KANSAS DEPARTMENT OF AGRICULTURE

DIVISION OF WATER RESOURCES

In the Matter of the Order Initiating Proceedings to Amend the Designation of the Intensive Groundwater Use Control Area in the Pawnee Valley	**)** **)** **)** **)**	**Case No. 06 WATER 4000**

ORDER FOLLOWING PHASE I OF THE HEARING

Phase I of the hearing in the above captioned matter was held from 1:20 p.m. on March 12, 2007 through 2:36 p.m. on March 16, 2007, and from 1:00 p.m. through 6:31 p.m. and 8:52 p.m. through 9:47 p.m. on March 27, 2007, at the Larned City Hall, 417 Broadway, Larned, Kansas by David L. Pope, P.E., Chief Engineer, Division of Water Resources, Kansas Department of Agriculture (Chief Engineer). Assisting the Chief Engineer were Paul Graves, Assistant Chief Engineer; Jim Bagley, manager of the technical services section; and Leland E. Rolfs, legal counsel. The following parties were represented by legal counsel: Subbasin Water Resources Management Program (SWRMP) by Barbara Hodgson; Big Bend Groundwater Management District No. 5 (GMD No. 5) by Lynn Preheim and Parthenia Evans; Kansas Wildlife Federation (KWF) by Frank Austenfeld; Richard Horning Trust (Horning) by Brock McPherson; Kansas Livestock Association, et al (KLA) by David Traster; and Nuss Farms et al by Michael Ramsey. Water right owners Larry Salmans and Darin Cure were present in person.

At the hearing the Chief Engineer took administrative notice of the following records:

(a) The U.S. Geological Survey's (USGS) complete records for each of the applicable stream gages that are under consideration related to this matter;

(b) The records of the Water Information Management and Analysis System (WIMAS) related to this proceeding and maintained by the Division of Water Resources;

(c) The Water Rights Information System (WRIS) maintained by the Division of Water Resources;

(d) The precipitation data base related to this proceeding;

(e) The Kansas Geological Survey (KGS) WWC5 well log data base related to this proceeding;

(f) The KGS WIZARD water level database related to this proceeding; and

(g) All Rules and regulations of the Chief Engineer, including those recommended by a groundwater management district and adopted by the chief engineer for that district. TR. at 948-49, 1197.

A public comment session was also held at the same location from 7:10 p.m. to 8:41 p.m. on March 27, 2007.

On April 5, 2007, the Chief Engineer issued an order setting the following deadlines:

> "Each party shall be allowed until April 13, 2007, to file with the Chief Engineer and each of the parties, a proposed list of general orders, regulations, or similar types of documents that they would like the Chief Engineer to take administrative notice of. Each party shall be allowed until April 20, 2007, to:
> (1) provide a written response to the written comments received by the Chief Engineer on or before March 30, 2007, and to oral statements received at the public comment portion of the hearing;
> (2) comment on the proposed lists of general orders, regulations, or similar types of documents that the other parties would like the Chief Engineer to take administrative notice of; and
> (3) file any written closing the parties would find appropriate."

On April 16, 2007, the Chief Engineer extended the deadlines in his order of

April 5, 2007, as follows:

"(1) Each party shall submit by May 31, 2007, a proposed list of general orders, regulations, or similar types of documents that they would like the Chief Engineer to take administrative notice of.
(2) Each party shall also submit the following by June 8, 2007:
    (a) a written response to the written comments received by the Chief Engineer on or before March 30, 2007, and furnished to the Parties by Order of April 5, 2007; and to oral statements received at the public comment portion of the hearing.
    (b) comment on the proposed lists of general orders, regulations, or similar types of documents that the other parties would like the Chief Engineer to take administrative notice of; and
    (c) any written closing the parties would find appropriate."

No requests to take administrative notice of any additional documents were filed by May 31, 2007.

On June 7, 2007, upon request of the parties, the Chief Engineer extended the briefing deadline until 9:00 a.m. on June 11, 2007.

NOW THEREFORE, the Chief Engineer, after having given due consideration to the testimony, public comments, other evidence presented at the hearing in Phase I of this matter, and the closing written comments of the parties made on or before June 11, 2007, makes the following findings, conclusions and order.

FINDINGS

(1) Phase I of the hearing in the above captioned matter was held from March 12, 2007 through March 16, 2007, and on March 27, 2007, in Larned, Kansas to determine if the statutory circumstances for designating an Intensive Groundwater Use Control Area (IGUCA) in the proposed area exist, and if so, what the boundaries should be. The witnesses testified under oath and a record was made of the proceedings. The transcript of the hearing, including the public comment session, was 1278 pages and 52 exhibits were admitted. Eleven persons

commented at the public comment session.

SWRMP called Tina Alder, supervisor of the program, and Bruce Falk, Water Commissioner, Division of Water Resources, Kansas Department of Agriculture, Stafford, Kansas, as its witnesses and entered 32 exhibits on its behalf. GMD No. 5 called W. Peter Balleau, hydrogeologist from Albuquerque, New Mexico, and Sharon Falk, Manager, GMD No. 5, as its witnesses and entered eight exhibits. KWF called Terry E. Denker, Chief of Planning and Federal Aid for the Kansas Department of Wildlife and Parks, to testify on its behalf and entered two exhibits. Horning, KLA and Nuss Farms called no witnesses, but Horning entered four exhibits, KLA one exhibit and Nuss Farms three exhibits. Water right owners Larry Salmans and Darin Cure did not testify and offered no exhibits.

