EXECUTIVE SUMMARY

FOR

Thirty-three Mile Water Supply Project,
Level I

Submitted To:

Wyoming Water Development Commission

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I. INTRODUCTION

A. Authorization and Purpose

This Level I Report for the 33 Mile Water Supply Project has been completed in accordance with a contract between the Wyoming Water Development Commission and JFC Engineers, Architects, Surveyors of Rock Springs, Wyoming, dated 17 June 1998. The purpose of this project was to complete a study and develop a preliminary design after evaluating the existing supply and distribution systems in the area and to determine the most feasible method for the district to obtain a potable water supply. Preliminary designs and cost estimates have been developed for preferred alternatives.

Assisting with the geology and hydrogeology on the project was the following subconsultant:

350 West "A" Street, Suite 205
Casper, WY 82601

The tasks involved for the Scope of Work are as follows:

Task 1: Scoping Meetings and Workshops
Task 2: Analysis of Potential Water Supplies
Task 3: Environmental Studies/Construction Permits
Task 4: Surveying
Task 5: Geological/Geotechnical Investigations
Task 6: Preliminary Designs and Cost Estimates
Task 7: Economic Analysis and Project Financing
Task 8: Reports, Executive Summaries, and Results Presentations

B. Study Area

The 33 Mile Service and Improvement District is located northwest of the city of Casper north of the intersection of 33 Mile Road and State Highway 26/20. A vicinity map (Figure 1) is included on the following page.

At the commencement of this study, the district had potentially 54 taps within an 18 square mile area. Natrona County has placed a 10-acre minimum plot size per residence within the county as a zoning restriction. However, much of the land within the district is still used as irrigated hay meadow and a 100% growth rate over the next 25 years or 4% per year growth was used as a conservative figure.
THIRTY THREE MILE ROAD IMPROVEMENT & SERVICE DISTRICT
C. Investigation, Fieldwork and Meetings

The investigation and fieldwork was conducted from June 1998 through September 1998. The investigation included data research, field reconnaissance, and personal contacts in the study area with personnel from the 33 Mile Service and Improvement District, the Pioneer Water and Sewer District, the Natrona County Regional Water System Joint Powers Board (hereinafter referred to as Regional), and WWDC.

Meetings conducted during the course of work included:

1. Scoping meeting in Casper on June 23, 1998, with members of the 33 Mile District, WWDC, and JFC present.
2. Several other meetings with the district were held throughout the scope of the project.

D. Conclusions

1. Distribution System
   • It is feasible for the district to attach to the Pioneer District’s 10" diameter water line that is south of State Highway 20/26.
   • The 33 Mile District’s proposed 3" line would run under Highway 26 on 33 Mile Road and meet the district boundary north of the Highway. Two inch and three inch polyethylene pipe or PVC will service the district.
   • Fire flows are not included in the design and proposed hydrants are for flushing purposes only.

2. Potential Funding Sources
   • The following funding sources should be considered in pursuing project development:
     a. Wyoming Water Development Commission (WWDC)
     b. Wyoming Farm Loan Board (WFLB)
     c. Rural Utility Service (RUS)

3. Impacts on Water Rates
   The total monthly water cost per ¾" tap per month is estimated to be:

   WWDC / WFLB Funding .................................................. $125.69
   RUS Funding ....................................................................... $124.91
The one time tap fee charges will be:

Pioneer Water District ................................................................. $1,500.00
Regional Water System ............................................................... $650.00

Total One-time Tap Fees ......................................................... $2,150.00 *

* This amount includes ¾" meter pit and PRV for services. Service lines over 10' are not included in this cost.

II. CONCLUSIONS

The 33 Mile Improvement and Service District's water system appears feasible due to the close proximity of the Pioneer District's lines and elevation of the Pioneer tank. The following points need to be addressed before the commencement of the project:

- The issue of available water rights needs to be discussed between the 33 Mile District and the Regional System Director.
- The per tap costs could be reduced if the system was constructed through a volunteer effort in the district and/or more in-depth study of chain trenching polyethylene pipe.
- The Regional System Director and Pioneer Manager need to be formally informed from the 33 Mile District of the district's intentions (i.e. by letter).
- Hydraulic modeling indicates that adequate pressures will exist in the proposed system and individual cisterns are not needed.
- Backflow prevention and pressure reduction equipment may need to be included with individual taps and follow the Pioneer District's standards.