

Hello Neighbor,

As the actions of the PSWID board unfold, it is useful to remember what the ACC Legal staff said in a February 29, 2008 legal brief: “The arguments that are being advanced against the [K2] agreement are to the benefit of a small group of developers, and against the overwhelming need of the public for more water.”

There have been a lot of suggestions about contacting the ACC with regard to the incorrect application of the effective date and that the rate structure penalizes people who conserve water. When the water system was purchased by PSWID, oversight by the ACC ended. That was one of the main goals of that small group of developers. It is much easier to get what you want from a local board packed with your friends than from a state agency run out of Phoenix.

There was a lot to chew on from the last meeting, so this email will only address the purchase of the Milk Ranch well. Be sure to read about the problems with the water quality.

There will be another email that addresses the financials and rate increase. The board is now speaking to the public through their lawyer. It is never a sign that a politician’s actions have been in integrity when that happens. The ability of the public to ask questions during the meeting was much more limited than before. If time permits, that will be addressed as well. We obtained a copy of the PSWID Rules and Regulations document. Surprisingly, the board is not following many of their own rules. There will be an email looking at what the rules and regulations mean to the customer and what the board has not been doing.

January 20, 2010 PSWID Meeting, Part 1

Next regular PSWID Meeting: Thursday March 17, 2011 at 7:30 PM at the PSWID Office

1. Milk Ranch Well Purchase
 - a. The purchase agreement that was signed wasn’t a full contract. A copy of what was signed can be viewed here:
<http://www.waterforpinestrawberry.com/data%20pages/BudgetDocs.htm> .
 - b. Same basic cost terms:
 - i. \$400,000 cash
 - ii. 50 residential and 2 commercial meters for free. Currently a \$171,000 value.
 - iii. No recovery by the district of the \$162,095.02 that the district spent to repair and develop a non-operational well
 - c. Total cost of Milk Ranch Well to the district is just over \$1 million.
 - d. Comment: We started with a private well that had filled with sand, did not function as anything more than a deep hole in the ground, and was worth next to nothing. We have a board that has spent \$162,000 of public money to repair and improve the well. We have well owners, Mr. Ray Pugel and Mr. Robert Randall, who are pocketing \$570,000 as a result of that public money improving their property. An example of that small group of developers gathering in their harvest.
 - e. Clarifies the following:
 - i. Land included with the well is 7000 square feet

- ii. Milk Ranch LLC is responsible for paying for line extensions to the meters
 - iii. The meters are not subject to any moratorium, now or in the future
 - f. One thing that is missing is any discussion of providing easements to get to the well. Easements were included in earlier documents. As noted in the engineering report below, it doesn't sound like they have the easements on the other side of Pine Creek either.
 - g. A new aspect was added where the district will pay Mr. Pugel \$6,000 per quarter (6% interest) until the balance is paid. This can go on for up to five years.
 - h. Comment: The addition of interest only payments to Mr. Pugel allows the district to take immediate possession and to worry about whether Compass Bank will approve the financing later. If Compass Bank were to refuse the money, then the board will have to find another way to raise that money.
2. Milk Ranch Well Hydrology
- a. The hydrology report, presented by Mr. Chuck Dickens, is too extensive to scan in its entirety. The main portion of the report can be viewed here: <http://www.waterforpinestrawberry.com/data%20pages/BudgetDocs.htm> . Contact us if you would like to see the entire report.
 - b. Definition: Turbidity is a measure of the degree to which the water loses its transparency due to the presence of suspended particulates. The more total suspended solids in the water, the murkier it seems and the higher the turbidity. Turbidity is visible to the eye at levels above 5 NTU.
 - c. The basic conclusion the Mr. Dickens came to is that the well can be pumped at 85 gpm and that after a period of time the sand content and turbidity levels will fall below the levels recommended by Mr. Dickens of 5 milligrams per liter (mg/l) and 5 NTU units, respectively.
 - i. Pump rate of 48 gpm after 7 days: Sand 1.35 mg/l; Turbidity 3.77 NTU
 - ii. Pump rate of 76 gpm after 7 days: Sand 3 mg/l; Turbidity 3.43 NTU
 - iii. Pump rate of 100 gpm after 7 days: Sand 16 mg/l; Turbidity 9.69 NTU; Well bottom filling with sand at a rate of 1 foot per week
 - iv. Pump rate of 117 gpm after 2 hours: Sand 62 mg/l; Turbidity 221 NTU; Well bottom filling with sand at a rate of 5 feet per hour
 - v. Pump rate of 85 gpm after 6 days: Sand 4 mg/l; Turbidity 3.55 NTU
 - d. The numbers given in the item above were presented by Mr. Dickens during the meeting. Mr. Dickens presented the most optimistic view, with the numbers for the 48 gpm and 76 gpm coming from the variable rate pump test at the end of all of the pump testing, rather than the actual pump test interval for that rate. The sand content and turbidity values averaged much higher than the numbers that were stated. Just focusing on the first three pump rates, the actual values at the end of the pump periods were:
 - i. Pump rate of 48 gpm after 7 days: Sand 1.35 mg/l; Turbidity 7.07 NTU. At no time during this test period did both levels fall below the limits.
 - ii. Pump rate of 76 gpm after 7 days: Sand 2.6 mg/l; Turbidity 5 NTU. There were only two samples on day 6 that fell below the limits.
 - iii. Pump rate of 85 gpm after 6 days: Sand 4 mg/l; Turbidity 3.55 NTU. The samples fell below the limits after 74 hours of pumping. Averaging the

samples that were below the limit gives Sand 4.48 mg/l and Turbidity 4.24 NTU.