(2) During the course of these proceedings, questions were raised concerning the role of SWRMP. Prior to the initiation of these proceedings SWRMP's mission was to take a proactive approach to seek resolution of water resource issues in a cooperative effort with federal, state and local agencies, as well as private interest groups, the regulated community and the general public. It was to develop water management strategies that address the long-term needs of the subbasin. These strategies were to be practical and realistic, developed within the context of the current water rights administrative system, and take into account the economic and social viability of the subbasin. DWR exhibit V.

The Subbasin Program is a voluntary process that is entirely separate and connected to these IGUCA proceedings only in that the reports and recommendations generated by this voluntary local process that attempted to

identify and recommend solutions to water problems in the basin. Those recommendations were part of the information considered by the Chief Engineer in deciding whether the statutory criteria for initiating an IGUCA were met. Once these proceedings began, the Chief Engineer exercised no supervisory control over the SWRMP's decisions and recommendations in this matter. TR at 276-307, 381-382.

(3) While this proceeding is being conducted under the provisions of K.S.A. 82a-1036 through 1039, as amended, it is recognized that the Kansas Water Appropriation Act (KWAA) K.S.A. 82a-701 *et seq.* provides the basic framework of Kansas water law. So while this proceeding is not for the purpose of making decisions pursuant to the KWAA, some references to the KWAA are appropriate in this proceeding, and have been made herein. For example, K.S.A. 82a-706 provides that the Chief Engineer:

> "shall enforce and administer the laws of this state pertaining to the beneficial use of water and shall control, conserve, regulate, allot and aid in the distribution of the water resources of the state for the benefits and beneficial uses of all of its inhabitants in accordance with the rights of priority of appropriation."

(4) On the other hand, K.S.A. 82a-1039 makes it clear that the powers granted to the Chief Engineer under the IGUCA statutes are in addition to, and not a restriction of, his powers under the KWAA. In order to take action to declare an IGUCA, it necessary to consider water rights created in accordance with the provisions of the KWAA.

(5) It is not the purpose of this proceeding to administer water rights for impairment, which is generally done on a complaint basis. The general purpose of an IGUCA proceeding is to provide additional regulation of a groundwater system to the

extent necessary to protect the public interest. If necessary to properly determine the impacts of that regulation, the entire source of water supply must be considered in order to provide a stable and reliable water supply for all beneficial uses in accordance with the procedures and authorities set forth in K.S.A. 82a-1036 through 1039, as amended. In this case the source of water supply consists of the aquifer and the hydraulically connected stream system. While the IGUCA process is primarily concerned with the regulation of groundwater, the impact of groundwater pumping affects both the use of water from the aquifer and the stream. Mr. Balleau provided an extensive analysis based on the aquifer as the source of supply and considered hydraulically connected surface water, but only to the extent it provided a source of induced recharge for use by pumping water from the aquifer without consideration of the impacts to surface water rights.

Under the KWAA, all water rights in the state of Kansas, both groundwater and surface water, are administered in accordance with a single priority system. The KWAA also gives the Chief Engineer the authority to conjunctively administer groundwater and surface water that are in hydraulic connection when necessary to prevent impairment and protect the public interest.

The source of supply in the area in question cannot be regulated properly without considering both the groundwater and surface water components.

(6) K.S.A. 2006 Supp. 82a-1038 provides "In any case where the chief engineer finds that any one or more of the circumstances set forth in K.S.A. 82a-1036 exist and that the public interest requires that any one or more corrective controls be adopted, the chief engineer shall designate, by order, the area in question, or any part thereof, as an intensive groundwater use control area."

K.S.A. 82a-1036 sets forth the following list of circumstances that the Chief Engineer may consider to determine whether designation of an IGUCA is necessary:

> (a) groundwater levels in the area in question are declining or have declined excessively; or
> (b) the rate of withdrawal of groundwater within the area in question equals or exceeds the rate of recharge in such area; or
> (c) preventable waste of water is occurring or may occur within the area in question; or
> (d) unreasonable deterioration of the quality of water is occurring or may occur within the area in question; or
> (e) other conditions exist within the area in question which require regulation in the public interest.

(7) The Chief Engineer had directed the parties to brief the definition of the phrase "declined excessively," as found in K.S.A. 82a-1036.

(8) SWRMP maintains that "declined excessively" means that "Groundwater declines have become unreasonable, unfair or intolerable to current users of water within the area of consideration or are reasonably likely to become unreasonable, unfair or intolerable to future users of water within the area of consideration." SWRMP brief at 1. This could occur when water users are not able to divert water at rates sufficient to satisfy their authorized uses after having made all economically practical adjustments to their infrastructure and application techniques. SWRMP brief at 2.

(9) The Horning Trust indicates that groundwater levels have "declined excessively" when they "have declined at a rate which … [is] unreasonable, unfair, or intolerable to the area appropriators." Horning brief at 2.

(10) KLA contends that "declined excessively" must be read in conjunction with the KWAA requirement that the Chief Engineer must administer water rights in

accordance with the prior appropriation doctrine, even if water levels have declined excessively. KLA brief at 4.

(11) GMD No. 5 contends that the law requires conservation, not preservation, and that the purpose of the requirement is to protect the local economy. It also avers that decline is acceptable as long as it is within the "range of the normal raising and lowering of groundwater levels…" over a reasonably long term period, and that period should be the last 25 years. It maintains that water use has been "relatively stable" since 1981, when controls on new appropriations began to be placed on that area. It cited as support Oregon cases that found that 15 years was an acceptable length of time to determine whether there were excessive long-term declines. GMD No. 5 contends this is consistent with the provision of the K.S.A. 2006 Supp. 82a-711(c) which says that there is no impairment unless there is an "unreasonable raising or lowering of the static water level …beyond a reasonable economic limit." GMD No. 5 concludes that "excessive decline" refers to a long-term decline outside the range of normal, cyclical raising and lowering of the water table and in this instance should be the 25 years since new appropriations in this area were limited. GMD No. 5 brief at 8.

