

**TRI-STATE WATER RESOURCE COALITION
GENERAL MEMBERSHIP MEETING
WEDNESDAY, APRIL 15, 2009 – 9:00 A.M.
FIFTH FLOOR CONFERENCE ROOM – JOPLIN, CITY HALL**

Welcome & Introduction:

Bob Nichols called the meeting to order and welcomed those present for attending. He then asked those present to introduce themselves as follows:

Bob Nichols – Chairman, Tri-State Water Resource Coalition
Roddy Rogers – City Utilities of Springfield, Springfield, Missouri
Hal VanDaGriff – Verona, Missouri, representing Empire District Electric
David Rauch – Springfield, Missouri, representing Senator Claire McCaskill
David Statt – KDHE, Chanute, Kansas
Greg Perkins – Missouri Department of Natural Resources, Springfield, Missouri
Jim Vandike – Missouri Department of Natural Resources, Rolla, Missouri
Tom Pittman – City of Carthage, Missouri
Morgan Pearman, Kansas Division of Water Resources (DWR)
Gary Pearman – Neosho, Missouri
Matt Barnhart – Missouri American Water, Joplin, Missouri
Paul Crabtree
Wally Kennedy – Joplin Globe
Dan Pekarek, City of Joplin
David Hertzberg, City of Joplin
Lynn Onstot, City of Joplin
Susan Champlin, City of Joplin

Approval of Minutes:

Mr. Nichols asked for comments or corrections to the minutes of the board of directors meeting of March 18, 2009.

Jan Tupper moved, seconded by Matt Barnhart, that the minutes of the board of directors meeting of March 18, 2009 be approved as written. The motion passed, with all voting “aye”.

Groundwater Studies Update:

Mr. Jim Vandike appeared representing the Missouri Department of Resources. He gave a presentation to the coalition regarding groundwater studies that have taken place in the Ozark Aquifer, which includes southwest Missouri, northwest Arkansas, northeast Oklahoma, and southeast Kansas.

Mr. Vandike explained that everyone is in total agreement that a greater need of surface water needs to be made in southwest Missouri to relieve the strain that is placed on the groundwater resources. He stated that groundwater is going to continue to be an important part of our water supply picture. One of the advantages of surface water is that it's able to supply a large volume of

water in a specific area every easily with the proper infrastructure. The advantage of ground water is that it's able to be accessed pretty much anywhere without use of installing water lines and pumping stations. In the future, we will see a much greater dependence on surface water, as well as groundwater in many areas.

Mr. Vandike explained that groundwater is still a viable option, but it will be a while before anything can be done with the surface water side. He discussed the geological conditions in Southwest Missouri which have some impact on groundwater movement, groundwater recharge, and the availability of water. He explained that some geological conditions are more susceptible to drought conditions and water level changes and are more easily influenced by surface activities.

Mr. Vandike explained that a certain amount of water in the aquifer that is essentially unrecoverable simply because of the surface tension of the water. The specific yield of that aquifer is the part that you can make use of. In order to extract all of that water, you have to basically de-water that aquifer. The ideal thing is to try to maintain the storage as high as possible and count upon the water that is recharged into the aquifer.

Mr. Vandike explained that the water quality in this area is generally good except for the areas to the north, with the water becoming progressively more mineralized. The water further to the north is too mineralized for domestic use without extensive treatment.

Mr. Vandike explained that groundwater use is an issue in Missouri that has been difficult to address, simply due to the lack of regulation on water use. Missouri has a major water user's law that requires that anyone who has the ability to produce 100,000 gallons of water per day or more, to report as a major water user and then report their yearly water usage. The law basically has no penalty provisions, which makes it difficult to collect accurate data. The Department of Natural Resources (DNR) is working harder on in trying to get a better compliance rate. The DNR is currently measuring water use at a number of different irrigation sites in southwest Missouri to determine how close the estimates to what the meter shows the well is actually producing.

Mr. Vandike explained that 1,400 public water supply wells exist in southwest Missouri, with 8,000 to 10,000 wells added to the system every year. A number of wells are taken out of service every year, as well as some wells that have problems or have to be abandoned. In 2000, the reported water usage in this area was around 19 billion gallons. As time goes on, people are using more and more water.

Mr. Vandike explained the effects of the water usage. As pumping rates increase, generally the effects seen from that water will increase correspondingly. The longer the wells are pumped, the more drawdown you get, and the less time you have for that drawdown to recover back up to pre-pumping levels. The number of wells is important because the more wells you have, the higher the volume of water you will be producing.

