this time is whether or not to provide financial assistance to LPRW for the construction of the Northeast Phase Expansion. All decisions regarding the disposition of LPRW's Water Appropriation Permit at the Burr Well Field are subject to the approval of the MDNR, Division of Water. Based on analyses performed in this EIS, RUS will make recommendations to the MDNR but all decisions regarding LPRW's permit are subject to MDNR's regulatory authority.

Again to remind readers, the objective and purpose of the EIS as stated in the DEIS's Executive Summary (page iv) was:

> Therefore, the primary issues to be evaluated in the EIS include the outstanding concerns from the earlier 1992 EA [Environmental Assessment], that is, the environmental effects on fens and Lake Cochrane (herein referred to as surface water resources) from groundwater appropriations at the Burr Well Field, and the potential environment impacts from the construction of the Northeast Phase Expansion proposal. The primary objective of the Northeast Phase Expansion proposal is to provide rural water service to rural residents (240 rural users) [corrected - 170 rural users] who have requested service and to the rural communities of Hazel Run and Echo, Minnesota. The proposal includes the installation of 170 miles of 2- to 8-in pipelines, an elevated water storage tank near Minneota, and a booster station near Green Valley.

Table 4 is an index to all of the comments submitted to RUS on the DEIS from the public and after the public meeting. Each document will be assigned a number for identification in Appendix A. For example, the first document included in Appendix A is from the MDNR; this document will be identified as A-1. Each comment that RUS selected for responses will be identified by a number affixed to the left of the comment in each applicable document. For example, the first response to comments in the first document will be assigned a 1-1 number and so on throughout the document. Accordingly, the first comment on the second document will be assigned a 2-1 number and so on depending on the number of comments RUS is responding to.

Table 4 - Appendix A and Organization of Responses to Comments

Document Number	Commenter	Date	No. of Pages (without attachments)
A-1	Minnesota Department of Natural Resources	4/23/98	17
A-2	South Dakota Department of Environment and Natural Resources	4/22/98	4
A-3	U. S. Environmental Protection Agency	4/24/98	3
A-4	East Dakota Water Development District	4/24/98	6
A-5	Jim Thompson, Thompson Engineering Company	4/23/98	3
A-6	Lincoln-Pipestone Rural Water	4/22/98	7
A-7	U. S. Department of Interior	6/10/98	5
A-8	U. S. Department of Interior	6/17/98	2
A-9	National Audubon Society	4/16/98	2
A-10	City of Hazel Run, Walter Wilson, Clerk and David Esp, Mayor		2
A-11	Lake Cochrane Improvement Association, Lyle Tobin	6/30/98	3
A-12	Clayton Holt	4/20/98	2
A-13	Eugene P. Eilers	3/4/98	1
A-14	John Lentz	Undated	1
A-15	U. S. Army Corps of Engineers, Omaha District	4/14/98	2
A-16	U. S. Army Corps of Engineers, Omaha District	3/23/98	1
A-17	Minnesota Historical Society	5/18/98	1
A-18	Senator Paul Wellstone and Congressmen David Minge	4/28/98	1
A-19	South Dakota State Senator Bernie Hunhoff	3/24/98	1
A-20	East Dakota Water Development District	7/31/98	1
A-21	Marshall Municipal Utilities	8/1/98	2
A-22	Marshall Industries Foundation	9/1/98	1
A-23	Southwest Regional Development Commission	3/20/98	5
A-24	Charlotte Baum	4/1/97	2
A-25	Jim and Sheryl Irvine	3/17/98	1
A-26	Bob and Joyce Otkin	3/10/98	1

Discussions and responses to the comments will reference several U.S. Department of Agriculture (USDA) agencies. During the course of this project, USDA has undergone several reorganizations. In order to minimize confusion, readers are reminded that the original loan and grants provided to LPRW were made by the Farmers Home Administration (FmHA). During and prior to the decision to prepare an EIS, the Water and Waste program previously administered by the FmHA was transferred to the Rural Development Administration (RDA). As part of the another USDA reorganization, RDA programs were then transferred along with the Rural Electrification Administration to the RUS. It was RUS's decision to prepare this EIS. RUS programs are administered by USDA, Rural Development (RD) staff in Minnesota.

Individual Responses to Comments

1. Minnesota Department of Natural Resources

Comment No.	Comment
1-1	RUS agrees with the need to develop an appropriate contingency plan. LPRW currently has a contingency plan (see reference, (Krause, 1994) Krause, Gorden, Burr Water Source Contingency Plan, July 1994, Dewild, Grant, Reckert, and Associates Company). While this plan will need to be revised to more effectively address the water resource management issues raised by Burr Well Field appropriations, it is a start. As part of its preferred alternative and as a condition for approval of financial assistance for the Northeast Phase Expansion proposal to LPRW, RUS will require that LPRW prepare a Water Resource Management Plan (WRMP) that will document in a comprehensive manner all water resources issues related to the Burr Well Field and the surface water resources hydraulically connected to the Burr Unit of the Prairie Coteau. As outlined in the DEIS, this plan should include operational protocols and standard operating procedures for groundwater appropriations at the existing Burr Well Field and any other supplemental well fields developed so as to minimize reductions in the potentiometric surface and a monitoring plan establishing monitoring protocols and documenting impact thresholds for surface water resources in the area. In addition to these requirements, RUS, as recommended by numerous commenters, will require integrating a contingency plan and an exploration plan for the development of a supplemental well field in the Prairie Coteau or Altamont aquifers into the WRMP. RUS continues to recommend that the MDNR integrate this WRMP into its water appropriation permitting process. With regard to a contingency plan, RUS does not agree with the assertion that the EIS should develop and dictate the elements of a contingency plan. RUS does not have the technical capabilities or wherewithal to establish such a plan. RUS believes that an appropriate contingency plan that meets the needs of LPRW and the MDNR should be negotiated and developed between these parties. If appropriate this plan could be established a condition of the Burr Well Field's Water Appropriation Permit. If desirable or necessary, technical staff from the U. S. Environmental Protection Agency, Region 8 has offered to assist in developing the technical and managerial components of such a plan. RUS's role with regard to a contingency plan and the overall WRMP is to require, as a condition of financial assistance, the preparation of such plans. Successful completion and technical sufficiency of such plans could

be linked to the issuance of the MNDR's Water Appropriation Permit and will be linked to the release of RUS's funding for the Northeast Phase Expansion proposal. It is assumed that as stated formally in writing between the Governors of South Dakota and Minnesota, MDNR will seek and consider input from South Dakota prior to the issuance of the Burr Well Field Water Appropriation Permit. In order to establish technical sufficiency of the WRMP and prior to the release of financial assistance to LPRW, RUS will consult with the USEPA's, Region 8 technical staff. Consultation with the USEPA will be on-going as part of its continuing role of providing technical assistance to RUS through the cooperating agency agreement adopted as part of this EIS.

RUS agrees with MDNR in the need for LPRW to develop a comprehensive plan to define their long-range operational and financial goals. As mentioned in and during the preparation of the DEIS, LPRW had a funding request pending with RUS to finance a nitrate reduction treatment process at the Holland Well Field. In conjunction with this funding request and the Northeast Phase Expansion funding application, Minnesota Rural Development staff requested that LPRW formalize their long-range operational, managerial, and financial plans and to prioritize its funding needs. The goal of these plans is to include input from state regulatory agencies and to encourage LPRW to seek out additional funding sources to leverage RUS's limited funding. At this time, these plans are be negotiated and developed.

RUS acknowledges MDNR's support for the development of a well field and water treatment facility on the east side of the system (the Wood Lake Alternative), however, as stated in DEIS this alternative is not considered economically feasible at this time. If or when LPRW expands to service areas beyond those envisioned by the Northeast Phase Expansion, that alternative may prove more economically viable. Until that time, however, RUS continues to support its preferred alternative.

1-2 Comments regarding project water needs at the Burr Well Field will be addressed in the comments on Section 1.1, Purpose and Need.

1-3 MDNR's concern for the expansion of the LPRW system is noted. The Northeast Phase Expansion phase ($4.33 million dollars) represents a modest expansion effort with regard to the system as a whole. As addressed in this comment, the expansion phase does include construction proposals to address storage capacities. System improvements to address nitrate problems were identified in various tables of the DEIS (Tables ES-4, 1-4, 2-4, 2-5). In response to a Minnesota Department of Health's compliance agreement regarding high nitrate levels, RUS approved an application from LPRW to upgrade the Holland Water Treatment Plant.

This facility upgrade will reduce nitrate levels to levels less than the regulatory maximum contaminant levels.

The second portion of this paragraph deals with LPRW's relationship with the City of Marshall. The relationship between the City of Marshall, Marshall Municipal Utilities (MMU), Minnesota Corn Processors (MCP), and LPRW was the subject of numerous comments received by the Agency. The issue raised in this comment relates to the participation cost of providing service to MMU and MCP in relation to the "rural" users of the LPRW system and the eligibility of MMU/MCP for RUS funding. These concerns as well as the overall issue of MMU/MCP will be addressed in this response. The DEIS addressed LPRW's relationship and the status of the water purchase contract with the City of Marshal on page 34.

Eligibility requirements for RUS's programs are defined for applicants and the areas to be served. The following citations state RUS program regulations, 7 CFR 1780 PART 1780, Water and Waste Loans and Grants:

> §1780.7 Eligibility. Facilities financed by water and waste disposal loans or grants must serve **rural areas**.
> (a) Eligible applicant. An applicant must be:
> (1) A public body, such as a municipality, county, district, authority, or other political subdivision of a state, territory or commonwealth;
>
> §1780.3 (a) **Rural and rural areas** means any area not in a city or town with a population in excess of 10,000 inhabitants, according to the latest decennial census of the United States.

