



TETRA TECH

May 19, 2010

Mr. Harry Jones
Pine-Strawberry Water Improvement District
6306 W. Hardscrabble Road
P.O. Box 134
Pine, AZ 85544

**Reference: Milk Ranch Well Process Discussion
Pine, Arizona**

Dear Mr. Jones:

Now that an agreement to purchase the Milk Ranch well has been approved by the PSWID board, we find ourselves at the start of a tedious process to “get the well online”. I want to take a moment to outline the course and some probable costs associated with the endeavors to help guide the PSWID board in this year’s budgeting process.

Because this well is intended to supply a public drinking water system, the well must undergo the process of ADEQ Approval TO Construct. Then once construction is complete, the well must undergo another ADEQ process for Approval OF Construction prior to operation. Each of the items listed below are necessary to construct the public infrastructure. The course of action is briefly outlined as follows with probable costs:

ADEQ Application for Approval TO Construct Drinking Water Facilities \$17,500+\$10,700

The ADEQ Application for Approval TO Construct Drinking Water Facilities will include the following:

1. Construction Plans
 - a. Waterline, Booster, Tank and Wellhead Site
 - b. Filtration System by McCandless Engineering - \$5,000
2. Construction Specifications
3. Design Report
4. Water Quality Analysis Report
5. Water Well Construction Data and Design
6. ADWR Notice of Intent to Drill
7. Site and Location Plan
8. ADEQ Application Fees = \$5,350 standard (\$10,700 expedited)

This estimate does not include the cost of processing an Arizona Pollution Discharge Elimination System(AZPDES) permit to discharge backwash from the filter plant into Pine Creek. The

estimate assumes that the PSWID will have enough land at the Milk Ranch wellhead for all of the following:

1. filtration,
2. booster pumps,
3. storage tank,
4. room for future drilling or maintenance,
5. evaporation/percolation pond for discharge of the backwash from the filter plant and well startup flushing.

The backwash and startup flushing is most likely covered under a “de Minimus” classification as long as the discharge meets the quality requirements for Pine Creek. The requirements are somewhat stringent for that portion of Pine Creek so it may not be feasible to discharge directly to Pine Creek. However, if it is possible to discharge the well startup flushing and filter plant backwash to Pine Creek, then the AZPDES permitting will be required at an estimated cost of \$2,500.

This estimate also assumes that the land acquired by PSWID is outside of the Federal Emergency Management Agency (FEMA) floodWAY and can accept the proposed waterworks on site. Inspection of the FEMA floodplain mapping has shown that the well is near the boundary separating the floodPLAIN and floodWAY. For your information, construction is allowed within a floodPLAIN as long as certain elements are elevated 1-foot above the water surface elevation. However, if the land is within the floodWAY, then virtually nothing above ground level can be constructed. The construction plans will show the floodplain/floodway boundary and will coordinate grading to ensure proper location and elevation of required elements.

Survey \$10,000*

Survey services will be required for the following purposes:

1. Land Acquisition -The land required for waterworks at the Milk Ranch well site will need to be surveyed and recorded with Gila County in order to convey the property from Milk Ranch LLC to the PSWID.
2. Bluestake and Boundary Survey – The existing utilities within the proposed waterline alignment must be identified to determine conflicts and solutions. In addition, the boundaries of existing easements, right-of-ways or needed easements or right-of-ways must be determined along the proposed alignment.
3. Construction Staking –Staking of the proposed alignment and waterworks must be completed prior to construction.
- 4.

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Bidding Process \$8,500

Once the construction plans and specifications have been prepared and preferably approved by ADEQ the project can go out to public bid which consists of the following process:

1. Bid Specification Preparation
2. Public Advertisement
3. Pre-Bid Meeting
4. Receipt of Bids
5. Bid Analysis and Tabulation
6. Award of Bid
7. Pre-Construction Meeting

Construction \$286,000

The estimated construction elements for connection of the well are as follows:

1. Well Site Grading (floodplain mitigation) \$5,000
2. Filtration (\$50,000-\$150,000 range) \$120,000 probable
3. Booster Station (\$48,000 skid mounted rig + \$2,000 installation) = \$50,000
4. Storage Tank \$15,000 (assuming 15,000 gallons installed)
5. Waterline \$80,000 (2,000 feet installed underground @ \$40/ft)
6. Pine Creek Waterline Crossing \$10,000
7. Construction Inspection \$3,000
8. Waterline Testing \$3,000
 - a. BADCTI Testing
 - b. Pressure Testing

ADEQ Application for Approval OF Drinking Water Facilities \$2,700

The ADEQ Application for Approval OF Drinking Water Facilities will include the following:

1. Construction Inspection Records
2. Engineer's Certificate of Completion for Water Systems
3. Disinfection Data
4. As-Built Drawings
5. Pressure Testing Results/Certification Statement

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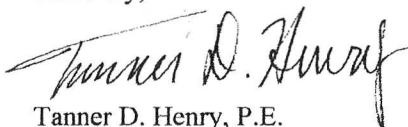
The total probable budget for the items listed above without AZPDES permitting is approximately \$335,400.

A recommended budget contingency of 25% would increase the total to approximately \$419,250.

Therefore, Tetra Tech recommends budgeting approximately \$420,000 for connection of the Milk Ranch well to the existing PSWID system.

If you have any questions or concerns, please feel free to call me or Garrett Goldman at 928-474-4636.

Sincerely,



Tanner D. Henry, P.E.
District Engineer

