



DEPARTMENT OF AGRICULTURE
ADRIAN J. POLANSKY, SECRETARY

KATHLEEN SEBELIUS, GOVERNOR

Aug 3, 2006

CITY OF WICHITA
ATTN JERRY BLAIN
455 N MAIN
WICHITA KS 67202

Re: Appropriations of Water
File Nos. 45,567; 45,568; 45,569; 45,570;
45,571; 45,572; 45,573; 45,574;
45,575; 45,576, and 46,081

Dear Mr. Blain:


Enclosed is the Findings and Order by the Chief Engineer, Division of Water Resources, Kansas Department of Agriculture, which modifies certain conditions set forth in the Order entitled "In the Matter of the City of Wichita's Applications To Operate an Aquifer Storage and Recovery Project in Harvey and Sedgwick Counties, Kansas" issued by the Chief Engineer on August 8, 2005 under the referenced file numbers

Please be reminded that reports of water usage must be submitted to this office annually. Records indicating the amount of water used should be furnished to the Chief Engineer by March 1 following the end of the previous calendar year so that the continued use of water becomes a matter of record in this office.

The owner, or his or her legally designated agent, is held responsible for submitting annual water use reports. If it is desired that someone other than yourself submit the report, you should complete the enclosed form letter regarding water use correspondent for the above referenced file, have your signature notarized, and return it to this office. Failure to file an accurate water use report is a violation of law which makes you subject to civil penalties.

If you have any questions, please contact this office. If you call, please reference the file number so we can help you more efficiently.

Sincerely,


Brent A. Turner, C.E.
Change Application Unit Supervisor
Water Appropriation Program

BAT:rak
Enclosures
pc: Stafford Field Office
Groundwater Management District No. 2

Division of Water Resources David L. Pope, Chief Engineer
109 SW 9th St., 2nd Floor Topeka, KS 66612-1283
Voice (785) 296-3717 Fax (785) 296-1176 <http://www.ksda.gov>

CERTIFICATE OF SERVICE

On this *3rd* day of *August*, *2006*, I hereby certify that the attached Findings and Order, File Nos. 45,567; 45,568; 45,569; 45,570; 45,571; 45,572; 45,573; 45,574; 45,575; 45,576, and 46,081 dated *August 1, 2006* was mailed postage prepaid, first class, US mail to the following:

CITY OF WICHITA WATER AND SEWER DEPT
ATTN JERRY BLAIN
455 N MAIN
WICHITA KS 67202


Staff

THE STATE OF KANSAS



KANSAS DEPARTMENT OF AGRICULTURE
Adrian J. Polansky, Secretary of Agriculture

DIVISION OF WATER RESOURCES
David L. Pope, Chief Engineer

**In the Matter of Modifying the Conditions
of the
Order Approving
the City of Wichita's Applications for Approval
To Operate an Aquifer Storage and Recovery Project
in Harvey and Sedgwick Counties, Kansas**

**Applications to Appropriate Water
File Nos. 45,567; 45,568; 45,569; 45,570; 45,571; 45,572;
45,573; 45,574; 45,575; 45,576, and 46,081**

Findings

1. That in a Findings, Conclusions and Order dated August 8, 2005, In the Matter of the City of Wichita's Applications To Operate an Aquifer Storage and Recovery Project in Harvey and Sedgwick Counties, Kansas ("Original Order"), the Chief Engineer approved Appropriation of Water File Nos. 45,567, 45,568, 45,569, 45,570, 45,571, 45,572, 45,573, 45,574, 45,575, 45,576, and 46,081 proposing the appropriation of water for beneficial use; that that Order had 24 Conditions.
2. That on November 14, 2005, Applications for Approval to Change the Authorized Point of Diversion for Appropriation of Water, File Nos. 45,572 and 45,575 were received in the Office of the Chief Engineer; that on January 30, 2006, Applications for Approval to Change the Authorized Point of Diversion for Appropriation of Water, File Nos. 45,573 and 45,574 were received in the Office of the Chief Engineer.
3. That the applications referred to in Paragraph No. 2 of these Findings propose to move their authorized points of diversions from bank storage wells to a surface water pumpsite located in the Southwest Quarter of the Southwest Quarter of the Southeast Quarter (SW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$) of Section 8, more particularly described as being near a point 230 feet North and 2,080 feet West of the Southeast corner of said section, in Township 23 South, Range 2 West, Harvey County, Kansas
4. That because the authorized points of diversions of File Nos. 45,572, 45,573, 45,574 and 45,575 are proposed to be changed from bank storage wells to a surface water pumpsite, some of the conditions pertaining to bank storage wells in the Original Order should be modified to reflect the change to a surface water pumpsite, specifically Conditions Nos. 9, 12, 14, 17, 20 and 23.

