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EXECUTIVE SUMMARY
FOR THE
WYOMING WATER DEVELOPMENT COMMISSION

LEVEL II ANALYSIS
RIVERSIDE AREA MUNICIPAL WATER SUPPLY SYSTEM
RIVERSIDE, WYOMING

JUNE 1992

SPONSOR
SIERRA MADRE WATER AND SEWER JOINT POWERS BOARD
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EXECUTIVE SUMMARY

PROJECT NEED

The Riverside area does not have a municipal water system. The present water supply is individual wells.

The wells in Riverside are shallow and some have been contaminated in the past by either sewage or gasoline. A wastewater treatment facility has been built, but residual well water contamination is still a concern. The most pressing problem is a lack of sufficient water from the individual wells inducing some residents to drill additional wells on their property.

Currently, water for fire fighting has to be hauled to the fire site.

PROJECT HISTORY

The Town of Riverside requested the Wyoming Water Development Commission to conduct a study to determine the feasibility of constructing a municipal water system to serve the Town and adjacent areas.

The Level II - Riverside Area Water Supply Study was initiated in 1989 to evaluate potential water supply sources and recommend a source of supply that will meet the water needs of the project area through the year 2040.

Alternative groundwater and surface water sources were evaluated to determine the feasibility of constructing a municipal water system to serve the Riverside area.

Potential water service areas were investigated. Population projections, conceptual designs, cost estimates and economic analysis were prepared for several alternatives. A preliminary design was prepared for the recommended alternative.

The study scope was amended in 1990 to include exploration of the recommended groundwater alternative located approximately 2.5 miles east of Riverside.

A second amendment to the study scope was made in 1991. This amendment was for additional groundwater exploration and investigation to verify the questionable results obtained in the 1990 exploration program.

GEOGRAPHIC AREA AND POPULATION SERVED BY PROJECT

The recommended service area is the Town of Riverside and the East Riverside Wyoming Water And Sewer District.

Approximately 170 people will be served by this project initially. The project service area is shown on Figure ES-1.

WATER CONSUMPTION AND POPULATION PROJECTIONS

The following water consumption and population figures were used in the preliminary system design.

YEAR	1991	2040
POPULATION	170	350
SERVICES	80	165
CONSUMPTION		
Average Day	300 Gal/Pop/Day	300 Gal/Pop/Day
	51,000 Gal/Day	105,000 Gal/Day
	36 GPM	73 GPM
Peak Day	700 Gal/Pop/Day	700 Gal/Pop/Day
	119,000 Gal/Day	245,000 Gal/Day
	83 GPM	170 GPM

SYSTEM OWNERSHIP AND OPERATION

The Sierra Madre Water and Sewer Joint Powers Board has been formed to own and operate the water system. Its members are the Town of Riverside and the East Riverside Wyoming Water And Sewer District.

RECOMMENDED ALTERNATIVE

The recommended Riverside Area Water Supply System is a complete municipal water system that will serve the Town of Riverside and the East Riverside Wyoming Water and Sewer District. The system consists of a well field, water treatment, transmission lines, storage tank and distribution system. Water meters will be installed on individual service lines. These components are described below. The proposed system is shown on Figure ES-2.

WATER SUPPLY

The water supply is a well field located in the NE1/4 Sec. 4, T14N, R83W. The well field will consist of a minimum of three wells.

Additional wells will be developed as the system consumption approaches the developed well capacity. Sufficient land will be purchased initially to allow future well field development.

WATER TRANSMISSION

An 8" transmission line will be installed from the well field to a 10" transmission line in Blackhall Road. The 10" transmission line will connect the water storage tank and the distribution systems. An additional 8" transmission line will loop north along the eastern end of the water district and connect to the above mentioned 10" transmission line.

WATER STORAGE

The preferred water tank location is adjacent to Blackhall Road approximately 1 1/4 mi. south of Wyo 230.

Installation of one 250,000 gal. bolted steel tank is proposed. Sufficient property will be acquired to allow installation of a second tank at the same site.

The tank location will be determined when the service area and users are finalized. The tank location will determine if pressure reducing valves are needed to regulate pressures in the lower portions of the system or if booster pumps are to be installed to serve the few users at the higher elevations.

WATER TREATMENT

The well supply is expected to be classified as a true ground water source and not a ground water source under surface water influence. Disinfection is the only treatment anticipated.

