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September 25, 2008

Wyoming Water Development Commission
Mr. Kevin Boyce, PG
Project Manager
6920 Yellowtail Rd.
Cheyenne, WY 82002

Town of Upton, Wyoming
Mr. Mark Lindstrom
725 2nd Street
Upton, WY 82730

RE: UPTON WELL NO. 6 LEVEL II STUDY – EXECUTIVE SUMMARY

Dear Kevin and Mark:

Please find attached the Well No. 6 Level II Study submitted to the Town of Upton, Wyoming and the Wyoming Water Development Commission. Included with this Transmittal Letter is an executive summary of the findings and conclusions generated with this report.

INTRODUCTION/PURPOSE

The Town of Upton teamed with the Wyoming Water Development Commission (WWDC) to develop a plan to use an existing water well. The well had originally been a poor water producer until an attempt of acid-frac greatly increased the production of the well. Unfortunately, quality of the water suffered and was never able to be used in the potable water system.

The initial plan involved designing a treatment facility that could remove the iron within the water. However, after a thorough investigation of the well, it was determined that it was not the aquifer that held the iron bacteria, it was the deterioration of the well casing that was supporting the well bacteria population.

EXISTING FACILITIES

The Town currently operates its own water system, comprised of groundwater wells and pumps, 3 storage tanks and approximately 58,600 lf of water distribution lines. A video was made of the well to show the condition of the existing casing and construction. The footage showed
deterioration of the casing, however the joints and overall stability of the well appeared adequate. The complete well review report with the pump test logs and recommendations can be found in Appendix A.

ESTIMATED WATER REQUIREMENT

The Town of Upton currently has approximately 1000 residents. The historical water use has shown an average daily demand of 500,000 gallons per day. Peak daily summer demands reach roughly 900,000 gallons per day.

Upton is expecting the population to double in the next five years. This would increase the average daily demand to 850,000 gpd, with a summer peak reaching 1,600,000 gallons per day. This rate includes 200,000 gallon per day demand that has been dedicated to the new ethanol plant.

The estimated present and proposed water demands are shown in the following table.

<table>
<thead>
<tr>
<th></th>
<th>Present</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Daily Demand (gpd)</td>
<td>500,000</td>
<td>850,000</td>
</tr>
<tr>
<td>Average Pump Demand (gpm)</td>
<td>350</td>
<td>590</td>
</tr>
<tr>
<td>Peak Daily Demand (gpd)</td>
<td>900,000</td>
<td>1,600,000</td>
</tr>
<tr>
<td>Peak Pump Demand (gpm)</td>
<td>625</td>
<td>1100</td>
</tr>
</tbody>
</table>

The expected production of 500 gpm of Well No. 6 would provide the Town with an available 1,500 gpm treated water supply.

ALTERNATIVES

Many alternatives were evaluated regarding the future of the well. It was determined that the Town had invested too much time and money into the well to not move forward in including the well into the potable water system. There were two alternatives presented for potable use; however, both provide for down-the-hole chlorination treatment to prevent the creation of iron through consumption of the well casing by iron bacteria.

Potable Alternative 1 involves constructing a two mile dedicated pipeline to the existing tank site. Contact time would be provided in the existing above grade storage tanks. This alternative would require an easement through forest service land, extensive permitting and mitigation and would have the water distributed from a single location.

Potable Alternative 2 involves directly connecting the well to the distribution system at the well site. The contact time would be achieved in a new 20,000 gallon underground storage tank. The water would then be boosted to the system pressure for injection.

RECOMMENDED ALTERNATIVE
When considering water system operations and reliability, Potable Alternative 2 is the preferred alternative. By providing another source point of water, the Town will be able to provide water from both the north and south. It will also provide two feeds during fire or peak demand situations, thus increasing both fire protection delivery rate and system reliability. Chlorination of the well for treatment of the iron bacteria is recommended at the well site for either option.

Potable Alternative 2 also does not carry the same public and political issues as Potable Alternative 1. The transmission line would not require cutting of trees, disruption of forest land or government easements. The extensive environmental assessment and correspondence showed no prohibitive environmental concerns preventing construction.

**ECONOMIC ANALYSIS AND PROJECT FINANCING**

Potable Alternative No. 2

Based on comparative costs and advantages, the Town of Upton has approved implementation of Alternative 2 without Well Rehabilitation. The project costs used for establishing funding and developing water rate analyses is the $374,000 for Potable Alternative No. 2 without the well rehabilitation. The Town has elected not to, at this time, include well rehabilitation involving lining of the casing and new pump installation (as outlined in Appendix A) when pursuing Level III Construction Phase funding with the WWDC.

