This is a digital document from the collections of the Wyoming Water Resources Data System (WRDS) Library.

For additional information about this document and the document conversion process, please contact WRDS at wrds@uwyo.edu and include the phrase “Digital Documents” in your subject heading.

To view other documents please visit the WRDS Library online at: http://library.wrds.uwyo.edu

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

Funding for WRDS and the creation of this electronic document was provided by the Wyoming Water Development Commission (http://wwdc.state.wy.us)
EXECUTIVE SUMMARY

PHASE III REPORT
(OPAL PIPELINE)

OAKLEY
WATER SUPPLY PROJECT
LEVEL II - FEASIBILITY STUDY

FOR

WYOMING WATER DEVELOPMENT COMMISSION
APRIL 1990

1515 Ninth Street
Rock Springs, Wyoming 82901
Phone (307) 362-7519
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 No. 2 thereto dated January 25, 1990.

Phase I of the Project investigated various alternate sources of a water supply for the Oakley area which is located approximately two miles south of Kemmerer, Wyoming. A groundwater source and a supply from the City of Kemmerer were investigated together with looking at means to treat water from the privately owned wells in the Oakley Subdivision. Ultimately a pipeline from Kemmerer to Oakley was selected for further study in the Phase II effort.

Three different alternatives were examined in detail in Phase II as follows:

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.

The Draft Phase II Report was submitted to the Wyoming Water Development Commission on January 10, 1990.

The Town of Opal, Wyoming requested that the Wyoming Water Development Commission investigate the possibility of extending the Oakley pipeline to Opal, this request was made prior to January 10, 1990. It was made because Opal had been advised that United States Environmental Protection Agency Region VIII was considering a Proposed Administrative Order addressing violation of 40 CFR 141.11(c) which sets the maximum contaminant level (MCL) for fluoride for a community public water supply system at 4.0 mg/L. The Opal MCL was based on an average of 4.4 mg/L, fluoride for six water samples taken and analyzed in 1986, 1988 and 1989. The Proposed Administrative Order is bound in the Appendix to this Phase III Report.

The pipeline extension was therefore considered to deliver sufficient water from Kemmerer to Opal to be blended or mixed with Opals' existing well water supply to achieve a MCL for fluoride of 4.0 mg/L or less.

The four inch diameter pipeline considered in Alternate "C" of the Phase II study is proposed in Phase III as Reach 1 of the Opal Pipeline. Reach 2 would consist of a four inch diameter pipeline from Oakley to Opal.

Project capital costs are estimated at:

Reach 1 - Transmission Line-Kemmerer to Oakley... $326,537.87
Reach 2 - Transmission Line-Oakley to Opal....... $1,467,296.48
Monthly component water costs for Oakley are:

1. Transmission Pipeline............... $ 9.44
2. Distribution System................ $ 7.38
3. Meter Reading and Billing............ $13.50
4. Fixed Costs to Payable to Kemmerer... $ 6.20
5. Variable Costs Payable to Kemmerer:
   @ 100 G/C/D........................ $ 28.35
   @ 300 G/C/D....................... $ 85.05

TOTAL COSTS:

   @ 100 G/C/D....................... $ 64.87
   @ 300 G/C/D....................... $121.57

Monthly component water costs for Opal are estimated at:

1. Transmission Pipeline - Reach 1....... $10.39
2. Transmission Pipeline - Reach 2....... $64.79
3. Fixed Costs Payable to Kemmerer....... $ 6.82
4. Variable Costs Payable to Kemmerer.... $ 7.71
5. Existing Monthly Water Costs........... $19.00

TOTAL MONTHLY COSTS $108.71

Extending the Oakley pipeline to Opal would affect the monthly water costs determined for Oakley in the Phase II effort because Opal would share in the cost of Reach 1 of the pipeline.

The estimated total monthly water costs for Oakley residences for Alternative "C" would be revised as shown below, if Opal shared in the cost of the transmission line from Kemmerer to Oakley. Service to the existing 20 lots in the Oakley area is considered. These costs are based on a 33% loan and a 67% grant from WWDC.
<table>
<thead>
<tr>
<th>Alternate</th>
<th>100 gal per Capita per day</th>
<th>300 gal per Capita per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;C&quot;</td>
<td>$64.87</td>
<td>$121.57</td>
</tr>
</tbody>
</table>

Total monthly water costs are estimated at $108.71 for Opal residents, assuming that 28 lots are served, which is the number of services presently active in Opal. This figure would be higher during the summer months when more water is being used for lawns etc.