Therefore based on the above citations, the City of Marshall, while a rural community, is not an eligible applicant for RUS programs because it has a population in excess of 10,000 inhabitants. The MCP is located within the incorporated area of Marshall and therefore, by definition, is located in a non-rural area.

While RUS does not oppose or prohibit its borrowers from supplying water to non-rural users, the Agency's loan and grant funds may not be used to finance any portion of the cost of a facility which serves those areas. If users in non-rural areas are proposed during facility planning, those users must contribute a proportionate share of facility costs in accordance with RUS regulations.

It is apparent that confusion remains regarding the relationship between LPRW and MMU and the MCP. The following will attempt to outline the facts of the matter as documented in RUS case files and from information provided by LPRW.

Preliminary engineering reports prepared during the early planning phases

of the Existing System North/Lyon County (ESN/LC) phase and provided to RUS and the MDNR demonstrated that LPRW was considering the potential to include MMU and/or the MCP as part of the original planning area proposed to be served by the Burr Well Field. Notwithstanding these discussions and continuing service proposal discussions between the parties (most likely initiated in 1990), MMU, MCP, and LPRW did not agree and sign a water purchase contract until early 1997. The parties to this water sales contract are LPRW and MMU. As stated in the DEIS (p. 35), LPRW installed 3.5 miles of 10-inch pipeline from a portion of the distribution network utility lines installed as part of the ESN/LC phase construction activities. The installation cost of this line has been amortized over this 5-year water service contract.

The following is a chronology of events as documented in the LPRW case file maintained by Rural Development (RD):

1/91 Pre-application with the Preliminary Engineering Report (PER) submitted to the Farmer Home Administration (predecessor to RUS) by LPRW. The PER included MMU/MCP in the scope of the potential service area.

3/91 Notice of eligibility determination by RD to LPRW.

4/91 Full application submitted to RD by LPRW.

1/92 Environmental Assessment (EA) completed. City of MMU and MCP was not included in EA because LPRW submitted information stating that the proposed system was sized for only the new rural users and small communities.

2/92 Finding of No Significant Impact published.

3/92 RD approved loan and grant for ESN/LC phase.

10/92 LPRW requested design changes due to increased rural customer demand for water.

2/93 Bid opening for construction activities of project.

3/93 LPRW submitted a subsequent loan request to cover cost overruns due to high construction bids and additional customers requesting service. Loan approved by RD.

LPRW's loan request discusses the potential for water sales to MCP. Estimated construction costs for installing pipelines for proposed MCP service connection would result in change order of $800,000. LPRW offers service proposal to MCP for the cost of the change order. MCP declines proposal.

Subsequent to MCP's decline of LPRW's proposal, the case file contains no additional notes regarding the sharing of capital costs for the Burr Water Treatment Plant and MCP.

4/93 Construction begins.

4/94 RD initiates an amendment to the earlier prepared EA.

7/94 LPRW again offers MCP chance to connect for the $800,000 change order cost and again MCP declines proposal.

1/95 LPRW begins water appropriations at the Burr Well Field.

3/97 LPRW and City of MMU negotiate and sign a 5-year water service contract. Contract includes a capital cost reimbursement of $229,000 payable over the life of the contract. Water sold from LPRW to MMU will supplement MMU's water delivery to MCP.

In addition to the above, LPRW, through its engineering consulting firm, Dewild Grant Reckert and Associates, was asked to respond to the MMU/MCP issue. Below is a portion of their response:

> "The need of additional water by MMU/MCP existed well before the construction of the project [ESN/LC phase] and various contact and discussions took place [between LPRW and MMU/MCP]. LPRW, with the assistance of their engineer, evaluated a number of options and addressed some of them in the formal reports used to plan the project. It is not unusual however, for communities that are included in a preliminary planning study to decide not to become part of the project. For example, on the Nobles County phase of the project, the cities of Rushmore, Adrian, Wilmont and others were included in the study phase but did not accept a service proposal and the facilities that were built did not include capacity for them. The fact that there is capacity available at this time is because the NE phase has not yet been built, nor has the per connection water use for the

rural customers in the North [ESN/LC] phase grown to the amounts used to design the system's facilities. Again this is the reason the MMU/MCP service agreement is limited to five years - it is expected that the capacity currently used by MMU/MCP will be needed by the NE phase and the current and future rural customers on the system.

At various stages during the development of the Existing System North/Lyon County [ESN/LC] phase cost of service proposals were made to MMU/MCP for full-time service. The proposals were similar to those made to communities that are now part of the LPRWS [LPRW system] and include a share of treatment, storage, booster pumps, etc. However, implicit on those proposals is a commitment by LPRW to provide permanent service. Essentially, the communities paid for a portion of the system, to reserve that capacity for their present and future needs. Because of the concerns raised during the construction of the project, it was not clear if the DNR Water Appropriation Permit could be increased to provide the needs of MMU/MCP and therefore the permanent service proposal was no longer felt to be appropriate by LPRW.

After initial construction of a rural water system such as this, usage by members increase slowly as they convert their operations to rural water and as more members sign up for service. As a result, after the system was put into operation, it was apparent that some unused capacity existed in the well, treatment, and distribution system. At the same time MMU/MCP's need for water continued. It was therefore decided that if MMU/MCP would pay for any new facilities needed to provide service that LPRW would commit to a five-year service contract. Five years was selected because it was felt that sufficient excess capacity existed to service the current users and initial NE Phase users for that period of time. The arrangement has proven to be of benefit to MMU/MCP as well as LPRW and will be reviewed at the end of the five-year period. The key distinction in the arrangement with MMU/MCP versus the other communities is that no long-term commitment for service has been made. If a long-term commitment is made in the future, it will be similar to those currently in effect with other communities on the system" (Madden, personal communication, 1999).

This and many other commenters are concerned that LPRW providing water to MMU/MCP is creating water demands that may be overburdening an aquifer (Burr Unit) that is supporting delicate, little understood fen ecosystems and other surface water resources such as Lake Cochrane. Concern is expressed regarding developing contingencies to meet the water needs not only of MMU/MCP, but LPRW rural customers and

municipalities. As will be discussed later, LPRW has sufficient capacity to supply all rural area users and municipalities in the service area designed to served by the Burr Well Field (herein referred to as the Burr Source service area). One of the primary questions posed by commenters is what if significant adverse environmental impacts are detected in the surface water resources under consideration in this EIS and LPRW is required to reduce or restrict water supplies to MMU/MCP what would be the resulting ability of MMU/MCP to meet its existing needs?

At the present time, the MDNR reports the following Water Appropriation Permits for MMU, MCP, and the City of Canby (Canby information is provided in that it affects the availability of potable water in the region).

TABLE 5 - SUMMARY OF WATER APPROPRIATION PERMITS FOR CITIES OF CANBY AND MARSHALL AND THE MINNESOTA CORN PROCESSOR

Municipality/ Industry	MDNR Permit Number	No. of Wells	Well Capacities	Use Record	
				Year	Gallons (millions)
City of Canby	80-4157	4 (2 standby)	1,350 gpm 120 Mgpy	1994	113.3
				1995	106.6
				1996	96.5
				1997	83.1
				1998	88.4
Marshall Municipal Utilities	77-4305	13	6,025 gpm 1,400 Mgpy	1996	1,247
				1997	1,318
				1998	1,289
Minnesota Corn Processors	99-4042 (issued 9/11/98)	2	12" - 700 gpm 6" - 300 gpm Total - 315 Mgpy	1998	0
	96-4207	8	1005 gpm 382 Mgpy	1996	85.1
				1997	219.5
				1998	228.0
	92-4024	4	140 gpm 74 Mgpy	1993	24.0
				1994	7.0
				1995 -98	No reported use

Source: Japs, J., MDNR, Division of Waters, personal communication, 1999.

While the above table demonstrates that even though the MMU and MCP both have a series of well fields and permitted water appropriations, MMU have signed a water service contract with LPRW in 1997. Taking into account their existing well fields, the primary reason for MMU/MCP's desire to purchase water from LPRW relates to water quality, cost of water treatment, and LPRW's availability of excess capacity prior to construction of the Northeast Phase Expansion. The water provided by LPRW from the Burr Well Field (both Burr Unit and Altamont aquifers) is reported to be better quality water and is cheaper to treat than the groundwater in the Marshall area.

If groundwater supplies had to be reduced from the Burr Unit under emergency conditions or during conditions where significant adverse environmental impacts to surface water resources were occurring, MMU/MCP would appear likely to be able to use their existing well fields and treatment capacities to supply their immediate or emergency needs.

Subsequent to the City of Canby updating its water treatment plant and in an emergency capacity, Canby could be potentially able to provide service to its previous customers in the Yellow Medicine phase. These customers are now served by LPRW.

The information related to the existing well fields and capacities in the Cities of Canby and Marshall and MCP could be included in the proposed contingency plan discussed in response 1-1.

1-4 Because of a compliance agreement between LPRW and the Minnesota Department of Health concerning high nitrate levels at the Holland Well Field, RUS approved a loan to finance an upgrade to the Holland Water Treatment Plant to address these contaminants. The added costs for the Holland treatment plant upgrade ($3,056,000), EIS participation costs ($476,000), and Existing System North Bond Retirement ($1,500,000) are the reasons the No Action alternative has a cost impact. These are costs that LPRW was facing at the time the DEIS was published and was a factor in determining the economic feasibility of the alternatives considered.