Mr. Vandike explained that piping the water back from a well is very expensive, creating the tendency to place the water supply wells where the water is needed. Sometimes wells overlap with each other and cause well interference.

Mr. Vandike explained the DNR has drilled 20 new wells have added since 2006 in southwest Missouri, with 10 of these wells being placed in areas where an existing well that met the DNR's

needs. He mentioned areas that have high water usage due to irrigation and heavily populated areas. The DNR has placed tipping bucket rain gauges at these wells, because the rainfall is recorded in terms of when it occurred and the time. During periods of heavy precipitation, you see a rise in the hydrograph due to the decrease in water use. As water use rates decrease, the water level in the aquifer comes back up.

Mr. Vandike presented a contour map showing the water levels before widespread pumping began. He mentioned studies being conducted in Kansas to produce a groundwater model for the Ozark and Springfield plateau aquifers in southwest Missouri, northeast Oklahoma, and northwest Arkansas. Other studies have been conducted in southwest Missouri. A series of maps have been produced to show the amount of water level decline in different parts of the area. The areas having the greatest amount of water level change are the areas with the greatest amount of water usage.

Mr. Vandike expressed concern about dealing with an artesian or a confined aquifer in southwest Missouri, and that hydraulic changes occur if you lower the water level down to where that confined aquifer becomes an unconfined aquifer. This has some impact on the ability of the water to be produced by the aquifer. He stated that you try to keep a confined aquifer confined as much as possible. He discussed the change in the water level in the well at Noel and other wells in southwest Missouri.

Mr. Vandike explained that the water usage is increasing in this area based upon data from 2000 and 2006, with an increase of about 37 percent. Water level declines in the Ozark aquifer are basically in areas where there is a lot of water usage. Despite some of these regional water level changes, the Ozark aquifer is still fully saturated throughout most of southwest Missouri most of the time. As water usage increases, you will see a decrease in saturated thickness of the aquifer, resulting in a decrease in its ability to yield water. Alternative water sources are being considered and will be required at some point and time simply because of growth of water use, and the effects it will have on an aquifer like the Ozark aquifer.

Mr. Vandike thought the Ozark aquifer will continue to be a viable source of water for western Missouri for a long time with common sense use. He then asked for questions from those present.

A question was raised regarding the decrease in surface water, and Mr. Vandike replied in any of the areas currently using a great amount of surface water such as Springfield and Branson. He mentioned areas of high water use in the western portion of the area such as Joplin would benefit by having a greater amount of surface water.

David Rauch asked about replacing surface water from major users, if the pressure on the aquifer will increase enough that the saline water will go back or stop. Mr. Vandike mentioned some pretty modest changes in water flow close to the transition zone where the water becomes more mineralized. He mentioned very slow groundwater velocities in that area.

David Rauch asked about restrictions on Branson, and if their water is coming from Lake Taneycomo. Mr. Nichols thought that was correct. Mr. Rauch asked about Branson accessing the water from Tablerock Lake and Bull Shoals, and Mr. Vandike was not sure what conditions have to be met before Branson begins using that water. He understood Branson developed the infrastructure for a city of 40,000 to 50,000 people for several months per year, with there being only 4,000 people in Branson for the remainder of the year. Branson had such a fast increase in

growth that they couldn't drill wells fast enough to meet the increasing demands. They constructed a new water treatment facility, with the DNR finding a way to increase their surface water system by another million gallons per day. Branson uses far less groundwater today than they were using 15 to 20 years ago.

David Rauch understood that the Ozark aquifer is generally in good shape, but he asked about problems in certain areas with heavy usage. Mr. Vandike replied that significant water level fluctuations may occur in those areas. He mentioned some pretty sharp declines in groundwater levels during peak water usage, and that we may see some serious declines if we have two or three dry years. He explained that people residing 10 miles away from a heavy water user area may not see that type of fluctuation.

David Rauch asked if it is naïve to suggest looking at pumping of water from the aquifer areas that are not being heavily used, and to bring that water into the heavy user areas. Mr. Vandike explained that Missouri American Water has stepped out further and further from town to bring the water into town, and they are going into areas of the aquifer where the yields are somewhat better. Historically the wells were built for low usage areas. The aquifer has zones and areas where yields are going to be lower than others. It is best to space the wells as far apart as possible in the areas where the yields are best, but that the infrastructure costs to pump the water will be expensive.