(12) KWF supports SWRMP's definition and adds that an excessive decline can be, but is not necessarily, evidenced by any of the following:

(a) wells drying up,

(b) water in lakes and streams being reduced,

(c) water quality deteriorating,

(d) pumping costs increasing, or

(e) land subsidence occurring.

(13) Nuss indicates in its closing brief that water levels are not declining in Ness County where they own water rights, and therefore that area should not be included within the IGUCA. Nuss brief at 1. Well NS08 does generally indicate a rising trend from January 1977 through January 2006. However, well HG44, which is also cited by Nuss, generally indicates a rising trend for the same period, but also shows significant declines in January 1992 and August 2005. This well is only 54 feet deep and in January 1992 the water level was at about 41 feet below land surface (down from about 32 in January 1977) and in August 2005 the water level was at about 46 feet. In addition, wells in the Pawnee River alluvial valley to the east of the Nuss water rights show significant declines. Well NS05, which is located in Section 35, Township 20 South, Range 22 West, shows a decline from about 35 feet in October 1974 to about 48 feet in January 1992; this well is 68 feet deep. Well NS07, which is located in Section 20, Township 20 South, Range 22 West, shows a decline from about 23 feet in January 1963 to about 54 feet in December 1991; the depth of this well is unknown. KGS WIZARD web site. Nuss further contends that the record is not sufficient to determine what the IGUCA boundaries should be. Nuss Brief at 6. Because it will be considered in Phase II of these proceedings whether the boundaries should be expanded beyond the proposed boundaries, it is premature to exclude this area where the Nuss wells are located at this time. Even if water levels do not exhibit long term declines, the diversion of water in these areas can affect the hydrologic system farther downstream and down gradient. It should also be noted that just because an area is included within the boundaries of an IGUCA does not determine what corrective control provisions, if any, should be adopted for any

particular area or water rights. That is a matter that is left to Phase II of these proceedings.

(14) A decline in the water table is primarily caused by pumping in excess of recharge over a given period of time. In other words, normal precipitation and recharge is insufficient to prevent a decline. A decline can be either long-term, when the water levels drop in spite of normal cyclical variations; or short term, when the water level drops are so severe that the water levels will not recover without the benefit of a relatively rare large precipitation and recharge event.

The period of time to be used to determine declines, or excessive declines, in the water table is not set by statute. The time period that may be used could vary in this case from the entire period of record (1924 through January 2006) to 1981 through 2004, and any period in between. The record has been examined for the following time periods:

(a) the period of record (1924 through January 2006);

(b) 1963 (the year baseflow dramatically declined) though January 2006;

(c) 1981 through 2004 (the period suggested by GMD No. 5 as a representative climatic cycle); and

(d) individual hydrologic cycles within the basin.

If over any of these time periods, the amount of recharge available is insufficient to prevent an excessive decline, the requirement of K.S.A. 82a-1036 has been met.

(15) Within the proposed IGUCA boundary, the Chief Engineer finds that "declined excessively" means that the level of the water table has at times fallen below the normal cyclical variations in the water table due to variations in climate,

precipitation, and groundwater pumping to a point where the lowering of the water table is unreasonable, unfair, or intolerable to a significant number of appropriators in the area in question.

(16) Relative to groundwater declines in the area in question, two primary questions remain:

(a) in the Pawnee/Buckner basin, has there been a decline in the groundwater table, and if so,

(b) has it been excessive?

Wells with long-term records of measurement (beginning no later than the early 1960's to present) show long-term declines. Water levels in six monitoring wells with measurements dating from the mid-1940's through 2006 all show a declining trend from the early 1960's until they reach their lowest levels in 1992 or 1993. The water levels then rise through the mid to late 1990's and then decline again. DWR Exhibit F, p.2, Chart 1. GMD5's expert, Mr. W. Peter Balleau, writes, "Alluvial aquifer drawdown has been amplified as a result of converting the Pawnee River to interrupted (in space) and intermittent (in time) flow in the IGUCA reaches." GMD No. 5 Exhibit 2, p. 78.

(17) The average water declines prior to 1980 were 11.98, 12.18 and 11.10 feet for alluvial wells in the Lower Pawnee River, Upper Pawnee River and Buckner Creek valleys, respectively. DWR Exhibit F, p. 8, Table 3. The average water level decline for these three areas from 1980 through January 2006 were 5.93, 1.52 and 3.07 feet, respectively, and the average water level decline for alluvial wells in Sawlog Creek was 3.87 feet for this same period. DWR Exhibit F, p. 8, Table 3.

