

Minutes of the Washoe County Well Mitigation Hearing Board

Tuesday, February 5, 2008

Members Present

Greg Pohll
David Carlson

Pete Morros

Scott Tyler

Members Absent

Karen Rosenau

Staff Present

Jim Smitherman
Linda White, Legal Counsel

Chris Wessel

June Davis

Others Present

Rick Felling

Randy VanHoozer

Ed Evans

DETERMINATION OF QUORUM – Chairman Pohll called the meeting to order at 6:05 p.m. There was a quorum present.

APPROVAL OF THE AGENDA – Mr. Morros made a motion to approve the agenda as posted. Mr. Tyler seconded the motion, which carried unanimously.

REVIEW, AMENDMENT AND APPROVAL OF MINUTES – The minutes of the December 18, 2007 meeting were submitted for approval. Chairman Pohll referred to page 3 of 8, paragraph three and stated he was asking a question rather than stating a fact so the first sentence should read, “Chairman Pohll mentioned a reference to a 2,500-foot radius and *asked if* mitigation should only be performed if the domestic well is within that radius.” Mr. Smitherman referred to page 5 of 8, paragraph one and revised a sentence to read, “Mr. Morros stated that water law has been in effect over 100 years and the policy has been the *doctrine* of prior appropriation, first in time, first in right.” Mr. Morros made a motion to approve the minutes as amended. Mr. Tyler seconded the motion, which carried unanimously.

PUBLIC COMMENT

Rick Felling, State Engineer’s Office referred to the last hearing on the Hayes well, when the Well Mitigation Hearing Board (WMHB) determined that 30% of the total drawdown was attributed to unreasonable municipal pumping. He reported that Truckee Meadows Water Authority (TMWA) declined to compensate Mr. Hayes so the case was referred to the State Engineer’s office. He offered to provide a copy of the letter to the WMHB once a determination is made.

Chairman Pohll thanked Mr. Felling for his comments. He called for further comments and hearing none, closed the public comment period.

BUSINESS OF THE DAY

1. Hearing on application for well mitigation, including possible decision and direction to staff:

**John Christopherson, APN 045-535-06; 5700 Tannerwood Drive
(Utility Service Area: Washoe County)**

Chairman Pohll reported that public comment would be allowed regarding this case, which would be followed by Mr. Christopherson presenting his case and then Washoe County presenting their case and any rebuttal. He called for any public comment and hearing none, called on Mr. Christopherson.

Mr. Christopherson reported that he is the owner and resident of 5700 Tannerwood Drive. He stated that he purchased the home in June or July of 1993 and last May performed a pretty extensive remodel. He added that they moved out of the house for the summer while the remodel was taking place. He stated the well was used some by the construction crews; however, the use was minimal. He reported that they were preparing to move back into the house in late September when the plumber advised them air was coming from the faucets. Mr. Christopherson called McKay Pump and Well Service, who came out and verified that the static water level was 200 feet and the total well depth was 212 feet with the pump set at 210 feet. He reported that they moved back into the house but they were showering elsewhere. They were doing laundry at the neighbor's house and they had no landscape irrigation.

Mr. Christopherson reported that the cost estimate to connect to the County municipal system is approximately \$25,000. He stated that McKay estimated the cost for deepening the well 200 feet was approximately \$12,300. He reported that he applied for a waiver with the State Engineer's office but was denied due to the water line already being in the street.

Mr. Christopherson reported that his well driller's reports show fluctuations of 166 feet to 170 feet below land surface. He reported that during the drought, the water level hardly changed at all. He stated that the water level in 1991 was 168 feet. He added that since 1998 the water level in his well has dropped 34 feet from 166 feet below land surface. He reported that the drop coincides with municipal pumping from the new commercial wells, Mt. Rose Wells 5 and 6 and Tessa Wells 1 and 2. He clarified that his property is surrounded by six municipal wells, the closest of which is one of the Tessa wells at a distance of about 2,400 feet and the furthest, which is one of the South Truckee Meadows wells at about 4,800 feet.

Mr. Christopherson reported that he has not seen an increase in domestic wells since 1998. He stated that per the County's package information, the estimated use of the domestic wells in the area is approximately 127 acre-feet. He added that in reviewing information supplied by Washoe County Department of Water Resources (DWR), the six wells mentioned are pumping increased annual volumes of 624 acre-feet to almost 1,100 acre-feet since 2002 or almost doubling. He reviewed the pumping numbers for the municipal wells that was provided to him by Department of Water Resources staff.