Mr. Vandike explained that water conservation is the cheapest water that you will ever get, by figuring out ways to use less water and still have the water that you need. Every 300 gallons of water a town can save is another well they don't have to drill.

Mr. Tupper and Mr. Nichols thanked Mr. Vandike for his excellent presentation. Mr. Nichols commented that much work has been done on groundwater studies. Mr. Vandike explained that these studies will be of value for many years to come.

Mr. Tupper thought that in a few years' time, treated sewage will be placed back into the pipeline at the other end and reused as drinking water.

Mr. Nichols understood that the recharge of the Ozark aquifer was really coming from above, and Mr. Vandike replied that is correct. Mr. Nichols mentioned the contaminated water above, and Mr. Vandike stated that this will take a long time to occur, with your principal concern being bacteria. He did not believe this will be a major concern.

Mr. Tupper thought there had to be some leakage due to lead and zinc, but that the metals have never really been present in the water.

Report of Membership Committee:

Harold McCoy was not present. Mr. Nichols was not aware of any new activities.

Report of Technical Committee:

Release of the Reservoir Site Screening Study and Future Activities:

Mr. Vandagriff presented a report from Pete Rauch for the technical committee. He wishes to invite John Rutledge and Steve Watters to make the same presentation (at the coalition's expense)

to the general assembly as they made to the board of directors and the technical committee with the addition of the comments submitted by the coalition members. The presentation would take place at Missouri Southern State University (MSSU), with all of the area press from Springfield, Missouri, to Miami, Oklahoma, being invited. This would be a good time and place to preface the report with a statement concerning the history of the Tri-State Water Resource Coalition. The preface should include the coalition's efforts to obtain water from already impounded reservoirs and the difficulties the coalition has faced in that regard. The invitation should include all state and federal elected officials, the DNR and their Kansas and Oklahoma equivalents, and the general public. There is a risk of holding two separate news conferences because different questions might be posed at different news conferences inviting different stories to be reported.

Mr. Nichols expressed concern that the coalition covers such a wide area, in that trying to hold a news conference in one location might not work too well. He originally proposed holding separate conferences in Springfield and in Joplin, with one conference in the morning and one in the afternoon. He explained that Greg Weeks expressed the concern that the Joplin media would be offended, and that both conferences should be held at the same time.

Mr. Nichols explained that the consultant would need to send two teams if the conferences were held simultaneously. Lynn Onstot thought two conferences held at different times would be fine, and Amy Bass from Empire District Electric also agreed with holding the two conferences at different times. Wally Kennedy from the Joplin Globe did not have a concern with holding two separate conferences to see if the questions and answers were different. Mr. Nichols thought holding two separate conferences would work satisfactorily. He anticipates scheduling the conferences during the week of July 6, 2009.

Mr. Nichols asked about scheduling a luncheon program for the elected officials, possibly in Mt. Vernon. He suggested inviting the general assembly members of the coalition, county commissioners, city council members, or any elected official. Mr. Tupper expressed concern about the cost. Ms. Onstot asked if the luncheon would be held the same day as the two conferences, and Mr. Nichols replied that was correct. Ms. Onstot thought there may not be a need for the afternoon conference if the press attends the luncheon. Mr. Tupper also wished to invite the new DNR director. Mr. Rogers asked Mr. Nichols to contact Springfield's public information officer. Ms. Onstot thought the coalition may obtain more press coverage because of the press conference. Mr. Nichols will discuss this press conference with Ron Richard.

Discussion Items:

Oklahoma Secretary of the Environment Concerning Grand Lake:

Mr. Nichols has met with Kyle Arthur from the office of the Oklahoma Secretary of the Environment, who was one of the speakers at the annual environmental conference on March 27. He stated that the moratorium for water leaving the state of Oklahoma dies on November 1, 2009, unless the Oklahoma legislature extends it. He will contact the Grand River dam authority officials to renew those discussions.

Expand Tri-State boundaries to include Northwest Arkansas:

Mr. Nichols had no new information to report from Northwest Arkansas at this time.

Meeting with State elected officials:

Mr. Nichols had no new information at this time.

Meeting with County and City officials:

Mr. Nichols had no new information at this time.

Meeting with Chambers of Commerce:

Mr. Nichols had no new information at this time.

Forming Stakeholders groups:

Mr. Nichols stated that Dr. John Moore has agreed to chair this group, but he asked for suggestions for officials from each community for potential members for this group.