(18) Some wells had their lowest water levels in 1992 or 1993, followed by a rise in the mid to late 1990's, and then a decline to levels similar to 1992-1993 by 2006. For example, HG24 in the Upper Pawnee alluvium had a depth to water of about 35.4 feet in March 1965 and 63 feet in January 1993. DWR Exhibit F, p. 11, Chart 9. This well (which is also identified as 21S22W12BCB01 on the Kansas Geological Survey WIZARD web site) is only 75.6 feet deep. In this example, the decline is considered excessive because of the loss of saturated thickness (40.2 feet down to 12.3 feet between 1965 and 1993, which is a loss of about 69 percent. Well HG03 (22S22W13CCC01), which is 49.4 feet deep, had a depth to water of about 25 feet in April 1965 and dropped to about 40 feet in 1991, rose to about 25 feet in January 1997, and then dropped to about 43 feet in January 2006. DWR Exhibit F, p. 15, Chart 15; and KGS WIZARD web site. In this last example, the latter decline is considered excessive because of the loss of saturated thickness (24.4 feet down to 6.4 feet between 1997 and 2006, about a 74percent loss). Other long term monitoring wells in the area also exhibit similar trends. See DWR Exhibit F, pp.10-15, Charts 8, 9, 11, 12, 14 and 15. Such a loss has a significant effect on well capacity, especially for those wells located on the fringes of the aquifer, and it means that the total recharge to the basin, including recharge from precipitation, recharge from the stream, and induced recharge from the stream caused by well pumping, is insufficient to support use by all surface and ground water rights.

(19) Pumping from wells withdrawing water from the alluvium of a stream, and any hydraulically connected aquifers, depletes surface flow in the stream by either intercepting water moving toward the stream or inducing groundwater recharge

from the stream. The Sophocleous report referred to in DWR Exhibit F, p. 2, indicates that "1963 is a key year, in which baseflow declined drastically which coincides with groundwater development." WRIS data indicates there are 693 water rights/permits to appropriate water for groundwater in the proposed IGUCA area. 64 percent of the 693 water right/permits (445), have priority dates on or after January 1, 1963.

(20) The following surface water rights are located in the Basin as follows:

Stream reach	**# of water rights**	**Acre-feet authorized**
Buckner Creek	13 (7 Vested rights)	895 (503 Vested rights)
Pawnee River	29 (15 Vested rights)	3737 (2241 Vested rights)
Sawlog Creek	3 (1 Vested rights)	524 (62 Vested rights)

Vested water rights are water rights that were determined in accordance with the provisions of the KWAA and are a right to "continue the use of water having actually been applied to any beneficial use…on or before June 28, 1945…." K.S.A. 82a-701 (d). Vested rights are senior in priority to all appropriation rights. Eight of the 13 surface water rights on Buckner Creek have priority dates prior to 1963; those rights are authorized to divert 510 acre-feet per calendar year. Similarly for the Pawnee River, 22 of the 29 surface water rights have priority dates prior to 1963 and their authorized quantities sum to 3,199 acre-feet per year. Also for Sawlog Creek, two of the three surface water rights have priorities dates prior to 1963 and their authorized quantities sum to 86 acre-feet per year. All of the Sawlog Creek rights have priorities of 1968 and before. Data from WRIS.

(21) From a comparison of the number of groundwater and surface water rights with priorities before or after 1963, it is evident that the majority of the surface water

rights have priorities prior to 1963 and the majority of the groundwater rights have priorities after 1963.

(22) Loss of streamflow over time is evident. GMD No. 5's expert, Mr. W. Peter Balleau, discussed his analysis of streamflow duration by decade as presented in Figure 11 of GMD5 Exhibit 2. This figure shows that, with the exception of the decade of the 1990's, both baseflow and peak streamflows in the Pawnee River at Rozel have progressively decreased by decade from the 1920's to the 2000's. Mr. Balleau explains this figure as follows:

> "If the question is what are the two explanations of why the curve shifts to the left, the low flows are supported by groundwater seepage to the stream, so wells affect the low flows. The high flows are affected by other things: The land use, the terracing, dams, land use changes, vegetation changes. The land surface itself in the watershed has been developed during these years. It was altered during these years, and the direct flow of water falling on the land surface running across the ground, across the field, down the drainage to the stream without interacting with the groundwater is the reason that things have declined on the high side." TR at 677-678.

Mr. Balleau also observes that, "by the year 2000, we're back down to the least baseflow we've ever seen." TR at 676.

(23) An analysis of water use report data for the Pawnee-Buckner Basin for the period 1970-2004 indicates that only about 50 percent of the points of diversion authorized to divert surface water reported any use during that period. About 26 percent reported a dry river and another 15 percent gave no reason for non use. DWR Exhibit F, p. 25, Chart 46. This analysis also indicates that the reports show an increasing number of points of diversion from 1982 through 1992 indicating a dry river as the reason for non use; this number fell during 1993, rose

again in 1994 and 1995, fell from 1996 through 1997, and then increased again from 1998 through 2001. DWR Exhibit F, p. 25, Chart 47.

(24) An examination of WRIS records of water use reporting data for 1980-2006 shows that for between 31 and 34 points of diversion authorized to divert surface water from the Pawnee River anywhere from 14 to 30 did not report use during this period with as many as 18 in 1990 indicating by various means (e.g., "dry river", "insufficient water", "creek not reliable") that water was not available. Similarly for Buckner Creek there are 20 points of diversion authorized and between seven and 20 reported no water use for 1980-2006 with as many as 12 in 1998 reporting that no water was available. A similar examination for Sawlog Creek shows there are 4 points of diversion authorized and between two and four of these indicated no water used during 1980-2006 with as many as all four in 2001 indicating no water was available. In addition, the trends for all three streams generally show an increasing amount of nonuse through time and an increasing amount of reports that no water was available through time.

(25) The Chief Engineer finds that groundwater has declined over significant long periods of time and has declined excessively at various times in the proposed IGUCA area.