1-5 Comment noted - concerns regarding potential effects to surface water resources from the development of the Burr Well Field were conveyed by the MDNR to LPRW prior to the construction of the Burr Well Field.

1-6 Within the context of the overall discussion regarding potential effects to surface water resources from a limited appropriation rate at the Burr Well Field, RUS stands by this statement. While we agree significant effects are possible, particularly during period of low precipitation, they appear to be unlikely at the appropriation rate recommended in the EIS. This

comment's issue of concern appears to relate to the use of the word "significant." The term "significant" is used in the context of the National Environmental Policy Act and the Council on Environmental Quality's definition in 40 CFR 1508.27 Significantly.

"Significantly" as used in NEPA requires considerations of both context and intensity:

(a) Context. This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

(b) Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:

1. Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.
2. The degree to which the proposed action affects public health or safety.
3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.
4. The degree to which the effects on the quality of the human environment are likely to be highly controversial.
5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
6. The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.
8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.
9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.
10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

If proposed mitigation measures are implemented, RUS believes that potentially "significant" adverse environmental impacts to surface water resources could be avoided or minimized.

1-7 MDNR's concern is noted regarding the "wet spell" through which the record of data exists. Only long-term observations and monitoring will verify the accuracy of the hypothesis contained in this comment. RUS, however, has clearly asserted that the present data set is incomplete with

regard to the climatic fluctuations this area invariably experiences. See graphs in Exhibit A-1 and A-2 concerning annual precipitation and long-term precipitation records from Canby, Minnesota.

1-8 Purpose and Need

This section received a significant number of comments. A comprehensive review of the public comments received by RUS regarding the issue of projected water needs for the Burr Source service area illustrates the overwhelming magnitude of details and data surrounding the developmental and construction phases of the LPRW system covered in the EIS. While these details are important from a regulatory perspective, NEPA instructs Federal agencies to "concentrate on the issues that are truly significant to the action in question." Therefore, RUS believes that the most significant issue related to decisions facing the Agency is to verify the projected water needs of the Burr Source service area. This determination is necessary to substantiate the area's projected water needs in order to advance an aquifer management scheme that will attempt to balance the area's citizens' public health and economic needs and to avoid or minimize adverse environmental impacts to the surface water resources that are being effected by the Burr Well Field's groundwater withdrawals.

No substantive comments were received regarding the data proposed for the Holland and Verdi well fields. It is agreed that the Holland and Verdi well fields in their present configurations are already at or near capacity, therefore all discussions hereafter will relate to the Burr Well Field.

The primary concerns raised by the comments included the accuracy of current and projected water needs in the Burr Source service area. Confusion related to projections based on primary versus secondary source demands and capacities. To facilitate a succinct discussion of LPRW's water needs, RUS requested that LPRW and its engineering consulting firm - Dewild Grant Reckert and Associates (DGR) working through the Minnesota Rural Development State Engineer re-submit revisions to Tables 1-8 and 1-11. RUS's response will attempt to focus on and answer the question regarding the critical issue at hand and that is - what are the projected water needs of the Burr Source service area which includes the Northeast Phase Expansion area. The revised Tables are included below.

The following discussion will attempt to establish projected water needs for the Burr Source service area from actual use data in the Existing System North/Lyon County Phase and projections for the Northeast Phase Expansion. This discussion will exclude all consideration of water sales to MMU. This is necessary because the water delivered to MMU for the

record of review exceeds the original design rate of 109 Mgpy as specified in the Table 1-6 (see Burr - NE Phase line item). In addition, MMU is receiving excess capacity originally designed for the Northeast Phase Expansion and a portion of the reserve capacity and future growth projections built into the system.

TABLE 6 (REVISED DEIS TABLE 1-8) - SUMMARY OF WATER NEEDS AND SOURCE CAPACITY

LPRW Source Needs	Average Day gpd	Peak Day gpd	Annual Use gal	Ave. Day kgpd	Peak Day kgpd	Annual Use MGal	DNR Permitted Capacity MGal/Yr	DNR Permit No.	Total Water Pumped 1993 MGal/Yr	1994 MGal/Yr	1995 MGal/Yr	1996 MGal/Yr	1997 MGal/Yr	1998 MGal/Yr
System Demand														
Rural connections	1,693,855	2,879,554	618,257,153	1,694	2,880	618								
City Use	1,118,171	1,980,985	408,132,497	1,118	1,981	408								
Total Water Sold	2,812,026	4,860,539	1,026,389,650	2,812	4,861	1,026								
Estimated Unmetered	604,234	1,044,408	220,545,362	604	1,044	221								
Estimated Drought Demand	281,203	486,054	102,638,965	281	486	103								
Total Projected Water Needs	3,697,463	6,391,001	1,349,573,977	3,697	6,391	1,350								
Source of Supply														
Verdi	1,371,073	2,529,791	500,441,801	1,371	2,530	500	683	794114	403	403	425	425	383	403
Holland	837,923	1,474,504	305,841,996	838	1,475	306	500	904140	172	244	287	333	355	374
Edgerton Well							26	794195	0	0	0	0	0	0
Burr - Existing System	772,913	1,429,049	282,113,311	773	1,429	282	400	914159 Prairie Coteau	0	9	145	215	274	314
Burr - NE Phase*	575,135	709,467	209,924,365	575	709	210	130	954171 Altamont	0	0	27	2	55	116
Canby (Now provided from Burr)	140,418	248,189	51,252,504	140	248	51	0							
Total Firm Design Capacity	3,697,462	6,391,000	1,349,573,977	3,697	6,391	1,350	1,739		574	656	885	975	1,067	1,206
Note: LPRW has a permit for 26.3 MG/year at Edgerton, however, they do not us that source. * Includes an estimate of 109 Mgpy for MMU/MCP														

Source: Madden, J., Dewild Grant Reckert and Associates, personal communication, 1999.

TABLE 7 (REVISED DEIS TABLE 1-11) SUMMARY OF LPRW WATER NEEDS AND RECENT ANNUAL USE

LPRW Water Source	Annual Needs MGal/Yr	DNR Permitted Capacity MGal/Yr	DNR Permit Number	Total Water Pumped					
				1993 MGal/Yr	1994 MGal/Yr	1995 MGal/Yr	1996 MGal/Yr	1997 MGal/Yr	1998 Mgal/Yr
Verdi	500	683	794114	403	403	425	424	383	403
Holland	306	500	904140	172	244	287	333	355	374
Edgerton Well (Backup)	0	26	794195		0	0	0	0	0
Burr Service area	492								
Burr Wells		400	914159		9	145	215	274	314
Altamont Wells		130	954171			27	2	55	116
Canby (Served from Burr)	51	0							
Total Design Capacity	1,350	1,583		574	656	884	975	1067	1,206
Notes: 1. LPRW has a permit for 26.3 MG/year at Edgerton, however, they do not us that source.									
2. Total annual needs are 1,350 MG, each source has the ability to deliver water outside of its Primary Service area.									
That capability is used to increase system reliability and does not increase the total system needs.									

Source: Madden, J., Dewild Grant Reckert and Associates, personal communication, 1999.

TABLE 8 - LPRW AVERAGE RURAL CONNECTION WATER USE

Month Used	1997 (gallons)	1998 (gallons)
Jan	15,353	16,694
Feb	15,375	15,947
Mar	14,914	15,015
Apr	16,545	16,612
May		24,729
Jun	19,137	20,339
Jul	21,364	20,952
Aug		20,503
Sep	18,899	18,604
Oct		18,990
Nov	16,342	16,965
Dec	15,783	17,194
Minimum	14,914	15,015
Average	17,079	18,545
Maximum	21,364	24,729
Gallons/year		
Minimum	178,968	180,180
Average	204,949	222,544
Maximum	256,368	296,748

Source: Madden, J., Dewild Grant Reckert and Associates, personal communication, 1999.

Tables 6-8 were submitted by LPRW. These tables project annual water needs for the Burr Source as 492 Mgpy. This volume includes a planning figure of 109 Mgpy for the City of Marshall, Marshall Municipal Utilities (MMU). The projected water needs represent and are based on the water needs identified for areas of the LPRW system that have been in operation for more than 20 years, future service areas that are yet to be designed and constructed, and service areas that are built but have not matured as of yet to the ultimate number of users. LPRW's engineers consider these values to be based on the best available data and accurately represent LPRW's long-term needs (Madden, personal communication, 1999).

In order to estimate Burr Source service area annual water needs a number of factors need to be considered. The Burr Source service area includes the previous Existing System North/Lyon County (ESN/LC) Phase and the proposed Northeast Phase Expansion. The pertinent factors considered include water use for rural connections, rural area municipal users, drought demand, water loss, reserve capacity, and future growth projections.

RUS examined the data supplied by LPRW and negotiated the following engineering design factors to establish that the design factors met RUS guidelines that facilities financed by the Agency be modest in size, design, and cost. The following factors were agreed upon by both parties as being modest.

Table 9 - Engineering Design Factors for Water Need Projections

Engineering Design Factors	Rate
Rural Water Use per connection	236,000 gpy[1]
Municipal Water Use per capita	36,500 gpy[2]
Drought Demand Estimates	10% of Annual Use[3]
Water Loss	15% of Annual Use[3]
Future Growth Projections (rural)	20% of Total Users or 200 rural users[4]
Emergency or Reserve Capacity	33 Mgpy[5]

[1] Estimated average use per rural connection (for entire LPRW system) is derived from 1997 and 1998 average use data. Average use is 204,949 and 222,544 gallons, respectively (see Table 8). Use of 236,000 gallons is to incorporate a conservative factor for planning purposes, particularly for a system that "matures" whereby additional users connect to the system and water use increases slightly over time.