- e. At the end of the pump testing there was a variable rate test where they changed the rate up and down over relatively short periods of time.
 - i. Starting at 50 gpm with sand at 3 mg/l and turbidity at 4.17 NTU
 - ii. Pump rate increased to 85 gpm which resulted in a spike in sand to 31 mg/l and turbidity to 10.78 NTU. It 2.5 hours the levels had declined to 5.3 mg/l and 4.75 NTU.
 - iii. Pump rate decreased to 45 gpm for 90 minutes and at the end of that time the levels were 4.1 mg/l and 4.36 NTU.
 - iv. Pump rate increased to 60 gpm for 30 minutes and at the end of that time the levels were 3.7 mg/l and 4.35 NTU
 - v. Pump rate increased to 70 gpm for 25 minutes and in the middle of that time the levels were 4.1 mg/l and 4.49 NTU
 - vi. Pump rate increased to 78 gpm for 20 minutes and at the end of that time the levels were 5.3 mg/l and 4.89 NTU.
 - vii. Pump rate increased to 85 gpm for 30 minutes and at the end of that time the levels were 6.2 mg/l and 5.54 NTU.
 - f. Observations about the testing:
 - i. It took 24 days of pumping before the samples were consistently below the limits. This probably reflects having to “clean” out the well by moving out the sand and particulates that had accumulated after the last time it was pumped.
 - ii. Pumping at 100 gpm or above is not possible since, even if the water could be cleaned up with filtration, the well will fill with sand at an unacceptable rate.
 - iii. Large spikes in the level of sand and turbidity occur when the pump rate is increased. When the pump rate is decreased levels stay the same. This is probably because when the pump rate increases the velocity of the water through the rock formation increases and picks up more sand and particulates from a wider area. When the pump rate is reduced, the levels stay the same because the higher pump rate has vacuumed out the area, at least for the time being.
 - iv. Based upon the data that is available, pumping the well at 85 gpm seems to be a borderline proposition. Even when it was gradually ramped up to 85 gpm in the final test, it still exceeded the levels after 30 minutes. The test wasn’t run long enough to determine how long it took to actually drop within the target levels.
 - v. If this well sits unused for a period of time, there may be a significant period of time where the levels are above the target levels as the area in the rock around the well gets “cleaned out” again. When asked about that, Mr. Dickens replied that the pump rate would be increased gradually. However, gradual may not do the trick if it has been sitting long enough. The well needs to have sensors to measure sand and turbidity and the water should be dumped when it is above a certain level.
3. Why is Filtration No Longer Required for the Milk Ranch Well?

- a. **The short answer is that the PSWID board is willing to accept water quality that is much lower than before.** Before the conspiracy theory faction took control of the board, filtration was being added to get the water to sand of 1 mg/l and turbidity to 1 NTU or less. Now the board is accepting water that runs at 5 mg/l and 5 NTUs. The 5 mg/l is being specified because the pump will wear out faster at levels above this and the 5 NTU is being specified because it is the absolute worst that is acceptable (see below). Turbidity of less than 1 NTU is recommended for water that is being chlorinated. The district is chlorinating the water.
- b. At one of the past board meetings, Mr. Bill Haney said that Pine and Strawberry shouldn't have to accept Third World water. The PSWID board owes the community an explanation as to why they are comfortable with water that has a turbidity of 4 to 5 NTUs, and why it doesn't need to be less than 1 NTU since the district chlorinates the water. The PSWID board also needs to explain to the community why spending \$1 million for a well with barely acceptable water is a good value for the community.
- c. From the World Health Organization's (WHO) "Guidelines for Drinking-water Quality" Third Edition:
 - i. "High levels of turbidity can protect microorganisms from the effects of disinfection, stimulate the growth of bacteria and give rise to a significant chlorine demand."
 - ii. "Drinking water should have a turbidity of 5 NTU/JTU or less. Turbidity of more than 5 NTU/JTU would be noticed by users and may cause rejection of the supply."
 - iii. "Where water is chlorinated, turbidity should be less than 5 NTU/JTU and preferably less than 1 NTU/JTU for chlorination to be effective."
- d. From Title 18, Chapter 4, Ariz. Admin. Code ADEQ's Safe Drinking Water Regulations: "The maximum contaminant levels for turbidity are applicable to both community water systems and non-community water systems using surface water sources in whole or in part. The maximum contaminant levels for turbidity in drinking water, measured at a representative entry point(s) to the distribution system, are: (a) **One turbidity unit (TU)**, as determined by a monthly average pursuant to § 141.22, except that five or fewer turbidity units may be allowed if the supplier of water can demonstrate to the State that the higher turbidity does not do any of the following:
 - i. Interfere with disinfection;
 - ii. Prevent maintenance of an effective disinfectant agent throughout the distribution system; or
 - iii. Interfere with microbiological determinations.
- e. Comment: While the above ADEQ turbidity requirement is for surface water (I couldn't find a requirement for ground water), it provides a good guide to what the level would be for "clean" water. Mr. Dickens makes a comment in his report that the 5 NTU is not enforceable by the state. Whether the water cops can handout a ticket or not isn't the point, the point is that the community has a right to expect clean water, not just barely acceptable water.