(26) K.S.A. 82a-1036 and K.S.A. 2006 Supp. 82a-1038 require designation of an IGUCA if the "rate of withdrawal of groundwater within the area in question equals of exceeds the rate of recharge in such area."

(27) Recharge in this basin is composed of recharge from precipitation and recharge from streamflow composed primarily of runoff from precipitation events. Streamflow is a source of recharge to the aquifer physically, but not all of the

streamflow is legally available for recharge. Only water not needed to satisfy senior surface water rights is considered to be legally available for recharge to the aquifer and pumping by wells.

(28) If only precipitation recharge is considered, the authorized annual groundwater quantities exceed recharge in each of the four alluvial valley areas considered by SWRMP. Charts comparing net precipitation recharge, reported water use and authorized quantities for 1990 through 2004 show that the net recharge is significantly less than the authorized quantities and, with the exception of 1993 for the Upper Pawnee, Lower Pawnee and Buckner Creek, reported water use is greater than net recharge. DWR Exhibit F, pp. 5-7, Charts 3, 4, 5 and 6. The average net recharge for 1990-2005 for the Upper Pawnee, Lower Pawnee, Buckner Creek and Sawlog Creek valleys, respectively, is: 4,569; 7,232; 4,358 and 915 acre-feet per year. The average uses for these same areas for 1990-2005 are, respectively: 13,061; 19,171; 10,718 and 3,172 acre-feet per year. DWR Exhibit F, p. 4, Table 2. The average net recharge for the Ogallala subunit for 1990-2005 was estimated to be 3,765 acre-feet per year (AF/yr); this compares to an authorized quantity of 9,829 AF/yr and an average water use of 5,797 AF/yr for the Ogallala subunit. DWR Exhibit F, p. 29, Table 4. If only precipitation recharge is considered, withdrawals are exceeding recharge in the proposed area.

(29) GMD5 asserts that induced recharge from streamflow should be considered to be a source of water for the aquifer. GMD No. 5 brief at 5. That is correct. But because the induced recharge is being considered, likewise the impacts of such induced recharge on streamflow should also be considered. GMD No. 5's expert, Mr. W. Peter Balleau**,** prepared a water balance for the alluvium of the existing

and proposed IGUCA areas. This water balance indicates that recharge from stream depletion, riparian evapotranspiration and bedrock drainage provides an average of 42,826 AF/yr of recharge to the alluvium in this area for the period 1981-2004. GMD No. 5 Exhibit 2, Bates 00065, Table 3. Mr. Balleau testified that streamflow is being depleted from the alluvial valley. TR at 758. Mr. Balleau also testified that he did not consider surface water outflows in his water balance; that his accounting only dealt with the "water table on down". TR at 761. Mr. Balleau testified that of the average 52,800 acre-feet of withdrawals for this period, the river replaced 42,000 acre-feet. TR at 922. He also stated, "the majority of this system has to have been replenished and it has to be replenished by the stream." TR at 922. Mr. Balleau also testified that, "the gauge flow out the mouth over history, and back before the '70s, my model here would have to say there is 242,000 that would have been gauged before the '70s and is absent from the gauge today because I'm routing it back to the aquifer." TR at 923.

(30) Mr. Balleau indicates in his report that, "Net withdrawal has not exceeded net recharge over time." GMD No. 5 Exhibit 2, p. 85, numbered paragraph 9. This conclusion is based on the period 1981-2004 which he examined for the proposed area. It is apparent from his analysis that much of the recharge to the alluvium and resultant water level rises occurred following the high flow event of 1993 and the sustained flows during 1996 through 1998. GMD No. 5 Exhibit 2, Figure 27. Mr. Balleau testified that he had not computed a return period for the high flow event of 1993. TR at 912.

(31) In examining streamflow records for the Pawnee River at Rozel available from the USGS streamflow records , including those from the NWIS web site, it

appears that the mean annual flow for this location for 1993 is the highest since 1958. The mean monthly flow for July 1993 is also the second highest amount since 1958, behind only July 1979. The July 1993 mean monthly flow is also more than twice as much as any other month subsequent to July 1979. It appears from this that the flows of 1993 represent a relatively rare event, having occurred only once on a mean annual basis or twice on a mean monthly basis during the 47 years from 1959, the year after the last large streamflow event which predated 1963 when baseflow began a significant decline, through 2006. Such flows may not occur frequently enough to avoid excessive declines in the alluvial aquifer. This is further evidenced by the rapid decline in water levels in the aquifer to near the 1992 lows after 1998. GMD5 Exhibit 2, Figure 27.

(32) Based on the above findings, the Chief Engineer finds that the rate of withdrawal of groundwater within the area in question exceeds the rate of recharge.

(33) Another set of circumstances that requires the Chief Engineer to declare an IGUCA is that "preventable waste of water is occurring or may occur within the area in question." K.S.A. 82a-1036 and K.S.A. 2006 Supp. 82a-1038. The Chief Engineer had directed the parties to brief the definition of the phrase "preventable waste."

(34) "Waste of water" means any act or omission that causes any of the following:

i. The diversion or withdrawal of water from a source of supply that is not used or reapplied to a beneficial use on or in connection with the place of use authorized by a vested right, or an approval of application for a permit to appropriate water for beneficial use;

ii. The unreasonable deterioration of the quality of water in any source of supply, thereby causing impairment of a person's right to the use of water;

iii. The escaping and draining of water intended for irrigation use from the authorized place of use; or

iv. The application of water to an authorized beneficial use in excess or the needs for this use. K.A.R. 5-1-1 (gggg).