[2] Assumes 100 gallons/capita/day. Extrapolated water use rates on a per capita per day rate from LPRW billing data were approximately 70 gallons per capita per day. This factor is considered to be very conservative for planning purposes.

[3] RUS agrees with LPRW estimates for and the use of a 10% Drought Demand and 15% Water Loss as being "reasonable" estimates for engineering design purposes.

[4] RUS agrees with LPRW's projection of a future growth projection (20%) of an additional 200 rural users as being a "reasonably foreseeable growth need". The determination of reasonably foreseeable growth needs is in the context of 7 CFR 1780.7 (c), Eligible Projects.

[5] Reserve or emergency capacity is defined as that volume of water necessary to provide "back-up" service for one of the other well fields if the well field were to experience production problems or scheduled maintenance. For the purposes of this EIS, RUS has calculated a reasonable or modest reserve capacity for the Burr Well Field as 33 Mgpy. This estimate was derived by calculating the volume of water necessary for a 30-day total production loss at the Verdi Well Field. The Verdi Well Field's annual water appropriation for the last 5 years is approximately 400 Mgpy; this calculates to a 33 Mgpy estimate. The term "reserve capacity" replaces the secondary capacity term used in the DEIS.

Using data from Tables 6-7 and the "modest" design factors negotiated and defined in Table 9, LPRW submitted the information contained in Table 10.

TABLE 10 - SUMMARY OF PROJECTED WATER NEEDS FOR BURR SOURCE SERVICE AREA

Existing System North/Lyon County Phase		Projected Water Use (gallons per year)	kgals/year
	664 Rural Connections (includes Green Valley)	236,000	156,000
	4 Municipalities (Population - 2,126) Taunton (174) Minneota (1,428) Ghent (312) Porter (212)	36,500	77,599
Subtotal			**233,599**
	Engineering Estimates for 10% Drought Demand and 15% Water Loss		58,400
Subtotal ESN/LC Phase Water Needs			**292,000**
Northeast Phase Expansion			
	170 Rural Connections	236,000	40,120
	2 Municipalities (Population - 385) Echo (304) Hazel Run (81)	36,500	14,052
Subtotal			**54,172**
	Engineering Estimates for 10%Drought Demand and 15% Water Loss		13,543
Subtotal Northeast Phase Expansion Water Needs			**67,715**
Future Growth Projections - 200 Rural Connections plus 10% Drought Demand and 15% Water Loss		236,000	**59,000**
Subtotal Burr Source Service Area			**418,715**
Emergency or Reserve Capacity			**33,000**
Total Burr Source Service Area Projected Water Needs			**451,715**

Source: Madden, J., Dewild Grant Reckert and Associates, personal communication, April 6, 1999.

To evaluate these figures, RUS obtained actual water use data compiled for the existing Burr Source service area users. Table 11 outlines the record of actual water use from LPRW's billing records received between December 1, 1997 - November 30, 1998.

TABLE 11 - BURR SOURCE SERVICE AREA
RECORD OF WATER USAGE FROM BILLING RECORDS[1]
DECEMBER 1997 - NOVEMBER 1998

Month Used	Total Water Use kgal	Marshall Municipal Utilities (MMU) kgal	Water Use/ Non-MMU kgal	Rural User Water Use kgal	LPRW Town Usage for the period, kgal.					
					St. Leo	Minneota	Ghent	Taunton	Porter	Total Municipal Use
Dec-97	27,397	13,307	14,090	10,056	185	2,758	693	218	180	4,034
Jan-98	27,468	13,770	13,698	9,506	208	2,915	679	210	180	4,192
Feb-98	26,575	13,905	12,670	8,654	221	2,609	614	342	230	4,016
Mar-98	36,572	21,687	14,885	10,441	259	2,993	712	230	250	4,444
Apr-98	36,750	20,567	16,183	11,399	236	3,004	968	246	330	4,784
May-98	37,350	18,799	18,551	13,131	239	3,488	1,170	293	230	5,420
Jun-98	39,797	21,198	18,599	12,900	342	3,808	1,040	279	230	5,699
Jul-98	38,953	20,330	18,623	13,332	238	3,347	1,060	336	310	5,291
Aug-98	39,346	20,937	18,409	12,947	236	3,506	1,050	255	415	5,462
Sep-98	36,544	20,240	16,304	11,412	187	3,174	837	424	270	4,892
Oct-98	40,057	19,790	20,267	15,858	174	2,871	750	261	353	4,409
Nov-98	37,304	20,889	16,415	11,623	240	3,112	895	245	300	4,792
Totals	424,113	225,419	198,694	141,259	2,765	37,585	10,468	3,339	3,278	57,435

Source: Madden, J, Dewild Grant Reckert and Associates, Personal Communication, 1999.
[1] Number of Users as of 1/99 - 694 (6 municipal users and the rest are rural users)

Billing records for the period of review indicate water use of non-MMU rural (141 Mgpy) and municipal (57 Mgpy) users in the current Burr Source service area as 199 Mgpy. Adding design factors for drought demand (10%) and water loss (15%) to this volume, the resulting volume is 249 Mgpy. As stated in Table 10, the projected water needs for the rural and municipal users in the Northeast Phase Expansion proposal are 68 Mgpy. Adding, future growth capacity (59 Mgpy), and reserve capacity estimates (33 Mgpy) to all of the non-MMU Burr Source service area rural users, projected water needs are estimated as 409 Mgpy.

Currently, the MDNR Water Appropriation Permit for the Burr Well Field allows annual withdrawals of 400 Mgpy. There is some controversy over the permit regarding whether the 400 Mpgy relates to the Burr Unit only or whether it is a combined total with the Altamont aquifer. According to the MDNR, this volume includes total appropriations from the Burr Unit and Altamont aquifers. At the present time, the Burr Well Field's Water Appropriation Permit is under consideration for an increase to 450 Mgpy with a reduction in withdrawals from the Burr Unit and an increase in the Altamont Aqiufer.

Based on current and projected water use data supplied by LPRW, RUS concludes that the Burr Source service area's projected water needs is 409 Mgpy; LPRW's projection is 452 Mpgy. LPRW's projection may be more accurate with regard to long-range water needs; RUS used actual water use data from the a portion of the Burr Source service

area that is not yet mature in terms of total user connections. At present permitted capacity (400 Mgpy) and until the Northeast Phase Expansion users are connected, LPRW has adequate production and treatment capacity to serve the rural area users and municipalities in the Burr Source service area. Once the Northeast Phase Expansion rural area users are connected it appears that the Burr Well Field's Water Appropriation Permit may need to be increased to account for reserve capacity and future growth potential. This may only be necessary at some future date. Until these future users are realized and connected, LPRW has some excess capacity in its Burr Well Field and Water Treatment Plant (facilities).

One of the points of confusion in the DEIS's presentation of projected water needs was the use of data regarding primary and secondary service areas. The purpose for secondary service areas are described in the DEIS on page 40 is - "In addition, the system is designed to permit the delivery of some water to adjoining service areas and they are called secondary service areas. The reasons for the delivery of water to secondary service areas will vary from short-term equipment maintenance to longer-term water shortages from adjacent sources". The term " secondary service areas" will be replaced in the FEIS as "reserve capacity". This was done to minimize confusion.

While planning for emergency or reserve capacity for secondary service areas is critical in designing rural water systems, the secondary service area originally stated in the DEIS as 136 Mgpy (628 minus 492 Mgpy) is now considered by RUS as not meeting the modest criteria the Agency uses to determine project eligibility. In Table 1-11 of the DEIS, the total projected water needs for the Burr Source service area's primary and secondary needs was stated as 628 Mgpy, whereas the revised Table 1-11 projects these needs as 492 Mgpy. Again, the 492 Mgpy annual use projection represents LPRW's position as to the Burr Source service area's needs. The 40 Mgpy difference between the 492 Mgpy and the 452 Mgpy figure presented in Table 10 is largely based on the estimate of reserve capacity. In the context of determining project eligibility, RUS believes that a reserve capacity of 33 Mgpy is reasonable and modest.

1-9 The purpose of Section 1.2 was not to present information to enable specific natural resource decisions but to present in a general fashion the documented water quality and quantity problems citizens of southwestern Minnesota have historically faced over the years. These problems have created the conditions whereby the development of regional rural water systems have been a primary focus of the citizens to solve their water supply problems.

While RUS agrees that providing discussions on the Lac Qui Parle watershed would be desirable, the geologic conditions of the watershed are not sufficiently different from the areas presented to compel additional discussions nor would it affect the conclusions regarding the area's problems in securing adequate water supplies at reasonable costs.

1-10 The documented water quality problems related to livestock production are correctly stated and RUS does not agree that it contradicts the conclusions of Section 3.4. The conclusions drawn from the analyses of Section 3.4, state that the availability of rural water does not by itself create conditions for the expansion of livestock production facilities or operations. Based on the analyses, the most important factors appear to be availability of land, close proximity to slaughterhouses, and general meat consumption in the general population. While RUS does not deny that the availability of higher quality rural water allows the diversification of agricultural operations where they were limited, it clearly is not the only or even the primary factor driving such expansion decisions. In addition, the availability of higher quality water has beneficial human health implications as well.