5. That Condition No. 9 of the Original Order should be modified to read:
 9. That the City by June 1 each year shall report an accounting of water diverted from the diversion wells and pumpsite(s) and recharged into the basin storage area in the Equus Beds Aquifer; that the Report shall be submitted to the Chief Engineer and GMD #2. The accounting shall use the Mode; and the accounting methodology described herein. In addition, the accounting reports shall meet the requirements of K.A.R. 5-12-2, including specifically addressing the following items for each cell in the basin storage area:
 - a. Natural and artificial recharge;
 - b. Groundwater inflow and outflow;
 - c. Evaporation and transpiration;
 - d. Groundwater water diversions from all non-domestic wells;
 - e. Infiltration from streams;
 - f. Groundwater discharge to streams;
 - g. The calculated recharge credits; and
 - h. Surface water diversions.
6. That Condition No. 12 of the Original Order should be modified to read:
 12. That the diversion wells and pumpsite(s) shall be operated only when streamflow at the Gage exceeds baseflow and will not cause streamflow to drop below baseflow; that for the purpose of this project the baseflow is 57 c.f.s., from April 1, through September 30; and 20 c.f.s., from October 1, through March 31, as measured at the Gage.
7. That Condition No. 14 of the Original Order should be modified to read:
 14. That each diversion well, pumpsite and ASR well shall be equipped with water flow meters, meeting the requirements of K.A.R. 5-22-4, to separately and accurately record the total quantity of water injected into and diverted by each well and each pumpsite.
8. That Condition No. 17 of the Original Order should be modified to read:
 17. That the City shall submit a well field operation, monitoring and reporting plan for the diversion wells and pumpsite(s) for review and comment by GMD #2 and approval of the Chief Engineer, no later than the date the test results in Order Paragraph No. 15 are required; that the operational plan shall include utilization of monitoring wells and the streamflow Gage in an automated system.

9. That Condition No. 20 of the Original Order should be modified to read:

20. That bank storage diversion quantities, pumpsite(s) diversion quantities, aquifer injection quantities and water level data shall be reported by the City to the Chief Engineer and GMD #2 as follows:

- a. Each month for the first year of operation;
- b. Each calendar quarter for the second year of operation;
- c. By March 1 each year thereafter;
- d. Other intervals as may be required by the Chief Engineer to properly evaluate the project;

That any water quality analyses, which may be required by KDHE, shall be reported by the City to the Chief Engineer and GMD #2 at the same time they are reported to KDHE.

10. That Condition No. 23 of the Original Order should be modified to read:

23. That the Chief Engineer also retains jurisdiction in this order so that during 2009, GMD #2 can review all data from the Little Arkansas River, the alluvium and Equus Beds Aquifer, diversion records from the diversion wells and pumpsite(s), injection and diversion data from the ASR wells, water quality information, streamflow data, water level data, and all other data relevant to the evaluation of this aquifer storage and recharge project, to determine the following:

- a. Whether the portion of the aquifer in which the diversion wells are screened is hydraulically connected to the Little Arkansas River;
- b. Whether the portion of the aquifer where the diversion wells are screened is hydraulically connected to the upper part of the aquifer;
- c. Whether the naturally occurring and artificially induced recharge from the bed and banks of the stream when bank storage was occurring has been sufficient to:
 1. Equal or exceed the authorized rate of diversion of all diversion wells,
 2. Prevent impairment by all diversion wells, and
 3. Prevent groundwater mining from being caused by all diversion wells,

- d. Whether seven days after pumping of all diversion wells has ceased, the water level in each diversion well, or monitoring well located within 100 feet of the diversion well, has recovered to an elevation equal to or greater than the water level elevation immediately before the diversion well began to pump, adjusted for any regional groundwater changes not caused by the pumping of diversion wells;
- e. Whether the wells have been only operated during bank storage events; whether the pumpsite(s) have been operated only in accordance with Order Paragraph No. 12;
- f. The effect of the recharge on the water quality and water levels in the Equus Beds Aquifer in the basin storage area; and
- g. Whether the ASR project has delayed or stopped the migration of the Burton brine plume into the basin storage area;

Based on the data and the GMD #2 review and recommendation, the Chief Engineer shall determine if the City may continue to operate the ASR project, be required to stop the ASR project in its entirety, be required to modify the project, and whether any of these permits should be revoked or modified.

Order

NOW, THEREFORE, It is the decision and order of the Chief Engineer, Division of Water Resources, Kansas Department of Agriculture, that effective the date of this order the following conditions as described in the Findings, Conclusions and Order of the Chief Engineer dated August 8, 2005, issued pursuant to Applications to Appropriate Water File Nos. 45,567, 45,568, 45,569, 45,570, 45,571, 45,572, 45,573, 45,574, 45,575, 45,576 and 46,081 shall be modified as follows:

1. That Condition No. 9 of the Original Order shall be modified to read:
 9. That the City by June 1 each year shall report an accounting of water diverted from the diversion wells and pumpsite(s) and recharged into the basin storage area in the Equus Beds Aquifer; that the Report shall be submitted to the Chief Engineer and GMD #2. The accounting shall use the Model and the accounting methodology described herein. In addition, the accounting reports shall meet the requirements of K.A.R. 5-12-2, including specifically addressing the following items for each cell in the basin storage area.