(35) Any "waste of water" is prohibited by K.A.R. 5-5-7 which provides in part, "Each person shall not commit a waste of water as defined in these regulations…."

(36) As SWRMP points out, these regulations are promulgated under the KWAA, not the IGUCA statutes, and do "not incorporate the idea of preventability." All waste is prohibited.

(37) SWRMP contends that "preventable waste" is waste that is the result of one or both of the following:

(a) Employing diversion, transportation or use practices that are unreasonably inefficient as compared to the practices of efficient water users in the area.

(b) There exist more efficient water diversion, transportation or use practices that would not place extraordinary financial burdens on water users, but such practices are not being used within the area. SWRMP brief at 4.

(38) The Horning Trust advocates that "preventable waste" is "any unnecessary or negligent consumption or other use of water which prevention thereof would place [an] extraordinary financial burden on the appropriator." Horning Brief at 2.

(39) KLA argues that "preventable waste" is water that is used "extravagantly, improvidently or lavishly." KLA brief at 7.

(40) GMD No. 5 contends that "preventable waste" should be deemed to have occurred only if non-beneficial use of water has occurred which is reasonably preventable by economically viable means. GMD No. 5 brief at 10.

(41) KWF supports the SWRMP definition of "preventable waste." KWF brief at 8.

(42) Within this proposed IGUCA boundary, the Chief Engineer finds that "preventable waste" means waste which can be prevented by economically and technologically feasible means in the area in question.

(43) Based on the period reviewed, it appears that water use for irrigation may have been higher than necessary by some irrigators pumping water from the alluvium (See GMD No. 5 Exhibit No. 2, Figure 15), but the evidence presented is insufficient to determine if preventable waste has been occurring.

(44) No evidence has been presented concerning the "unreasonable deterioration of the quality of water" therefore it can not be concluded that unreasonable deterioration of water has occurred.

(45) Another circumstance that requires the Chief Engineer to designate an IGUCA is that "other conditions that exist within the area in question which require regulation in the public interest." K.S.A. 82a-1036 and K.S.A. 2006 Supp. 82a-1038.

(46) K.S.A. 2006 Supp. 82a-711(b) regulates the approval of new applications to appropriate water and provides, "In ascertaining whether a proposed use will prejudicially and unreasonably affect the public interest, the chief engineer shall take into consideration:

(a) Established minimum desirable streamflow requirements;

(b) The area, safe yield and recharge rate of the appropriate water supply;

(c) The priority of existing claims of all persons to use the water of the appropriate water supply; and

(d) All other matters pertaining to such question."

(47) In determining whether to approve a new application, the public interest also includes

"(a) …considering the quantity, rate and availability of water necessary to:
(1) Satisfy senior domestic water rights from the stream;
(2) protect senior water rights from being impaired by the unreasonable concentration of naturally occurring contaminants; and
(3) over the long term reasonably recharge the alluvium or other aquifers hydraulically connected to a stream.
(b) Unless otherwise provided by regulation, it shall be considered to be in the public interest that only the safe yield of any source of water supply, including any hydraulically connected sources of water supply, shall be appropriated." K.A.R. 5-3-9.

(48) As SWRMP points out, the IGUCA statutes are part of the Groundwater Management District Act (GMDA), K.S.A. 1020 et seq. SWRMP brief at 22. In K.S.A. 82a-1020 the Legislature declared the purpose of the GMDA to include: (a) the conservation of groundwater resources, (b) prevention of economic deterioration, (c) stabilization of agriculture, and (d) to secure Kansas' position in national and world markets. This is one declaration of the public interest.

(49) Ms. Alder testified that the state water plan goal is to achieve sustainable yield statewide, except for the Ogallala aquifer, by 2015. TR at 256-59, 324-325. Mr. Falk also testified that the state water plan goal is to achieve sustainable yield statewide, except for the Ogallala aquifer, by 2015, and that the State Water Plan establishes this as public policy. TR at 1054-1055, 1104.

(50) KLA argues that "any attempt to curtail water rights with a priority date before April 12, 1984 for any reason other than direct impairment would be an attempt to circumvent the legislative policy that only post April 12, 1984 water rights are subject to [minimum desirable] streamflow restrictions." KLA brief at 10. Although no Minimum Desirable Streamflow (MDS) has been established on the

Pawnee River or any of its tributaries, MDS was established for the gage at Great Bend on the Arkansas River. K.S.A. 82a-703c. The Pawnee River and its tributaries are tributary to the Arkansas River above this gage. Although the purpose of this proceeding is not to regulate minimum desirable streamflow (MDS), it should be noted that there are six surface water rights and 58 groundwater rights with a priority junior to the minimum streamflow priority of April 12, 1984 WRIS date base. These water rights could legally be regulated to provide MDS at the Arkansas River gage at Great Bend. While it is not necessary to use an IGUCA to administer water rights to protect MDS, neither is there a prohibition from doing so. Likewise, according to WRIS there are water rights to divert surface water and groundwater from the Arkansas River hydrological system downstream from the confluence of the Pawnee River and the Arkansas River that are both junior and senior to MDS. As a result, it is not appropriate to consider water use in the Pawnee River and its tributaries without potential consideration of the impacts to downstream water rights as may be appropriate.

(51) As KLA argues, it is correct that at the time any application for a permit to appropriate water is being considered, the Chief Engineer must find that the "proposed use neither impairs a use under an existing water right nor prejudicially and unreasonably affect the public interest" before the permit can be approved. K.S.A. 2006 Supp. 82a-711(a). KLA brief at 7.