1-11 This comment requests a discussion of the financial viability of the LPRW system as a whole. While financial issues are factors that need to considered in an EIS, these concerns are not a particularly relevant issue to the purpose of the EIS. The purpose of the EIS is two-fold. The primary issue is to evaluate outstanding environmental concerns from the earlier 1992 Environmental Assessment, that is what are the potential environmental effects to surface water resources from groundwater withdrawals at the Burr Well Field, and, secondly, what are the potential environmental impacts from the construction of the Northeast Phase Expansion proposal.

1-12 RUS agrees with this comment. In the revised Table 1-11 (Table 7), LPRW still maintains the annual needs for the entire LPRW system is 1,350 Mgpy. In the table, LPRW lists a 51 Mgpy water need for a service area that is being served by the City of Canby. As discussed in the DEIS (p. 36), the City of Canby has successfully financed an upgrade to its water treatment facility, therefore it not reasonable for LPRW to maintain the 51 Mgpy as part of its need calculation. The annual needs should be reduced by this amount.

1-13 As stated in Table 10, the Northeast Phase Expansion proposal consists of 170 rural users and two communities - Hazel Run and Echo (385 population totals). All projected water needs for the Northeast Phase Expansion proposal can be found in the response at 1-8.

1-14 The cost estimates for the point-of-use treatment are based on generalized information and may be over or understated, but well within the range of reasonable costs. Additional research and documentation is not likely to significantly change the costs presented and will not change the conclusion that point-of-use treatment is more costly than a rural water system, particularly in an area such as southwestern Minnesota with its water quality problems. The EIS will not consider the issue any further.

1-15 The LPRW official policy on future growth was approved by the LPRW Board of Commissioners and provided in writing to RUS through its engineering consultant, DGR.

1-16 The booster station referenced in the attachment has not yet been built. The construction of this booster station and storage facilities are proposed to be built as part of the Northeast Phase Expansion proposal.

1-17 The DEIS was in error. The percentages stated in this section represented a portion of the total LPRW system needs rather than from the Burr Well Field.

1-18 As stated in the responses at 1-3 and 1-8, MMU/MCP was considered throughout the planning process for the period of time covered by this EIS to include planning for the Existing System North/Lyon County Phase. RUS has re-evaluated LPRW's relationship with MMU/MCP in terms to its future funding decisions. It is clear from the discussion in response 1-8, that without MMU/MCP LPRW has adequate production and treatment capacity to service all rural users in the Burr Source service area. As discussed in response 1-3, if LPRW chooses to continue providing water to MMU/MCP then all future RUS funding decisions will be evaluated upon MMU/MCP providing a proportionate share of capital improvement costs in accordance with RUS regulations.

1-19 As stated in response 1-8, RUS has re-evaluated the "modest" design of the Burr Well Field. All future RUS funding decisions will reflect this evaluation.

1-20 RUS stands by its discussion regarding the MMU/MCP issue. MDNR is correct in its interpretation of when LPRW provided documentation to the Farmers Home Administration regarding the consideration of MMU/MCP in its planning for the Existing System North/Lyon County Phase.

The information regarding MMU/MCP was not in the original Environmental Assessment, as stated in response 1-3, because LPRW notified FmHA that even though it was part of planning considerations, MMU/MCP was not part of the ultimate design considerations of the Burr Well Field. As previously stated, RUS has re-evaluated the design capacity of the Burr water treatment facility and determined that the resulting capacity does not meet RUS's "modest" design criteria. All future funding decisions will reflect this determination.

1-21 See revised Tables 1-8 and 1-11 in response 1-8. Responses to comments in this section are included in response 1-8.

1-22 Most of the issues brought out in this comment are valid concerns, however, they are not particularly relevant to the primary issues discussed in the EIS and will not be considered any further.

1-23 The requested information in this comment is not particularly relevant to the primary issues discussed in the EIS and will not be considered any further. However, costs for providing engineering services and environmental analyses and surveys are eligible loan expenses as outlined in 7 CFR 1780.9 (e). Itemized costs will be submitted to RUS for approval at the appropriate time. Determination of whether the costs are reasonable and eligible for reimbursement are or will be made at the time of loan approval.

1-24 The number of rural users projected for the Northeast Phase Expansion is 170. As discussed in response 1-8, future growth projections have been estimated at 200 rural users. This figure represents approximately 20% of the existing users in the Burr Source service area. RUS has concluded that this figure represents a reasonably foreseeable growth need in the context of its regulatory eligibility requirements.

1-25 See response 1-8.

1-26 RUS agrees with MDNR concerning potential sources of water from the Big Sioux Community Water System in South Dakota and City of Canby. Both of these systems represent potential sources of water for inclusion into the Contingency Plan that RUS will require LPRW to develop as a condition of financing the Northeast Phase Expansion proposal.

1-27 RUS stands by its conclusion that funding Alternative 4 is not economically feasible at this time. Perhaps as stated in the DEIS, if LPRW extends its service areas further northward in the future this alternative may become more economically attractive.

1-28 As stated in response 1-16, the elevated storage tank planned for the Northeast Phase Expansion was not replaced with the booster station referenced in this comment. The elevated storage tank and the associated booster station remain as part of the Northeast Phase Expansion proposal.

1-29 RUS believes that the MDNR has sufficient statutory authority to regulate groundwater appropriations through its existing permitting authority.

1-30 In response to all of the comments regarding Section 2.2.3. RUS simply offers these points as recommendations. Developing multiple well fields in the same aquifer can be used as an effective aquifer management tool.

Without specifying exact well field locations it is difficult to identify specific aquifer responses. The point of the recommendation is to minimize the drawdown of the potentiometric surface. For example, assuming the same withdrawal volume in the Burr Unit using two wells versus one could potentially minimize reductions in the overall potentiometric surface. MDNR may through their permitting authority choose the most appropriate well field configuration for minimizing effects to surface water resources from Burr Unit appropriations.

1-31 Yes.

1-32 Correct figure should be Figure 3-1.

1-33 RUS agrees.

1-34 RUS agrees.

1-35 RUS agrees and stands corrected.

1-36 RUS agrees.

1-37 RUS will agree with any reasonable proposal to address monitoring concerns, subject of course to the availability of funding. RUS will entertain funding proposals through the proposed Water Resource Management Plan LPRW will be required to develop as a condition for funding of the Northeast Phase Expansion proposal.

1-38 See response 1-35.

1-39 RUS agrees.

1-40 See response 1-6.

1-41 See response 1-10. RUS disagrees with the proposed mitigation measure - "a mitigation measure that requires proof of compliance with feedlot regulations should be required for customers benefiting from federally funded rural water systems." RUS has not been delegated the authority to impose such a mitigation measure on recipients of its programs.

2. South Dakota Department of Environment and Natural Resources

2-1 RUS agrees that to quantify groundwater input and a water budget for Lake Cochrane would be valuable information, however, as stated in the DEIS on page xii - "The information that would be necessary to quantify the overall percentage of groundwater contribution in relation to surface water

inputs to Lake Cochrane's water budget and the percentage of the contribution from shallow aquifers versus the Burr Unit is incomplete and unavailable. The cost and technical difficulty of obtaining such information for evaluating reasonably foreseeable impacts by the Agency has been determined to exorbitant and unreasonable." See also 40 CFR 1502.22, Incomplete or unavailable information. In addition as stated in the DEIS on page 111, RUS agrees with the work already completed by the DENR regarding Lake Cochrane and does not dispute its findings. While RUS agrees that the data would be beneficial if available, RUS also believes enough information is available to make reasonable natural resource decisions regarding groundwater appropriations in the area. Consequently, RUS will not supplement the work already accomplished by DENR.

RUS and most commenters agree that to minimize reductions in the potentiometric surface will protect or minimize any significant adverse environmental impacts to Lake Cochrane and all surface water resources hydraulically connected to the Burr Unit of the Prairie Coteau aquifer. RUS continues to believe that the implementation of the preferred alternative and the mitigation measure outlined in the DEIS will be protective of all surface water resources in the area.

2-2 RUS agrees that pumping at 400-525 gpm at the Burr Well Field could cause effects to surface water resources in the area. Whether these effects are significant can only be determined by long-term monitoring. To avoid or minimize these effects as the preferred alternative states, RUS supports the development of a supplemental well field to utilize the Altamont aquifer and a Water Resource Management Plan to develop, among other issues, a comprehensive aquifer management scheme to minimize reductions in the potentiometric surface while meeting the water needs of the area's citizens.

2-3 RUS agrees and supports such limitations. RUS believes that these limitations could be formalized and implemented within of the MDNR's Water Appropriation Permit.

2-4 To minimize potential effects on all surface water resources in the area, RUS supports the development of a supplemental well field.

The key parameter that will allow monitoring for the effects of pumping on surface water resources will be the potentiometric surface. It is RUS's understanding that the MDNR is considering establishing impact thresholds using pre-determined potentiometric surface elevations as a means to monitor effects to surface water resources in the area (see Appendix C-2, p. 17). RUS supports this effort. RUS encourages the DENR to provide

technical input to the MDNR during the development of these impact thresholds.

As part of its involvement in this EIS and in order to ensure the sufficiency of the proposed WRMP, the USEPA, Region 8, has agreed to provide technical assistance to all parties in the development of this plan.

Therefore, the methodology to measure impacts to all surface water resources in the areas will be developed during the preparation of the proposed WRMP. South Dakota will be offered the opportunity to participate in the development of this plan. In addition, impact thresholds will be established as condition of the Burr Well Field as they presently are by the MDNR. These threshold could be included and documented in the WRMP

RUS has agreed to include a contingency plan in the proposed WRMP. All RUS funding decisions will be contingent upon LPRW's ability to successfully obtain the proper Water Appropriation Permit from the MDNR. South Dakota should work through its existing agreement with Minnesota to participate in Minnesota's permitting decisions at the Burr Well Field.