Mr. Christopherson stated that beyond the pumping, the County continues to approve subdivisions in his area that are on sanitary sewers and with curb and gutter storm drainage, which he believes further impacts the water table by eliminating recharge. He summarized that he does not feel they have been very good groundwater stewards for the area. He reiterated that the water level in his well remained relatively constant prior to the drilling of Mt. Rose Wells 5 and 6 and Tessa Wells 1 and 2 based on the records he has. He added that the water level in his well has dropped 30 to 40 feet. He summarized that his conclusion is that the protectible interest for his well has been rendered useless by water table lowering caused by the surrounding commercial wells.

Chairman Pohll asked for clarification that the home was purchased in 1993 and was remodeled in May of 2007. Mr. Christopherson confirmed that was the case and added that during the remodel, they did not live in the house. He stated that the pump was lowered to 210 feet when it began sucking air.

Mr. Morros reiterated that the well was drilled in 1979 with a static water level of 170 feet, which is currently at 200 feet. He asked if there was any indication that the perforations might have been plugged and added that the well is almost thirty years old. Mr. Christopherson stated he was unsure what would be the indicator. Mr. Morros asked about other wells in the area. Mr. Christopherson stated that some seem to be fine and some have had problems so it seems fairly random.

Ed Evans, Washoe County Department of Water Resources Hydrogeologist, stated that he and Randy VanHoozer were present for any questions. Mr. Evans made a correction to the package information in that Mt. Rose Well 5 is actually 2,675 feet from the subject well and Mt. Rose 6 is approximately 3,615 feet away.

Mr. Evans referred to Figure 1 included in the packet that shows the location of domestic wells, production wells, and current and prior mitigation request parcels. He explained that no compensation was awarded for the previous requests. He referred to Figure 2, which shows replacement wells, well deepening, customers hooked up to the municipal system and wells drilled since 1981.

Mr. Evans stated that Washoe County has never measured any levels in Mr. Christopherson's well; however, they believe that the numbers reported are accurate and representative. He referred to figures showing the water levels in the subject well as well as surrounding wells. He explained that the Groundwater Data Resource Center (GDRC) also plotted precipitation levels and associated well levels.

Mr. Evans referred to Mr. Christopherson's comment that there was basically no change in his well from 1991 to 1998. He reported that the County was monitoring well levels in the area almost monthly from 1989 to 2000, which does show changes. Mr. Evans referred to graphs showing the pumping volumes for the surrounding production wells up to April 2006 and explained the fluctuations.

Mr. Evans referred to a letter (dated June 18, 2003) from the State Engineer to Steve Bradhurst (then Director of Department of Water Resources) regarding a mitigation request from Ronald Nesler. He explained that Mr. Nesler believed Washoe County was 100% responsible for the impact to his domestic well, which is located approximately 1,500 feet south of Mt. Rose Well 5. Mr. Evans referred to the sentence in the letter, "Mr. Nesler argues that he has lost capacity entirely as a result of the Washoe County, but that only accounts for 4 feet, with up to 19 feet of decline due to other causes." Mr. Evans summarized that there were other causes that resulted in the impacts. Mr. Evans read a sentence from the last paragraph, "In view of the specific facts regarding this particular well, I find that the impact to the Ron Nesler well caused by Washoe County's nearby pumpage to date is not unreasonable."

Mr. Evans summarized that the subject well declined 42 feet since it was constructed in 1979. He stated that the total depth of the well, the geologic location and the wide range of the permeable materials both vertically and horizontally and the gravels in the alluvial fan, play an important part of how the domestic well will perform. He added that he does not feel the County is 100% responsible for the lowering of the water level in the subject well. He stated that he believes there is a serviceable life of a domestic well. He added that he thinks a life of thirty years for a well that had only 42 feet of water is reasonable. He welcomed any questions.

Mr. Carlson asked how deep the subject well's seal is, to which Mr. Evans stated that typically they are very aggressive with surface casings and 100-foot seals regardless of location. Mr. Carlson stated that in reviewing the hydrographs, it looks as though the deeper wells in the fractured rock are causing leakage through the alluvial material. Mr. Evans stated that a 10-day aquifer stress test showed no leakage. He added that if leakage were causing the impact to the subject well, we would be seeing more domestic wells with water level declines.