The construction costs include the chlorine contact tank, well house upgrades, approximately 100 lf. of connecting pipeline and radio controls. The project will provide the Town of Upton with a high capacity, high quality water source, plus an alternate supply point to the system.

<table>
<thead>
<tr>
<th>Construction Action</th>
<th>Estimated Cost with Well Rehabilitation</th>
<th>Estimated Cost without Well Rehabilitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation of Final Designs and Specifications</td>
<td>$52,000</td>
<td>$24,000</td>
</tr>
<tr>
<td>Permitting and Mitigation</td>
<td>$10,000</td>
<td>$10,000</td>
</tr>
<tr>
<td>Legal Fees</td>
<td>$3,000</td>
<td>$3,000</td>
</tr>
<tr>
<td>Acquisition of Access and Rights of Way</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Cost of Project Components</td>
<td>$65,000</td>
<td>$37,000</td>
</tr>
<tr>
<td>Construction Cost Subtotal #1</td>
<td>$723,000</td>
<td>$262,000</td>
</tr>
<tr>
<td>Engineering Costs</td>
<td>$72,300</td>
<td>$26,200</td>
</tr>
<tr>
<td>Subtotal #2</td>
<td>$860,300</td>
<td>$325,200</td>
</tr>
<tr>
<td>Contingency</td>
<td>$129,000</td>
<td>$48,800</td>
</tr>
<tr>
<td>Construction Cost Total</td>
<td>$723,000</td>
<td>$262,000</td>
</tr>
<tr>
<td>Project Budget Total</td>
<td>$989,300</td>
<td>$374,000</td>
</tr>
</tbody>
</table>
Operating Budget

Staff provided information shows that a previous bond issue was retired in the 2007/2008 fiscal year leaving the only presently outstanding issues of DWSRF Loan #054 ($118,797, twenty years @ 2½% interest); and Wyoming Farm Loan #528 ($158,806, thirty years @ 3½% interest).

Service Charge Design

Proposed financing for this Well No.6 activation project is:

- Total project budget $374,000,
- 67% WWDL Grant $250,500,
- WWDC 4%, 30 year loan $123,500.

Level debt service for this loan is $7,260/year.

Approximate allocations of expense as to fixed or variable components indicate that approximately 75% of the total budget is fixed (i.e. not dependent on amount of water usage.) In contrast, for the 2007/2008 fiscal year, approximately 46% of the total service charge income was fixed. This indicates that any upward rate adjustment should be made to the fixed component.

Proposed Rate Schedule

Using the projected design 2009/2010 budget and estimated number of customers connected at that time, it is estimated that overall rate income should be increased about 10.9%. Allowing for some growth, the unit rate increase would be 10.6%. Analysis of expenses indicates that Upton water system costs are approximately 75% fixed, whereas the present rate structure has resulted in only about 45% fixed income.

To maintain the existing rate structure as closely as possible, the proposed rate structure is:

- Base Rate (indicates first 1,000 gallons) $16.00/month
- Metered water above 1,000 gallons $2.10/1,000 gal.

It is noted that the monthly increase attributable to the Well No.6 project is $1.14/month/tap.

Revisions that the Council may consider to reduce the amount of increase required include:

1. Town to pay for municipal water use – or cash transfer from the General Fund in lieu of.
2. Differentiate the Base Rate between 1” and ¾” taps (typically larger taps require a higher base rate.)
3. Reduce the projected costs for capitalized replacements and improvements. The $40,000/year estimate is about the average for the past three years, but if you
have confidence in the present system condition, some reevaluation would involve a reasonable risk.

4. Increase the base system development ("tap") fee, providing higher amounts for larger taps.

The Town of Upton is fortunate to have the high quality and quantity of water sources available. Inclusion of Well No. 6 will ensure adequate water supply for the expected growth in the near future. This study began as an investigation of costly treatment alternatives for removing iron, and evolved into an affordable solution that provides not only additional water, but also reliability and functionality to the entire system.

Very truly yours,
McLaughlin Water Engineers, Ltd.

Ronald C. McLaughlin, P.E.                                      Melanie Asquith, P.E.

cc: John Kaufman, Wyoming Water Design & Development, LLC
    Bret Wolz, Wyoming Water Design & Development, LLC

Attachment