- f. When the conspiracy theory faction took control of the board and forced the resignations of Tetra Tech, Highland Water Resources, Mr. Harry Jones, and eventually Mr. Haney, one of the reasons cited was that the \$420,000 cost estimate to connect the Milk Ranch well was inflated and wrong. Mr. Pugel said that the cost estimate was “mythical”. This estimate included significant costs for the filtration of the water from the Milk Ranch well. The report on filtration was prepared by McCandless Engineering and the filtration that was recommended would have reduced the sand levels to 1 mg/1 and the turbidity to 1 NTU.
 - g. The McCandless Engineering report can be found here:
<http://www.waterforpinestrawberry.com/data%20pages/BudgetDocs.htm> . Scroll down a bit to “Water Filtration Recommendation and Estimate”.
 - h. Comment: So why would the board be against filtration and the costs associated with it? As was expressed by the board’s conspiracy theory faction, it was thought that a price tag that high was a deal breaker and that it was deliberately being done to scuttle efforts to buy the Milk Ranch Well.
 - i. The \$420,000 would have created pressure to reduce the amount being paid to Mr. Pugel for the well, so the estimate, and those associated with it, had to be trashed.
 - ii. The same situation existed for the appraisal. When it became clear that the appraisal would not be anywhere near the price that was being paid for the well, it had to be stopped before it created pressure to reduce the price being paid.
 - iii. The effort by the district to drill its own deep well was a mortal threat to the Milk Ranch well purchase since if it was successful it would have removed any need to purchase the Milk Ranch well. It too had to be stopped.
 - i. Comment: I hadn’t believed in the conspiracy theories, but now it is clear that Mr. Haney and the others were indeed conspiring to bring the community water that was clean and met the ADEQ quality standards. Shame on them for risking the size of Mr. Pugel’s payday for such a trivial concern.
4. Milk Ranch Well Connection
- a. A copy of the report provided by Verde Engineering Group can be viewed here:
<http://www.waterforpinestrawberry.com/data%20pages/BudgetDocs.htm> .
 - b. Verde Engineering provided an estimate of \$246,309, which they indicated should be considered the minimum cost, to connect the well into the system. The well needs to be connected into the system at the southeast corner of the Pine school yard. The connection consists of 2000 feet of pipe, a 10,000 gallon storage tank, and an 85 gpm booster pump.
 - c. Verde Engineering indicated that this cost did not include surveying the well site or the cost to acquire an easement from the well site to Pine Creek Road.
 - d. The board voted to increase the pipe size from four inches to six inches. Verde Engineering estimated that this would add \$16,000 to the total cost.
 - e. Comment: When you back out the costs that were included for filtration in Tetra Tech’s \$420,000 estimate and adjust for the difference in storage tank size and not requiring expedited ADEQ approvals, the Verde Engineering and Tetra Tech estimates are within a few thousand dollars of each other. So those Tetra Tech

numbers that were supposedly mythical and inflated match the numbers arrived at by the new District Engineer. Just goes to show that when you need a scapegoat, the truth doesn't matter.

5. Election of New Officers

- a. The board voted to reelect the board members currently holding those positions.
 - i. Chairman: Mr. Lovetro
 - ii. Vice-Chairman: Mr. Weeks
 - iii. Secretary: Mr. Dickinson
 - iv. Treasurer: Mr. Greer

This email is from the group Water For Pine Strawberry. We will be sending out an email after each of the PSWID meetings with a summary of what the board did, additional facts that are relevant to what went on, and some commentary. Please forward this email to friends and neighbors that are interested in the local water issues. If you would like to be added to or removed from the list for these emails, please reply to WaterForPineStrawberry@hotmail.com. Emails on earlier meetings are available on our website: www.WaterForPineStrawberry.com.

Water For Pine Strawberry is a group of residents who are concerned about the community's water issues and how they can best be resolved. Visit our web site, www.WaterForPineStrawberry.com, for more information. The website for PSWID is www.pswid.org.

Clarifications can be submitted by anyone who is explicitly named, implicitly identifiable, or a board member to items in this email. Clarifications will be posted on our website. We reserve the right to post a response. Clarifications must deal with the topics discussed in the email that relate to the individual or the board. They must be in family friendly language and be non-abusive. When the clarification is accepted, it will be posted to the website and notice of that posting will be added to the next email.