Consider water conservation program:

Mr. Nichols is still working on water conservation issues and stated that the DNR does not really have any program related to water conservation. He stated that Ryan Mueller from the DNR is trying to implement water conservation programs into their operation.

Report of the Treasurer:

Matt Barnhart explained that the current balance is \$75,602.64. He has obtained all the required signatures so he can begin writing checks, and that he has one bill to pay for a visit with the water attorneys in Kansas City.

Mr. Nichols met yesterday with John Bailey, the director of public utilities for the City of Pittsburg, Kansas. They expressed concern that they were not addressed in the water study prepared by Freese and Nichols and recommended more investigation into Sites 1 and 2 and how those sites might serve the Pittsburg area.

Public Relations Activities:

Lynn Onstot will be preparing for the upcoming press conferences to be scheduled during the week of July 6.

Mr. Nichols mentioned some recent updates to the coalition's power point presentation. He will forward a copy of the revised presentation to Ms. Onstot. He explained that Harold McCoy is meeting with the county commissioners of Southwest Missouri at this time regarding the Tri-State Water Resource Coalition.

Second Annual Environmental Conference, March 27, 2009:

Mr. Nichols stated that 80 people were registered for the environmental conference on March 27, with 93 people in attendance. He thought everyone was satisfied that the conference was successful. He appreciated Mayor Shaw's attendance at the conference.

Replacing Bill Beasley with John Bailey as a director of the Coalition:

Mr. Nichols explained that Mr. Beasley is no longer involved in the utility operations in Pittsburg, Kansas. He suggested that the board of directors replace him with John Bailey, the new director of utilities.

Jan Tupper moved, seconded by Hal Vandagriff, that John Bailey be appointed to the board of directors to replace Bill Beasley. The motion passed, with all voting "aye".

Reports:

Morgan Pearman explained that the USGS water quality report will be released in mid-May, with the KGS water report to be released in late May. The KGS report is titled "Pumping-Induced Water Quality Changes in the Ozark Plateaus Aquifer System, Southeast Kansas". The KGS recently presented some draft data to the DWR that indicates some change in water quality has taken place when compared to data previously collected during the 1970's and 1980's. The new draft data does not suggest any lateral or upward migration of brines.

Mr. Pearman anticipates release of the USGS flow model and report in early June. A public information meeting will be scheduled to present the study results once the report is released. The Chief Engineer of the Division of Water Resources (David Barfield) will provide comments during that meeting.

The City of Baxter Springs could potentially supply 25 percent (2.5 million gallons per month) of water for the Public Wholesale Water Supply District #19 project (Spring #19). On March 31, Katie Tietsort from the Topeka Field Office met with the City of Baxter Springs to review and discuss applications for additional quantity on their surface and groundwater rights. It was mentioned that Cherokee Rural Water District #2 may purchase water directly from Baxter Springs.

Greg Perkins explained that the decreases in revenues for sewer use in Springfield are due to water conservation practices. He believes that water conservation is occurring. Mr. Nichols stated that conservation will not only affect sewer use but will affect water revenues as well. He expressed the need to prolong our water resources.

Mr. Rogers explained that Springfield's water revenues have decreased over the last couple of years. He encourages water conservation and recently implemented voluntary odd-even watering. He hopes to see is that not less water is necessarily used, but that the peak usage is leveled.

Mr. Perkins explained that the communities who have stormwater permits are looking at conservation issues because while DNR does not look at the quantity of water that goes anywhere, they do look at the quality.

Mr. Barnhart explained that water conservation saves companies, water districts, and municipalities from having to borrow several millions of dollars to construct additional treatment

facilities. He stated that when he sees increases on his billings, he looks at the issue differently and sees the value of water.

Old Business:

There was no old business to discuss at this time.

New Business:

Mr. Nichols has asked the board of directors to reschedule their May meeting to Monday, May 18. He will notify all the board members by e-mail of this change.

Mr. Nichols asked for additional comments. Paul Crabtree asked if the coalition is prepared for backlash from the public and other individuals with regard to the new water study. Ms. Onstot suggested thinking about questions that may be asked, and to be prepared with answers before the press conferences take place and the controversy occurs.

Adjourn:

There being no further business to come before the Tri-State Water Resource Coalition, Mr. Nichols thanked those present for attending and adjourned the meeting.

David Hertzberg, Secretary