(52) But then KLA argues that because the Chief Engineer found at the time the application was approved that the use would not impair an existing water right, that if priorities were observed, the Chief Engineer can never attack this finding in an ancillary IGUCA proceeding. KLA brief at 8. As conceded by KLA, even

though the Chief Engineer makes a finding at the time the application is approved that the proposed use will not impair a use under an existing water right, the Chief Engineer may regulate that right any time in the future if it is causing impairment.

This is inconsistent with KLA's argument that once the Chief Engineer determines at the time the application is approved that it does not prejudicially and unreasonably affect the public interest, the Chief Engineer can never take action to protect any future public interest.

It is also clear that that is not the same public interest question that is raised by K.S.A. 2006 Supp. 82a-711 and K.S.A. 82a-1036. The IGUCA statutes clearly contemplate the Chief Engineer may consider whatever public interest issues are being raised at the time of the IGUCA proceedings, and that he is not bound to a determination of the public interest at the time the application was approved. If either of these were true, the IGUCA statutes could never be used because the Chief Engineer would be forever bound to his determination concerning the public interest at the time the permit was issued. It is clear that the IGUCA statutes were intended to deal with water shortages and current threats or injuries to the public interest. In administering the law an agency is required to attempt to administer its laws to give meaning to all provisions of the law. To adopt KLA's argument would do the opposite.

(53) Based on an examination of the priorities of water rights in the area in question, a majority of the surface water rights have a priority before 1963 and a majority of the groundwater rights have a priority after 1963. In general, junior groundwater rights in the area in question are adversely affecting senior surface water rights. The authorized quantities of senior surface water rights have generally been

unable to be satisfied at times when water is needed for beneficial use due to excessive declines in the groundwater table caused by well pumping.

(54) In this proceeding, the factors requiring regulation in the public interest are:

(a) Groundwater pumping under junior groundwater rights has adversely affected senior surface water rights, because those senior surface water rights, are no longer able to be satisfied when water is needed for beneficial use.

(b) Having a stable water supply to meet the long term needs of all beneficial uses is in the public interest.

(c) Having a reasonable balance between the renewable water supply and the beneficial use of water is in the public interest because it generally enables water rights to be satisfied, avoids long-term declines, reduces the magnitude of cyclical fluxuations, and benefits the public as a whole. A balanced stream-aquifer system also provides secondary benefits, such as fishing, recreation, and wildlife and aquatic habitat. A system that is in reasonable balance will have streamflow more often.

(d) Management of the water supply to achieve sustainable yield management.

(55) The Chief Engineer finds that the conditions listed above in finding (54) require regulation in the public interest.

(56) Because the Chief Engineer has found that three of the circumstances set forth in K.S.A. 82a-1036 exist, the statute requires the Chief Engineer to specify the area to be designated as an IGUCA.

(57) Tina Alder testified on behalf of SWRMP that the proposed boundaries for the alluvial aquifer system were consistent with the State Water Plan and recommendations by the stakeholder committees with regard to areas experiencing groundwater declines and streamflow depletion.The boundaries are also correlated to the areas of the alluvial aquifer and the Ogallala subunit where the majority of wells are located. TR. at 309-314. DWR exhibit B, page 16, map 4; DWR exhibit D, Appendix A.

(58) Bruce Falk testified on behalf of SWRMP as follows: "If the IGUCA proceedings ends up in a drought contingency plan, then I would consider the boundaries as drawn to be sufficient. If it's a long-term restrictive in nature, then potentially, the whole basin should be studied." TR. at 1062.

(59) GMD No. 5's expert, Mr. W. Peter Balleau, speaking of the proposed expanded boundary, testified that, "I don't believe we know enough to delineate the expanded boundary, because we don't yet know enough about cause and effect of the upstream water operations." TR at 728. He further testified, that the inquiry in this proceeding should be to the entire Pawnee-Buckner Basin. TR at 729. Mr. Balleau supports this testimony with Figure 34, GMD No. 5 Exhibit 2, which shows areas of influence of wells in aquifers and connected streams. Concerning this figure, Mr. Balleau testified, "[I]t shows that there are Ogallala areas that shouldn't be affecting our streams, but the land use throughout the basin should be affecting our streams, so I suggested that the whole thing should be looked at." TR at 925 - 926.

(60) The Ogallala aquifer within the proposed boundaries (with the exception of the very southwestern corner of Hodgeman County) has little or no saturated

thickness. DWR Exhibit B, p. 37, Map 10 and TR at 200. The area described as the Ogallala subunit is shown in DWR Exhibit F, p. 31, Map 9. There are 45 water rights for groundwater use in the Ogallala subunit. Those rights are authorized to divert a total of 9,995 acre-feet per calendar year (AF/yr). DWR Exhibit F, p. 36, Table 6. Net recharge to this area (average 3,765 AF/yr) has been less than reported water use (average 5,797 AF/yr) each year from 1990 through 2004, with the exception of 1993. DWR Exhibit F, p. 30, Chart 52. Although all monitoring wells in this are not showing declines in water levels, two wells in particular (OG39 and OG40), which are in the northeastern part of the area, have shown significant declines from 1977 through January 2006. DWR Exhibit F, p. 33, Chart 55. These two wells have also experienced a corresponding loss in saturated thickness of 68% and 24%, respectively. TR. at 209. "The area where the declines are occurring is near the discharge points from the Ogallala to the Sawlog Creek. As the water levels decline, less water is available to discharge to the Sawlog Creek." "In the Sawlog Creek,…the frequency at which surface water users were able to divert has decreased over time. This may be attributed to the declines in water levels in the Ogallala subunit." DWR Exhibit F, p. 37. The area within the Ogallala subunit where the largest declines are occurring are near the discharge points of Buckner and Sawlog Creeks. DWR Exhibit B, p. 44, Map 15 and TR at 212 - 213.