Mr. Carlson stated that in a 10-day test, you might see leakage; however, it could be a cumulative effect. He added that the subject well could be in an area with more clays or sand in the alluvium or there could be structural problems. He reported that a 40-foot drawdown is probably about the minimal amount you would see. He explained that there should be about 8 feet of fill in the bottom of the well, which was drilled at 220 and now measures at 212. He summarized that based on 30 years of well use and 8 feet of fill, the domestic well did pretty well.

Chairman Pohll apologized for not inviting staff to read their summary of findings. Mr. Smitherman stated most everything was covered. Chairman Pohll referred to the well capacity being estimated at 15 gallons per minute in 1979 and stated he believed that was the only finding that was not mentioned.

Mr. Christopherson referred to the 30-year life of the well and stated that if there was no growth in the area, the well might have lasted longer. He stated that his well might not respond as well as some other wells.

Mr. Morros stated that based on his 40 years of experience with groundwater and wells, 6-inch wells are notorious for having decreased production over a period of time. He added that in an area surrounded by other domestic wells, the wells are going to have an impact on each other.

Mr. Tyler referred to the Tahoe precipitation graphs and asked for an explanation of the "Regional Precipitation (moving five-year percent of normal)". Mr. Evans stated that an intern generated the graphs and he does not have a definite answer. He offered to provide an explanation at a later time. Mr. Tyler stated it would be helpful to the Board if drought and precipitation years were better clarified.

A recess was held from 7:05 p.m. to 7:10 p.m.

Chairman Pohll reconvened the meeting. Members discussed the numbers and followed the "Form Motion" as follows. The Christopherson domestic well is characterized as having the following attributes:

- (a) 170 ft. (amsl/bls) Initial Static Water Level
- (b) 200 ft. (amsl/bls) Current Static Water Level
- (c) 30 ft. [(a)-(b) = (c)] represents total impact to well

Lowering of the Static Water Level in this domestic well not attributable to unreasonable municipal pumping includes:

- (d) 10 feet of which is attributable to drought or natural fluctuations;
- (e) 2 feet of which is attributable to other domestic well pumping;
- (f) 0 feet of which is attributable to other permitted pumping;
- (g) 0 feet of which is attributable to other causes, to wit: _____
- (h) 10 feet of which is attributable to reasonable municipal pumping.

Calculated apportionment of unreasonable lowering of the Static Water level in the well attributed municipal pumping is equal to:

$$[(c) \underline{30} - ((d) \underline{10} + (e) \underline{2} + (f) \underline{0} + (g) \underline{0} + (h) \underline{10})] = (i) \underline{8}$$

Lowering of the static water level in this domestic well, which can be attributed to unreasonable municipal pumping is (i) 8 ft. resulting in [(i)/(c)*100] (j) 27 % of the total lowering of the static water level.

Mr. Morros made a motion that the WMHB find and determine that a lowering of the static water level due to unreasonable municipal pumping in this matter is (i) 8 ft, which represents (j) 27 % of the total lowering of the static water level in this domestic well. Mr. Carlson seconded the motion, which carried unanimously.

Mr. Tyler stated that he made a request to Mr. Evans and Mr. VanHoozer to re-plot some of the precipitation hydrographs and provide those at the next meeting. Mr. Evans and Mr. Vanhoozer agreed.

Chairman Pohll thanked Mr. Christopherson and staff.

2. Review status report on previous WMHB determinations, and possible direction to staff.

Chairman Pohll reiterated Mr. Tyler's request to staff regarding the updated precipitation and drought hydrographs.

3. Scheduling the next meeting of the Well Mitigation Hearing Board, and possible direction to staff.

Chairman Pohll mentioned that the WMHB previously discussed scheduling a workshop focused on drought effects and the associated fluctuations. Mr. Smitherman stated that the workshop would focus on the entire region. He added that staff is working on the workshop; however, it probably would not be ready by the March meeting. He reported that there is one completed application packet that could be scheduled for the March 4, 2008 meeting.

Mr. Smitherman suggested that Ms. Davis poll members regarding their availability prior to scheduling the April workshop.

BOARD ITEMS

None

STAFF ITEMS

None

ADJOURNMENT

There being no further business, the meeting was adjourned at 7:35 p.m.

Minutes submitted by:

Niki Linn
Recording Secretary