- a. Natural and artificial recharge;
- b. Groundwater inflow and outflow;
- c. Evaporation and transpiration;
- d. Groundwater water diversions from all non-domestic wells;
- e. Infiltration from streams;
- f. Groundwater discharge to streams;
- g. The calculated recharge credits; and
- h. Surface water diversions.

2. That Condition No. 12 of the Original Order shall be modified to read:

12. That the diversion wells and pumpsites(s) shall be operated only when streamflow at the Gage exceeds baseflow and will not cause streamflow to drop below baseflow; that for the purpose of this project the baseflow is 57 c.f.s., from April 1, through September 30; and 20 c.f.s., from October 1, through March 31, as measured at the Gage.

3. That Condition No. 14 of the Original Order shall be modified to read:

14. That each diversion well, pumpsite and ASR well shall be equipped with water flow meters, meeting the requirements of K.A.R. 5-22-4, to separately and accurately record the total quantity of water injected into and diverted by each well and each pumpsite.

4. That Condition No. 17 of the Original Order shall be modified to read:

17. That the City shall submit a well field operation, monitoring and reporting plan for the diversion wells and pumpsite(s) for review and comment by GMD #2 and approval of the Chief Engineer, no later than the date the test results in Order Paragraph No. 13 are required; that the operational plan shall include utilization of monitoring wells and the streamflow Gage in an automated system.

5. That Condition No. 20 of the Original Order shall be modified to read:

20. That bank storage diversion quantities, pumpsite(s) diversion quantities, aquifer injection quantities and water level data shall be reported by the City to the Chief Engineer and GMD #2 as follows:

- a. Each month for the first year of operation;
- b. Each calendar quarter for the second year of operation;
- c. By March 1 each year thereafter;
- d. Other intervals as may be required by the Chief Engineer to properly evaluate the project;

That any water quality analyses, which may be required by KDHE, shall be reported by the City to the Chief Engineer and GMD #2 at the same time they are reported to KDHE.

6. That Condition No. 23 of the Original Order shall be modified to read:

23. That the Chief Engineer also retains jurisdiction in this matter so that during 2009, GMD #2 can review all data from the Little Arkansas River, the alluvium and Equus Beds Aquifer, diversion records from the diversion wells and pumpsite(s), injection and diversion data from the ASR wells, water quality information, streamflow data, water level data, and all other data relevant to the evaluation of this aquifer storage and recharge project, to determine the following:

- a. Whether the portion of the aquifer in which the diversion wells are screened is hydraulically connected to the Little Arkansas River;
- b. Whether the portion of the aquifer where the diversion wells are screened is hydraulically connected to the upper part of the aquifer;
- c. Whether the naturally occurring and artificially induced recharge from the bed and banks of the stream when bank storage was occurring has been sufficient to:
 1. Equal or exceed the authorized rate of diversion of all diversion wells;
 2. Prevent impairment by all diversion wells, and
 3. Prevent groundwater mining from being caused by all diversion wells;
- d. Whether seven days after pumping of all diversion wells has ceased, the water level in each diversion well, or monitoring well located within 100 feet of the diversion well has recovered to an elevation equal to or greater than the water level elevation immediately before the diversion well began to pump, adjusted for any regional groundwater changes not caused by the pumping of diversion wells.

- e. Whether the wells have been only operated during bank storage events; whether the pump(s) have been operated only in accordance with Order Paragraph No. 12;
- f. The effect of the recharge on the water quality and water levels in the Equus Beds Aquifer in the basin storage area; and
- g. Whether the ASR project has delayed or stopped the migration of the Burton brine plume into the basin storage area;

Based on the data and the GMD #2 review and recommendation, the Chief Engineer shall determine if the City may continue to operate the ASR project, be required to stop the ASR project in its entirety, be required to modify the project, and whether any of these permits should be revoked or modified.

In all other respects, the Findings, Conclusions and Order of the Chief Engineer dated August 8, 2005, issued pursuant to Applications to Appropriate Water File Nos. 45,567, 45,568, 45,569, 45,570, 45,571, 45,572, 45,573, 45,574, 45,575, 45,576 and 46,081, remains as authorized.

This is a final agency action. If you choose to appeal this decision or any finding or part thereof, you must do so by filing a petition for review in the manner prescribed by the Kansas Act for Judicial Review and Civil Enforcement of Agency Actions (KJRA K.S.A. 77-801 et seq.) within 30 days of service of this order. Your appeal must be made with the appropriate district court for the district of Kansas. The Chief Legal Counsel for the Kansas Department of Agriculture, 109 SW 8th Street, 4th Floor, Topeka, Kansas 66612, is the agency officer who will receive service of a petition for judicial review on behalf of the Kansas Department of Agriculture, Division of Water Resources. If you have questions or would like clarification concerning this order, you may contact the Chief Engineer.

Dated at Topeka, Kansas, this 1st day of August, 2006.



David L. Pope
 David L. Pope, P.E.
 Chief Engineer
 Division of Water Resources
 Kansas Department of Agriculture

State of Kansas

County of Shawnee

The foregoing instrument was acknowledged before me this 1st day of August, 2006, by David L. Pope, P.E., Chief Engineer, Division of Water Resources, Kansas Department of Agriculture.

Delora S. Hayes