2-6 See response 1-30.

2-7 RUS stands corrected on this matter. Proper comparisons between the elevation of the potentiometric surface of the Burr Unit should be the lake level not the ordinary high water mark.

2-8 RUS agrees conceptually with this comment as it is within the range of water appropriation rates recommended in the DEIS. RUS also agrees with the need to develop a contingency plan as part of the proposed Water Resource Management Plan.

3. U. S. Environmental Protection Agency

3-1 See response 1-8

3-2 Subsequent to publishing the DEIS, the MDNR and LPRW conducted additional ground water exploration efforts to help identify potential well development sites for the Altamont aquifer. MDNR supplied RUS with the following information (see Appendix C-3):

"During September 1998, two deep test holes were drilled in an area located approximately 3 - 4 miles south of the Lincoln-Pipestone Burr Well Field by the South Dakota Geological Survey (SDGS) and the Minnesota Department of Natural Resources (DNR). Test holes R2-98-38 and R2-98-

39 (Figure 1) were drilled into the top of the Cretaceous Shale to depths of 549 feet and 541 feet respectively. The purpose of these test holes was to define the northwestern extent of the Altamont aquifer equivalent sand layers that were discovered in test holes DNR 41-1 and DNR 87-7 in 1996.

Both of the 1998 test holes were gamma logged by the SDGS. The logs of these test holes are shown on cross section E-E'. The location of this cross section is shown on Figure 2. Approximately 12 feet of the Altamont sand was found in test hole R2-98-38. No Altamont sand was found in test hole R2-98-39. The previously drilled test holes nearest R2-98-38 and R2-98-39 encountered Altamont sand layers with a thickness range of 35 feet (DNR 41-1 and DNR 87-7) to 100 feet (DU-73A). These wide variation of sand thickness within a relatively small area suggest depositional and stratigraphic complexities that require additional test drilling to define."

In addition to the above test holes, during the 1998 field season the MDNR performed 17 seismic lines in Yellow Medicine and Lincoln County, Minnesota and Deuel County, South Dakota near the Burr Well Field (see Appendix C-1). The purpose of the seismic survey as stated in the report was to better define the Quaternary stratigraphy in the area around the Burr Well Field and to explore for a sand aquifer that is deeper than and not connected to the Prairie Coteau aquifer. Lower Quaternary sand units correlate to the aquifer referred to in the EIS as the Altamont aquifer.

Of the seismic survey performed by the MDNR, the report recommended that an area north of the Burr Well Field may be the most promising area for test drilling for lower Quaternary sands (Altamont aquifer)(MNDNR, 1999, Peterson and Berg).

The information presented above is the most current information available regarding the Altamont aquifer. As discussed, the area to the south of the Burr Well Field has sand layers identified as the Altamont aquifer. In addition, an area north of the Burr Well Field have been identified as having promising potential for locating the Altamont aquifer.

As discussed in the DEIS the Altamont is the most promising aquifer for utilization by LPRW to supplement the Burr Well Field. The Altamont aquifer is most likely hydraulically isolated from the Burr Unit of the Prairie Coteau aquifer (see page 63 of the DEIS; Berg, 1997a). Well fields developed in this aquifer should have no effect on surface water resources in the area. Specific questions raised by this comment will be addressed during the exploration efforts and permitting process necessary for any new well fields.

3-3 RUS agrees to integrate a Contingency Plan into the proposed Water

Resource Management Plan.

3-4 See response 1-8. Reasonable foreseeable rural growth in the Burr Source service area has been projected as 200 rural users for a 59 Mgpy estimate. This estimate is approximately 20% of current LPRW rural users and is considered to be very conservative. This growth factor does not take into account potential population growth by the City of Marshall, which is ineligible for RUS financial assistance.

Determining and evaluating cumulative effects on groundwater resources in southwestern Minnesota is a continuing struggle for all parties. The MMU is continuing to explore additional groundwater supplies. As discussed, on-going groundwater exploration efforts are continuing by the MDNR as part of its grid drilling program and specific technical assistance to LPRW in the Burr Well Field area. A component of the proposed Water Resource Management Plan will include an exploration plan for the proposed supplemental well field. All of these efforts are contributing to exploring technical and economically feasible options for providing safe drinking supplies to the citizens of southwestern Minnesota.

4. East Dakota Water Development District

4-1 Commenter is correct. LPRW's water supply contract is with the MMU who in turns provides the water to the Minnesota Corn Processor.

4-2 While it is understood that the MNDR did raise the issue with LPRW, the comment was made within the context of the National Environmental Policy Act (NEPA) (see 40 CFR 1502.16, Environmental Consequences) and the original published by the then Farmers Home Administration's Finding of No Significant Impact (FONSI). The other term at issue here is the word "significant"; again, this word is used in the NEPA context (see response 1-6). In this case, publishing a FONSI does not indicate no "effect" or impact to environmental resources it means no "significant" impact.

4-3 The commenter should focus on the word "significant". At current appropriation rates it is unlikely surface water resources will be significantly impacted. Only long-term monitoring will determine the overall effect on the surface water resources. The purpose of the proposed mitigation measures as outlined in the DEIS is to avoid or minimize any significant adverse environmental impacts.

4-4 The objective of the calculation on page 63 was to determine what would be the remaining demand if MMU and the Yellow Medicine Phase (originally served by the Canby system) would be discontinued. The number to start this calculation is the 628 Mgpy as shown in Table 1-8 of

the DEIS. This value was calculated as follow:

Burr - Existing System	282 Mgpy
Burr - NE Phase	210 Mgpy
Burr - Secondary (187 Verdi, 161 rural Canby, Ivanhoe, St. Leo)	136 Mgpy
Total	628 Mgpy

MMU is included in the NE Phase with an annual use projection of 109 Mgpy (see Table 1-6) and the Yellow Medicine Phase includes 161 rural Canby (35.7 Mgpy) and St. Leo (3.3 Mgpy). The total is 148.5 Mgpy. Therefore subtracting 148 Mgpy from 628 Mgpy equals 480 Mgpy. Added to this as stated earlier is RUS's determination that the proposed "secondary" capacity of 136 is not "modest" by Agency standards. RUS calculated that a 33 Mgpy "reserve" factor is more reasonable, see response 1-8.

4-5 Point noted concerning the Big Sioux Community Water System. Perhaps the Big Sioux could be considered in a Contingency Plan as a source of water.

John Madden works for Dewild Grant Reckert and Associates (DGR). DGR designed the portions of the LPRW system being evaluated in the EIS. RUS prepared the DEIS with data supplied by LPRW and John Madden and others. A conflict of interest as stated in 40 CFR 1506.5 9 (c) is as follows:

> (c) Environmental impact statements. Except as provided in Secs. 1506.2 and 1506.3 any environmental impact statement prepared pursuant to the requirements of NEPA shall be prepared directly by or by a contractor selected by the lead agency or where appropriate under Sec. 1501.6(b), a cooperating agency. It is the intent of these regulations that the contractor be chosen solely by the lead agency, or by the lead agency in cooperation with cooperating agencies, or where appropriate by a cooperating agency to avoid any conflict of interest. Contractors shall execute a disclosure statement prepared by the lead agency, or where appropriate the cooperating agency, specifying that they have no financial or other interest in the outcome of the project. If the document is prepared by contract, the responsible Federal official shall furnish guidance and participate in the preparation and shall independently evaluate the statement prior to its approval and take responsibility for its scope and contents. Nothing in this section is intended to prohibit any agency from requesting any person to submit information to it or to prohibit any person from submitting information to any agency.

A conflict of interest would exist if DGR prepared the EIS, which they did not. The original contractor used by RUS was Vista Technology, Inc. RUS terminated the contract with Vista because it was having financial difficulties and loss of critical staff members. RUS then had to prepare the

EIS internally. While information was obtained from John Madden and DGR, RUS is responsible for verifying the accuracy of the information supplied to it.

4-6 The information presented in the DEIS is correctly stated.

4-7 MDNR has the authority to compel compliance with its Water Appropriation Permit. Comment was made with the assumption that as a condition of RUS's loan, LPRW will be required to develop Water Resource Management Plan which will include an operation plan designed to minimize drawdowns in the Burr Unit's potentiometric surface.

4-8 RUS disagrees with this comment. The USEPA and SDDENR have also stated a pumping rate recommendation. In order to avoid or minimize significant adverse environmental impacts to surface water resources, it appears the critical factor to accomplish this goal is related to minimizing the drawdown of the potentiometric surface. Therefore stating a recommended pumping rate until more definitive information can be gathered through long-term monitoring is a responsible and prudent course of action.

Establishing water appropriation rates within its permitting authority is the jurisdiction of the MDNR not RUS. RUS is making a recommendation to the MDNR not dictating permit conditions.

4-9 The Governors of both South Dakota and Minnesota have agreed in writing to cooperate on decisions regarding groundwater appropriation at the Burr Well Field. This arrangement should be formalized in the proposed Water Resource Management Plan.

4-10 Both statements are true.

4-11 Correction noted.

4-12 RUS disagrees with this comment. RUS has not stated the appropriations rates of 400 - 525 gpm are safe, the statement says - "appear to be having little or minimal effects on any surface water resources." This statement is made with the repeated caveat regarding the high precipitation the area is receiving (see pages xii, xiii, and 54).