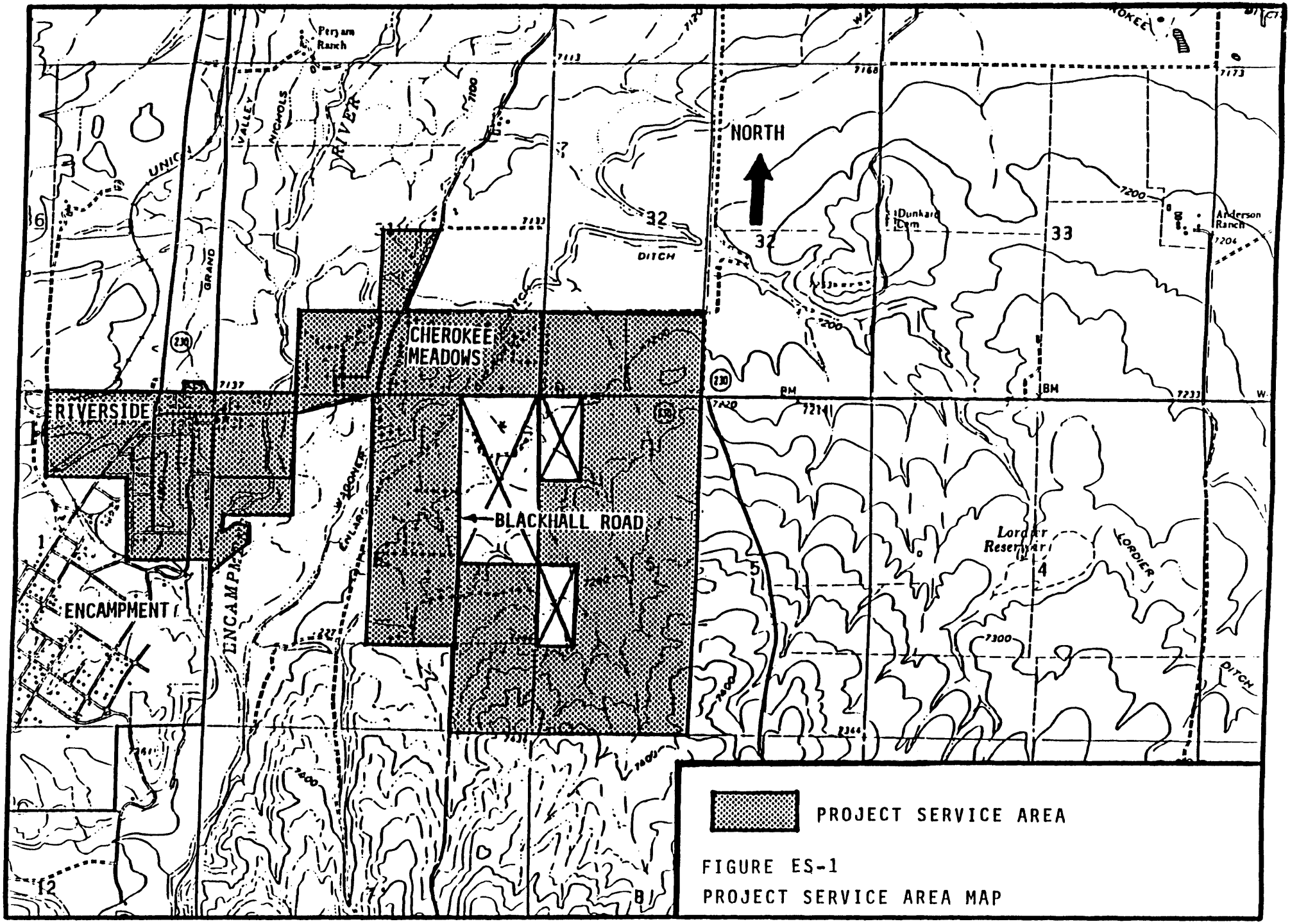

FIGURE ES-1
PROJECT SERVICE AREA MAP

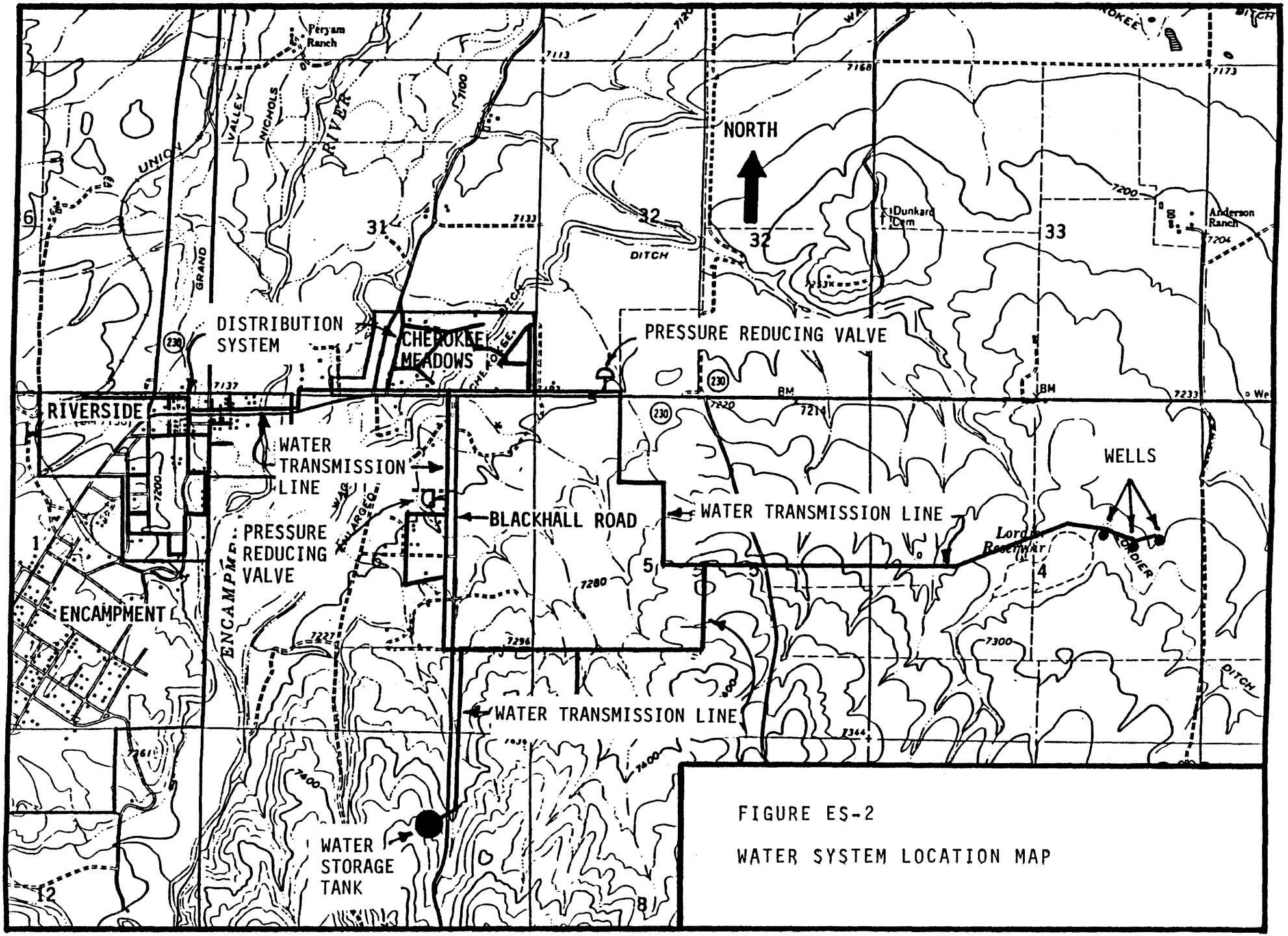

FIGURE ES-2

WATER SYSTEM LOCATION MAP

ENGINEER'S OPINION OF PROBABLE PROJECT COST

DESCRIPTION	OPINION OF PROBABLE COST
WELLS	
Well Site	$20,000
Well Construction	110,000
Electrical Service	8,000
Pumps, Motors, Controls	40,000
Pump Buildings	12,000
Chlorination System	12,000
TRANSMISSION LINES	
Easements And Rights Of Way	5,000
8" Transmission Line - Wells to Blackhall Rd	216,000
8" Transmission Line - East Side Of District	80,000
10" Transmission Line - Tank To Distribution	291,000
River Crossing	33,000
ROW & Easement Survey	8,000
STORAGE TANK - BLACKHALL ROAD LOCATION	
Tank site acquisition	5,000
Property Survey	3,000
250,000 gal. tank & controls	115,000
DISTRIBUTION SYSTEMS	
Riverside	440,000
Cherokee Meadows	243,000
Blackhall Road	30,000
Subtotal	$1,671,000
Design (10%)	167,000
Subtotal	$1,838,000
Admin./Inspection/Quality Control (10%)	184,000
Subtotal	$2,022,000
Contingency (15%)	303,000
TOTAL ANTICIPATED PROJECT COST	$2,325,000

ANNUAL ANTICIPATED LOCAL COSTS	67% GRANT	96% GRANT
Labor	$7,800	$7,800
Chemicals	500	500
Power	2,100	2,100
Maintenance (10% moving parts)	6,000	6,000
Debt Service ($87,000, 4% int., 30 yrs.)	44,370	5,032
Annual Anticipated Local Base Cost	$60,770	$21,432
Anticipated Monthly Base Cost Per Service	$63.30	$22.33

The anticipated monthly base cost per service is based on 80 taps and debt service on $87,000 @ 4% for 30 years.

FUNDING SOURCES

The following total project funding program is being pursued:

Farm Loan Board Grant	$584,000	(25%)
EDSB Block Grant	250,000	(11%)
Farmer's Home Administration	571,000	(24%)
Wyoming Water Development Commission (Grant)	833,000	(36%)
Wyoming Water Development Commission (Loan)	87,000	(4%)
Total	$2,325,000	(100%)

The status of the funding applications are:

EDSB - Approved $250,000 grant

WWDC - 1992 legislature approved $833,000 grant and up to a $410,000 loan for water supply, transmission and storage system funding. The loan payments will be deferred for the first five years.

FmHA - The FmHA State office is attempting to obtain funding from national FmHA funding pool. Funding is expected to be in place in late 1992.

FLB - A $35,000 grant was approved at the January 1992 meeting. A $275,000 grant application has been submitted for consideration at the July 1992 meeting. A $274,000 grant application will be submitted for the January 1993 meeting.