(61) The Chief Engineer finds that the boundaries proposed in the Order Initiating Proceedings to Amend the Designation of the Intensive Groundwater Use Control Area in the Pawnee Valley, dated June 19, 2006, are appropriate based on the above findings because the boundaries will encompass the majority of

groundwater points of diversion in the basin. Credible evidence has been received indicating consideration should be given to the expansion of the IGUCA beyond the boundaries proposed to the entire Pawnee/Buckner/Sawlog drainage basin, but because notice has not been given to water right owners and other persons and entities who would have an interest in this matter in the area beyond the boundaries of the proposed IGUCA, it is not appropriate to consider expanding the boundaries beyond those of the proposed IGUCA at this stage of these proceedings.

CONCLUSIONS

(1) Within the boundaries of the proposed IGUCA, groundwater levels have declined over significant long periods of time and have declined excessively at various times in the proposed IGUCA area.

(2) Within the boundaries of the proposed IGUCA, the rate of groundwater withdrawals has at times exceeded the rate of recharge physically and legally available to the area in question.

(3) Other conditions exist within the area in question which require regulation in the public interest.

(4) Because three of the criteria in K.S.A. 82a-1036, as set forth in conclusions numbers one through three have been met, the Pawnee IGUCA boundaries should be expanded to the boundaries proposed in the Order Initiating Proceedings to Amend the Designation of the Intensive Groundwater Use Control Area (IGUCA) in the Pawnee Valley, dated June 19, 2006.

(5) A Phase II of these proceedings should be held to determine:

(a) The goals that are to be accomplished by the IGUCA;

(b) The corrective control provisions necessary to achieve those goals.

(6) A prehearing conference should be held to:

(a) establish a process to determine whether the IGUCA boundaries should be expanded to include the remainder of the Pawnee/Buckner/Sawlog drainage basin, or any other areas deemed appropriate, and whether the Chief Engineer should initiate proceedings to include additional areas into this IGUCA. To the extent appropriate, this process should include consultation between the Division of Water Resources and the Southwest Kansas Groundwater Management District No. 3.

(b) set procedures for identifying the IGUCA goals,

(c) ascertain which corrective control provisions will be adopted to reach those goals, including any necessary testimony or evidence on the nature of corrective controls to be adopted,

(d) set a briefing schedule, as needed,

(e) set other deadlines,

(f) take up any other relevant procedural matters, and

(g) set the hearing dates for the hearing in Phase II of these proceedings.

ORDER

After due consideration, the Chief Engineer hereby orders as follows:

(1) The boundaries of the original Pawnee IGUCA are hereby expanded to include the following area:

The hydrologic subbasin within the drainage basin of the Pawnee River, Buckner Creek and Sawlog Creek, located in Hodgeman, Ness and Pawnee Counties, Kansas, known as and referred to as the Pawnee-Buckner-Sawlog Subbasin, and

being more particularly described as:

Township 20 South

Range 26 West through Range 19 West

Range 18 West, Sections 5, 6, 7, 8, 14 through 36

Range 17 West, Sections 30, 31, 32

Township 21 South

Range 26 West through Range 18 West

Range 17 West, Sections 5 through 9, 15 through 22, and 26 through 36

Range 16 West, Sections 31

Township 22 South

Range 26 West through Range 18 West

Range 17 West, Sections 1 through 10, 16 through 20, 29, 30, and 31

Range 16 West, Section 6

Township 23 South

Range 26 West through Range 22 West

Township 24 South

Range 26 West through 22 West

(2) A Phase II hearing in these proceeding shall be held to determine:

(a) the goals that are to be accomplished by the IGUCA; and

(b) the corrective control provisions necessary to achieve those goals.

(3) A prehearing conference shall be held to:

(a) establish a process to determine whether the IGUCA boundaries should be expanded to include the remainder of the Pawnee/Buckner/Sawlog drainage basin, or any other areas deemed appropriate, beyond the boundaries specified in paragraph (1) of this order; and whether the Chief Engineer should initiate proceedings to include additional areas into this IGUCA. To the extent appropriate, this process shall include consultation between the Division of Water Resources and the Southwest Kansas Groundwater Management District No. 3.

(b) set the procedures for identifying the IGUCA goals,

(c) ascertain which corrective control provisions will be adopted to reach those goals, including any necessary testimony or evidence on the nature of corrective controls to be adopted,

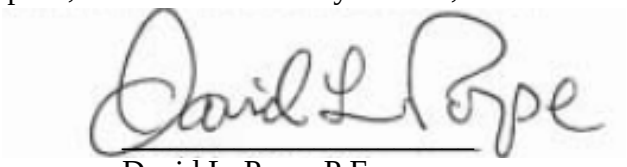
(d) set a briefing schedule, as needed,

(e) set any other deadlines needed,

(f) take up any relevant procedural matters, and

(g) set the hearing dates for Phase II of these proceedings.

IT IS SO ORDERED at Topeka, Kansas this 18th day of June, 2007.



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

CERTIFICATE OF SERVICE

On this 18th day of June, 2007, I hereby certify that a true and correct copy of the foregoing **ORDER FOLLOWING PHASE I OF THE HEARING** was sent postage prepaid, U.S. First-Class Mail and emailed to the following:

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