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**Mailing Address:**

Water Resources Data System  
University of Wyoming, Dept 3943  
1000 E University Avenue  
Laramie, WY 82071

**Physical Address:**

Wyoming Hall, Room 249  
University of Wyoming  
Laramie, WY 82071

**Phone:** (307) 766-6651

**Fax:** (307) 766-3785

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**JOHNSON-FERMELIA Co. Inc.**

CONSULTING ENGINEERS, ARCHITECTS AND SURVEYORS

**EXECUTIVE SUMMARY  
PHASE II REPORT**

**OAKLEY**

**WATER SUPPLY PROJECT**

**LEVEL II - FEASIBILITY STUDY**

**FOR**

**WYOMING WATER DEVELOPMENT COMMISSION**



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## P H A S E   I I   R E P O R T

### I   EXECUTIVE SUMMARY

This Executive Summary of the Level II Feasibility Study of the Oakley Water Supply Project is submitted pursuant to our Consultant's Contract for Services dated June 13, 1989 and the Amendment thereto dated October 1, 1989.

The Oakley Project Area is located approximately two miles south of Kemmerer, Wyoming. It consists of homes and development in the Quarry and Oakley Subdivisions and three other homes situated on individual lots outside of the subdivisions, as shown on Sheet 3 of the Drawings. There is a total of 20 lots in the area considered for water service.

The homes in the study area presently obtain their water from shallow private wells. The quantity and quality of these groundwater supplies varies greatly and, for the most part, the quality is very poor. Consequently, the homeowners are intent on obtaining a better supply. Additionally, water is not available for fire protection and there has been one instance where property has been lost to fire because of this deficiency.

Three alternatives were evaluated in Phase I of the study to provide water to the Oakley Area. They were:

- 1) Connecting a pipeline to the Kemmerer water system to convey water to Oakley.

- 2) Development of a groundwater source.
- 3) Improving water quality with individual residential water treatment/softening units.

Alternates 2 and 3 were dropped from further consideration. Alternate 1 was selected for further study and ultimately three different variations were examined for supplying water from Kemmerer to Oakley. These three alternates are:

Alternate "A" - Constructing an 8 inch diameter transmission pipeline from Kemmerer to Oakley and installing a distribution system with adequate capacity for fire flows.

Alternate "B" - Constructing a 4 inch diameter transmission pipeline from Kemmerer to a 50,000 gallon water storage tank near Oakley. A distribution system would connect to the water storage tank to serve Oakley, with sufficient capacity to meet fire flow demands and fire hydrants would be installed for fire protection.

Alternate "C" - Constructing a 4 inch diameter transmission pipeline from Kemmerer to Oakley with a distribution system consisting of 4 inch diameter pipe. No fire hydrants would be installed and there would be no provision for fire fighting capabilities.

Several meetings were held during the Phase II effort that significantly affected the work and influenced the cost figures. They are listed as follows:

- 1) A public meeting on August 23, 1989.
- 2) Workshop with Oakley residents on Sept. 27, 1989.
- 3) Meeting with DEQ on November 15, 1989.
- 4) Meeting with Farmers Home Administration (FmHA) on November 21, 1989.
- 5) Meeting with representatives of Kemmerer Water Department on November 28, 1989.

Project capital costs are estimated to be:

**Alternate "A":**

Transmission Line.....	\$ 428,962.64
Distribution System.....	<u>78,000.45</u>
<b>TOTAL CAPITAL COST</b>	<b>\$ 506,963.09</b>

**Alternate "B":**

Transmission Line and Tank.....	\$ 412,913.39
Distribution System.....	<u>78,000.45</u>
<b>TOTAL CAPITAL COST</b>	<b>\$ 490,913.84</b>

**Alternate "C":**

Transmission Line.....	\$ 326,537.87
Distribution System.....	<u>38,086.95</u>
<b>TOTAL CAPITAL COST</b>	<b>\$ 364,624.82</b>

Estimated total monthly water costs for the three alternates to meet existing conditions (20 lots) assuming 67% grant and 33% loan from the WWDC for construction of a transmission pipeline are as follows:

Alternate	100 gal. per capita per day	300 gal. per capita per day
"A"	\$150.72	\$207.42
"B"	\$106.84	\$163.54
"C"	\$ 92.23	\$148.93

The above figures include component costs for:

1. Transmission Pipeline
2. Distribution System
3. Meter Reading and Billing
4. Fixed and Variable Costs Payable to Kemmerer.

These figures could be reduced to the those in the following tabulation by receiving a 75% grant and 25% loan from WWDC.

Alternate	100 gal. per capita per day	300 gal. per capita per day
"A"	\$142.45	\$194.15
"B"	\$ 98.88	\$155.58
"C"	\$ 85.94	\$142.64

The costs could be further reduced if a more favorable water pricing program was adopted by the City of Kemmerer.

Cost figures were also developed on the assumption that Oakley annexed to the City of Kemmerer. This would reduce their water costs in four ways:

- 1) The connection fee would not apply - \$25,000 for Alternate "A" and \$10,000 for Alternates "B" and "C".
- 2) A large meter would not be required - \$7,500 for Alternate "A" and \$3,000 for Alternates "B" and "C".
- 3) The monthly fixed charge for each large meter would not apply - \$1,192.80 per month for Alternate "A" and \$340.00 per month for Alternates "B" and "C". (Instead a monthly charge of \$4.26 per residence would be applied.)
- 4) Water rates would drop from \$2.70 per 1000 gallons to \$1.75 per 1000 gallons.

The following total monthly costs would result if all other costs remained the same and the 20 Oakley lots are annexed to the City of Kemmerer.

Alternate	100 gal. per capita per day	300 gal. per capita per day
"A"	\$ 69.07	\$105.82
"B"	\$ 69.48	\$106.23
"C"	\$ 54.87	\$ 91.62

There are probably other costs in the form of tax assessments, etc., and other criteria that may apply to Oakley concerning annexation that have not been identified nor addressed in this study and Report.

The cost figures given in the above table assume a 67% grant and 33% loan from the Wyoming Water Development Commission to construct the transmission pipeline for each of the three alternatives.

The distribution system was assumed to be funded by the Wyoming Farm Loan Board with a 50% grant and 50% loan in all cases for each alternate. Funding from the Farmers Home Administration was also investigated, however, it is very unlikely that Oakley would qualify for a FmHA grant. They could secure a loan from FmHA to cover the loan portion of Wyoming Farm Loan Board funding at a more attractive interest rate that could reduce monthly costs by about \$1.00 per month per residence.