The point of the last comment in predicting effects to surface water resources is that it is relatively straight forward if one applies Darcy's law (Groundwater flow (Q) is proportional to Hydraulic Conductivity (K), Head Gradient (I) and Area (A) through which flow occurs. Q=KIA), which is the purpose of the statement in the DEIS. Reduction in the potentiometric

surface will cause a proportional reduction in the groundwater flow to the affected resource.

4-13 This comment was raised by the MDNR and SDDENR, RUS stands corrected.

4-14 RUS stands corrected. The Farmers Home Administration, predecessor to the RUS helped finance the wastewater system used by Lake Cochrane residents.

5. Jim Thompson

5-1 RUS disagrees with comment. The purpose of NEPA as stated in 40 CFR 1500.1, Purpose:

> The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.

In addition the purpose of an EIS as stated in 40 CFR 1502.1, Purpose, is:

> The primary purpose of an environmental impact statement is to serve as an action-forcing device to insure that the policies and goals defined in the Act are infused into the ongoing programs and actions of the Federal Government. It shall provide full and fair discussion of significant environmental impacts and shall inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment. Agencies shall focus on significant environmental issues and alternatives and shall reduce paperwork and the accumulation of extraneous background data. Statements shall be concise, clear, and to the point, and shall be supported by evidence that the agency has made the necessary environmental analyses. An environmental impact statement is more than a disclosure document. It shall be used by Federal officials in conjunction with other relevant material to plan actions and make decisions.

In order to further the policies and goals of the NEPA, agencies may develop and implement mitigation measures that include the following from 40 CFR 1508.20, Mitigation:

> "Mitigation" includes:
> (a) Avoiding the impact altogether by not taking a certain action or parts of an action.
> (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
> (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
> (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
> (e) Compensating for the impact by replacing or providing substitute

resources or environments.

It is not RUS's responsibility to do as the commenter states - "NEPA regulations require that the RUS establish monitoring requirements and thresholds of protection for these lakes and wetlands, and locate an alternative that avoids the impact to the lakes and wetlands."

As stated earlier the only decision facing RUS at this time is whether to finance the Northeast Phase Expansion. Through the EIS, RUS has evaluated the potential environmental effects of the proposed action and stated its conclusions and recommendations. As a condition of funding the Northeast Phase Expansion proposal, RUS will require LPRW, as a mitigation measure, to prepare in consultation with the MDNR, a Water Resource Management Plan. The goal of this plan is to minimize any significant adverse environmental impacts to the surface water resources in the area and provide the monitoring protocols that will allow all parties to cooperatively share information and through consensus evaluate on an on-going basis effects to surface water resources from pumping at the Burr Well Field.

RUS does not have the authority to dictate to state regulatory agencies, as in this case, conditions or elements to a Water Appropriation Permit. RUS may make recommendations to the MDNR as they have done, but the State of Minnesota has jurisdiction over waters in its state. Based on the analyses performed and conclusions drawn in the EIS, RUS has conditionally agreed to proceed with financing the Northeast Phase Expansion provided LPRW satisfy the mitigation measures outlined in the EIS. If these conditions are met, RUS will release the funds approved for the proposal.

5-2 RUS made, as part of its preferred alternative, a recommendation for a supplemental well field. The DEIS and response 3-2 states the available information regarding the Altamont aquifer. Subject to MDNR approval, RUS is willing to assist in financing the development of a well field in this aquifer. Specific well field configurations are subject to MDNR's authorization.

5-3 The commenter is correct in that RUS decided to prepare an EIS after reviewing the significant issues related to the previous Environmental Assessment and the pending application for the Northeast Phase Expansion. The form the commenter is referring to - the FmHA 1940-20, Request for Environmental Information - is a form the agency uses to solicit information from applicants to its programs. The information provided by LPRW on this form was in retrospect incorrect, but the Agency is responsible for verifying the accuracy of the information. This fact was a contributing factor in RUS's decision to prepare an EIS.

While patterned calcareous fens are classified as "wetlands" in terms of the U. S. Army Corps of Engineer, Wetland Delineation Manual, Technical Report Y-87-1, 1987, not all of the wetlands listed in this comment are fens. The fens in the area around the Burr Well Field exist due to the unique geologic and topographic conditions that occur in this area and are dependent on groundwater contributions from the Burr Unit of the Prairie Coteau aquifer. Many of the wetlands in the area are not dependent on groundwater recharge from the Burr Unit and consequently are unaffected by Burr Well Field activities.

6. Lincoln-Pipestone Rural Water

6-1 RUS did in fact rely on the technical input from all qualified parties prior to making its conclusions and recommendations. As stated in 40 CFR 1500.1, Purpose: "The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment." The conclusions drawn are an attempt to balance a stated statutory goal of NEPA to "achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities", such access to high quality drinking water at a reasonable cost.

It is readily apparent and documented that conclusive data regarding potential significant adverse environmental impacts to surface water resources in the area are limited, however, the analyses performed and information supplied to the Agency indicate that in all likelihood Lake Cochrane is receiving a yet undetermined and unquantified groundwater contribution from the Burr Unit of the Prairie Coteau aquifer. In addition, it has been established that the Burr Unit and the fens are hydraulically connected and that at some volume groundwater appropriations from the Burr Unit have the potential for adversely affecting these resources. Until longer-term data is available to managers of the natural resources in their respective states, it is prudent and RUS's opinion that groundwater appropriations from the Burr Unit be managed in a conservative fashion.

6-2 RUS agrees with this comment, impact thresholds for surface water resources should be based on the potentiometric surface elevations caused by groundwater appropriations. RUS agrees that impact thresholds need to be established by the MDNR through its Water Appropriation Permit process. RUS also agrees that since the potential exists to adversely affect surface water resources in South Dakota, South Dakota officials should be consulted regarding Water Appropriation Permit decisions at the Burr Well Field.

Conclusions drawn by RUS were based on information provided to and reviewed by all parties. Recommendations were based on consultations with state regulatory agencies, cooperating agencies (USEPA) and technical consultants hired by the Agency.

6-3 RUS agrees that attempting to predict the effect drought may have on surface water resources from groundwater appropriations from the Burr Unit is highly speculative. However, until longer term data can be gathered and analyzed within the documented climatic cycles (see Appendix B-1 and 2), RUS believes it is prudent and responsible to manage the aquifer system in a conservative manner

6-4 Commenter is correct in their interpretation. Again these pumping rates are recommendations, MDNR has the authority to establish whatever pumping rates they deem appropriate in the issuance of their Water Appropriation Permit. It appears that the recommendation to limit pumping rates in the Altamont is unnecessary since the Altamont aquifer is not hydraulically connected to the surface water resources of concern.

6-5 RUS has expressed a willingness to provide financial resources to LPRW provided they are willing to abide by the loan conditions established by the analyses and conclusions drawn in the EIS.

6-6 As demonstrated in response 1-8, LPRW has sufficient capacity to serve all of the rural and rural area municipal users in the present and proposed Burr Source service area from the Burr Well Field provided they restrict or discontinue providing water to MMU. If MMU wishes to continue purchasing water from LPRW on a long-term basis, they should contribute proportional financial resources to LPRW in accordance with RUS regulations.

6-7 1. RUS believes it has a responsibility to present recommendations on appropriate pumping rates from the Burr Unit in the EIS. These recommendations are generally consistent with the USEPA , SDDENR, and MDNR. RUS acknowledges that MDNR has the authority to establish whatever pumping rates they deem appropriate through its Water Appropriation Permit process.

2. All financial issues will be negotiated in detail upon completion of the EIS environmental review process.

3. RUS agrees to delete this previous requirement. The purpose of this agreement was to formalize monitoring input to the WRMP from South Dakota officials. RUS has decided to remove this requirement for the

following reasons:

- Governors from both South Dakota and Minnesota have already formally pledged in writing to cooperate on evaluating the effects of groundwater appropriations to the surface water resources hydraulically connected to the Burr Unit.
- RUS believes that the MDNR has the appropriate statutory and regulatory procedures in-place to allow for South Dakota's input into their Water Appropriation Permitting process.
- All regulatory issues, concerns, or conditions related to MDNR's Water Appropriation Permit at the Burr Well Field from South Dakota should be directed at MDNR not LPRW.

7. Department of the Interior

7-1 RUS consulted with the local Fish and Wildlife Services' offices regarding threatened and endangered species and the results of those consultations are contained in the EIS. The only surface water resources that appear to be affected by groundwater withdrawals from the Burr Unit of the Prairie Coteau aquifer are those that are hydraulically connected to the aquifer - that is, the patterned calcareous fens and likely, Lake Cochrane. These are the surface water resources identified as those sustained by the artesian nature of the Burr Unit in that area surrounding the Burr Well Field. It is assumed that all surface water resources that are sustained by these groundwater inputs will response in a similar fashion, therefore predicting effects from groundwater withdrawals were focused on those resources. It was concluded that to describe other fish and wildlife resources in the Minnesota portion of the project area, as suggested in this comment, was to not focus on the significant issues and would be an accumulation of extraneous background data. See 40 CFR §§1500.2, Policy and 1502.1, Purpose.

> 40 CFR Sec. 1500.2, Policy. Federal agencies shall to the fullest extent possible:
> (b) Implement procedures to make the NEPA process more useful to decisionmakers and the public; to **reduce paperwork and the accumulation of extraneous background data**; and to emphasize real environmental issues and alternatives. Environmental impact statements shall be concise, clear, and to the point, and shall be supported by evidence that agencies have made the necessary environmental analyses.

> Sec. 1502.1 Purpose. The primary purpose of an environmental impact statement is to serve as an action-forcing device to insure that the policies and goals defined in the Act are infused into the ongoing programs and actions of the Federal Government. It shall provide full and fair discussion of significant environmental impacts and shall inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the

quality of the human environment. **Agencies shall focus on significant environmental issues and alternatives and shall reduce paperwork and the accumulation of extraneous background data.**

As stated on page 45 in the DEIS, it was not economically feasible to catalog all fens in the area influenced by Burr Well Field appropriations. While this information would be highly desirable it is not available nor is the information available regarding all possible points of Burr Unit surface discharges whether in lakes, fens or streams.

Consistent with 40 CFR 1502.22, Incomplete or Unavailable Information, and on page 114 in the DEIS, RUS clearly stated that all decisions and statement regarding Lake Cochrane (and can be extended to the fens) are being made on incomplete or unavailable information.

Because of the cost of data collection and monitoring, the amount of observation wells and monitoring points available to all interested parties will have to suffice in making reasonably informed natural resource decisions. RUS believes that the monitoring data collected to date, while not perfect, is sufficient to make reasonable interpretations and to drawn conclusions. The East Dakota Water Development District submitted an article with its comments (see Appendix A-4). The article was titled "Managing Water Resources Systems: Why "Safe Yield" is Not Sustainable"; in this article published in Groundwater, July-August 1997, the author, Marios Sophocleous, stated "Science will never know all there is there is to know. Rather than allowing the unknown or uncertain to paralyze us, we must apply the best of what we know today, and at the same time, be flexible enough to allow for change and for what we do not yet know. Instead of determining a fixed sustainable yield, managers should recognize that yield varies over time as environmental conditions vary." RUS agrees with this statement and also believes that its conclusions are reasonable given the amount of information available to it at the time of its analyses.

7-2 Cost estimates and projections for a supplemental well field were stated in Table 2-4 as $1.4 million. Cost estimates for the two options in Wood Lake alternative ranged from $3.7 to 4.9 million based on the size of the water treatment plant proposed. As is the case of any cost estimate, cost of a supplemental well field will vary based on the exact location and depth of the well developed and the length of the pipe necessary to transmit the raw water to the treatment plant. The cost estimate was provided for the area projected in the DEIS as the most likely site for a well field that would be able to utilize the Altamont aquifer - southwestern Yellow Medicine or northwestern Lincoln County. As stated in response 3-2, seismic surveys performed recently by the MDNR indicated that an area just north of the Burr Well Field held promising prospects for the Altamont aquifer (see

Appendix C-1). If LPRW can successfully locate an Altamont well in this location the cost of the supplemental well field could very well be less than the cost estimate projected in the DEIS.

As stated in response 1-8, LPRW currently has sufficient capacity to serve all of the rural and rural area municipal users if they were to discontinue water sales to MMU. If MMU and MCP utilized the wells currently permitted by the MDNR, then LPRW may not have to develop a supplemental well field at all. RUS still believes that a supplemental well field is the most reasonable alternative from both a resource management issue and cost feasibility standpoint; RUS will continue to support the preferred alternative.

7-3 Notwithstanding past legal actions as listed, MDNR has the authority to regulate groundwater appropriations at the Burr Well Field. RUS has no reason to question MDNR's resolve to assert its jurisdiction over its Water Appropriation Permit with LPRW and its fen protection statue - Minnesota Wetland Conservation Act of 1991 (Minn. Stat. 103G).

7-4 RUS agrees, see response 1-12.

7-5 All water sold to customers is metered. The footnote attempts to explain that the volume of water that is "unmetered" is the difference between total volume produced and that metered through all users' meters. Unmetered water is used for flushing lines, backwashing filters at the water treatment plants, and consists of leaks in utility lines. Unmetered water is sometimes reported as "unaccounted for water" and is typically less than 15% rather than 10% on a system of this type.

7-6 According to the MDNR Final Report, Southwestern Minnesota Groundwater Exploration Project 1996-97, page 7 - "The hydraulic conductivities values from the City of Cottonwood and Berg aquifer tests are in the middle to upper range for clean sand (Freeze and Cherry, 1979) which indicates that Wood Lake is a good aquifer."

7-7 South Dakota #2 is also referred to as the South Slough Fen and South Dakota #5 is the Lynch Fen.

7-8 Any factor that reduces groundwater flow to the fens can be described by the discussion in the DEIS on pages 96-98.

8. Department of the Interior

8-1 Since the publication of the DEIS in February 1998, monitoring and data collection has continued in observation wells and piezometer nests

installed in selected fens. Hydrographs of these monitoring points can be found in Appendix B. In addition, rainfall data was plotted on graphs from the period between 1988 to 1998 and from 1917 - 1998 (see Appendix B-1 and 2).

The commenter uses the term "ground-water levels" which may be confusing to some readers. The Burr Unit of the Prairie Coteau aquifer is a confined aquifer in the eastern portion of its range and also under water table conditions in the western portion (see Figure 3-4). Water levels in the confined portion of the aquifer is measured by the potentiometric surface (see DEIS page 81). During the period LPRW has been pumping from the Burr Unit at the Burr Well Field, the potentiometric surface in the confined portion of its extent has dropped on the average approximately 0.5' (9/94 - 12/98, OW R2 94-26 - West End of Lake Cochrane (Appendix B-22)); 3.5' (9/94 - 12/98, OW R2 93-10 - State Line OW (Appendix B-21)); and 1.4' (4/97 - 12/98, Deep Steel OW, Sioux Nation area (Appendix B-20). In the water table portion of the Burr Unit the water elevation has declined 0.2' (9/84 - 12/98, OW R2 94-33 - 2.25 miles west of Lake Cochrane (Appendix B-23)).

8-2 Information regarding the Altamont aquifer can be found in the DEIS on page 60 and 63 which uses information from references Kume 1985 and Berg, 1997a. Based on exploration efforts by the MDNR (Berg), the Altamont aquifer appears to hydraulically isolated from the Burr Unit of the Prairie Coteau aquifer, therefore it is unlikely that declines in water levels in the Altamont would affect the water levels or the potentiometric surface in the Burr Unit. In addition, Appendix C in the DEIS contains four cross sections (Fig 7.4 through 7.7) which depict the till sequences and depth information requested in this comment. The Altamont aquifer is designated as BQ.

9. National Audubon Society

9-1 RUS disagrees with this statement. The MDNR has the statutory jurisdiction and regulatory authority to regulate groundwater appropriations in Minnesota through its permit program. RUS has no reason to believe that they will not exercise their authority if on-going monitoring determines significant adverse environmental impacts to surface water resources are occurring. In order to minimize the fears the commenter speaks of where human needs are pitted against the long-term viability of lakes and fens, RUS supports actions outlined in the preferred alternative that minimizes an over-reliance on the Burr Unit. This could be accomplished by developing a supplemental well field, particularly one that utilizes the Altamont aquifer. In addition, Table 5 outlines the permitted capacities of the well fields owned by MMU and MCP. These wells, particularly those

owned by MCP, are available for use.

10. Hazel Run City Council

10-1 The EIS that is being prepared is required by the National Environmental Policy Act (NEPA). One of the goals of NEPA is to "achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities (42 USC 4331, Section 101 (b)(5)." RUS believes its preferred alternative will go a long way in helping to achieve this balance.

11. L. W. Tobin, Lake Cochrane Improvement Association

11-1 See response 1-30. The commenter's analogy may be appropriate for an aquifer that is not receiving recharge, however, it is likely that the Burr Unit of the Prairie Coteau is receiving some recharge. The point of the recommendation was assuming that the annual volume appropriated from the Burr Unit would not appreciably change, therefore two point withdrawals from the Burr Unit could potentially minimize reductions in the potentiometric surface and the resulting cone of depression thus potentially minimizing effects to surface water resources. MDNR will determine through its permitting authority any and all well field configurations, pumping rates, and annual volumes.

11-2 RUS accepts and does not dispute the work performed by the SDDENR regarding Lake Cochrane (see DEIS page 109). See response 2-1.

11-3 The DEIS on page xiii states that - "Based on a systematic and objective evaluation of the environmental and economic issues related to the remaining alternatives, the Agency has concluded that the proposed action (to appropriate groundwater at 1,500 gpm/800 Mgpy from the Burr Unit at the Burr Well Field) poses an unreasonable environmental risk to surface water resources in the area.

12. Clayton Holt

Comments noted; RUS has no additional responses.

13. Eugene Eilers

13-1 RUS regrets that it does not have funding available to meet the needs of all of the rural areas. RUS was informed by the MDNR that Canby was able to secure funding from the revolving loan funds being made available to

State governments through revisions in the Safe Drinking Water Act.

Perhaps the upgraded City of Canby's Water Department could serve as a contingency supply for citizens that were previously served prior to LPRW's service in the Yellow Medicine phase area.

14. John Lentz

Comments noted; RUS has no additional responses.

15. U. S. Army Corps of Engineers, Omaha District

Comments noted; RUS has no additional responses.

16. U. S. Army Corps of Engineers, St. Paul District

Comments noted; RUS has no additional responses.

17. Minnesota Historical Society

Comments noted; RUS has no additional responses.

18. Senator Paul Wellstone and Congressman David Minge

Comments noted; RUS has no additional responses.

19. South Dakota State Senator Bernie Hunoff

Comments noted; RUS has no additional responses.

20. East Dakota Water Development District

Comments noted; RUS has no additional responses.

21. Marshall Municipal Utilities

Comments noted; RUS has no additional responses.