

Division of Water Resources  
109 SW 9<sup>th</sup> Street, 2nd Floor  
Topeka, Kansas 66612-1283

Dale A. Rodman, Secretary  
David W. Barfield, Chief Engineer



Kansas Department of Agriculture

phone: (785) 296-3717  
fax: (785) 296-1176  
www.ksda.gov/dwr

Sam Brownback, Governor

**Senate Committee on Agriculture**  
**Testimony on SB 272, Multi-year Flex Accounts**  
**David Barfield, Chief Engineer**  
**January 18, 2012**

Chairman Taddiken and members of the committee,

I am David Barfield, Chief Engineer of the Kansas Department of Agriculture's Division of Water Resources. I appear before you today to testify in support of SB 272, amending K.S.A. 82a-736, a provision of the Kansas Water Appropriation Act which authorizes and governs multi-year flex accounts. Attached to my testimony is my report to the Legislature on the implementation of the program for the past year, as the statute requires. That report also provides some of the history of the 2011 drought, as well as KDA-DWR's response in developing this bill.

K.S.A. 82a-736 is a complex section of the Kansas Water Appropriation Act, and the proposed amendments to K.S.A. 82a-736 increase its complexity to provide more options to water right holders. However, these amendments can be easily understood as three related changes—changes that respond to the drought of 2010-2011 and what we have learned from it.

First, the bill increases the amount of groundwater that can be pumped under a flex account, without increasing overall water use. The statute allows water right holders to exchange annual pumping maximums for a five-year maximum, enabling substantial flexibility in year-to-year pumping. However, as currently enacted, the statute imposes a water penalty for that flexibility, by requiring a ten-percent reduction in that five year quantity to promote water conservation. Largely because of this penalty, very few water users have placed their water rights into flex accounts, and so the statute has conserved little water. This first change does away with the ten percent reduction for conservation. To make this intent clear, a new subsection (a) has also been added to the statute.

Second, the bill provides three different potential options for water users to compute the amount of water that they can place into a flex account. They can use the average annual historic usage of the water right, based on the years 2000 to 2009, multiplied by five. Or, they can use the normal irrigation requirement for crops in their county, multiplied by their maximum irrigated acres, again multiplied by five. Finally, where available, they can use a GMD-developed alternative, provided that it does not increase long-term water use.

Third, the statute is drafted so that it can be implemented as quickly as possible. Due to high stakeholder interest in taking advantage of this modified flex account for 2012, KDA-DWR has included more specifics in the legislation than it otherwise would—including an expansion of the definition section, and more reliance on regulations than is otherwise desirable. While these expediencies make for a longer and more complex statute, DWR and stakeholders believe that that is a price worth paying, given the benefits the amendments provide. For example, the flex account tool will be especially beneficial to water users who significantly overused their 2011

authorized quantities under drought emergency term permits, by allowing them five years to “pay back” their overuse, rather than just one.

DWR’s experience in processing the drought emergency term permits made it clear that landowners needed a clearly defined and concise water right for their flex account permit. Because water right owners may not want to place all of a water right into a flex account permit, we expect that the advantages of these accounts will produce more requests to divide water rights. To that end, Section 1 of the bill provides for such division. By dividing a water right into multiple rights, this section will allow water right holders to enroll one or more points of diversion authorized under one divided right into a multi-year flex account, while leaving the other divided right (or rights) outside the flex account. This section makes our current practice of dividing water rights explicit in statute, and provides a fee of \$300 for the division, no matter how many wells are involved.

In conclusion, I believe the proposed amendments to K.S.A. 82a-736 will provide for multi-year flexibility without increasing long term water use.

Thank you. I will stand for questions at the appropriate time.

Attachments:

Attachment 1, Report on Implementing Multi-Year Flex Accounts, January 18, 2012

**Report on Implementing Multi-year Flex Accounts (K.S.A. 82a-736)**

to  
House Standing Committee on Agriculture and Natural Resources  
and  
Senate Standing Committee on Natural Resources

By David W. Barfield  
Chief Engineer  
Kansas Department of Agriculture  
Division of Water Resources

January 18, 2012

K.S.A. 82a-736 requires the chief engineer of the Kansas Department of Agriculture's Division of Water Resources to implement a voluntary program that allows year-to-year flexibility in groundwater pumping pursuant to its provisions. The law also requires the chief engineer to submit a written report on the law's implementation to your committees by February 1 of each year.

K.S.A. 82a-736 became law on May 9, 2001. As originally enacted, it allowed water right holders to exchange the annual pumping maximums of their groundwater rights for a five-year maximum instead—which enabled substantial flexibility in year-to-year pumping. However, that flexibility carried a required 10 percent reduction in the five-year pumping quantity. In 2005, the Legislature changed two details to the statute. First, the average pumping period used to calculate the five-year amount grew from 1996 -2000 to 1992 – 2002. Second, the calculation for depositing water into a flex account changed slightly: whereas previously it was required to be 90 percent of the base average amount multiplied by five, after 2005, that amount could not exceed 90 percent of the base average amount multiplied by five.

Despite these changes and our best efforts to inform water users of the program, there were no active flex accounts as of the end of 2010. However, drought has brought new attention to the advantages of year-to-year flexibility in groundwater pumping. As can be seen by the maps and figures attached as Attachment 1, the drought and heat of late 2010 and 2011 hit groundwater users in central and western Kansas especially hard. Early in 2011, we began to hear concerns from water users in southwest Kansas that they were likely to run out of their annual authorized quantities of water to complete their crops for the year. As a result, we asked the Legislature to amend K.S.A. 82a-736 to allow for water users to apply for a multi-year flex account within the year that it would begin, rather than having to apply during the preceding year. The Legislature in 2011 enacted this change, and also changed the base average use period from 1992 - 2002 to 2000-2009.

Attached as Attachment 1 are the rules and regulations related to K.S.A. 82a-736, which were originally promulgated in 2002, and have been revised periodically to address subsequent amendments.

Despite these improvements to the statute, water users expressed the desire for another tool to manage the drought of 2011: specifically, a one-time flexibility to deal with this extraordinary drought, rather than being required to enroll in a 5-year program. In response, DWR developed a new type of permit under the chief engineer's existing authority: the drought emergency term permit. In

this one-time program for severe drought areas, term permits are granted to allow water users to borrow from their 2012 authorized quantity of water to complete irrigation of their 2011 crops. By year's end, we had accepted just over 2200 drought term permit applications — a much higher number than either DWR or the GMD's had anticipated, and the load has put significant burdens on DWR staff. Attachment 3 shows the distribution of 2011 Drought Emergency Term Permits.

DWR took significant measures to inform water right holders of these two options — both the multi-year flex account program and drought term permits. DWR issued multiple press releases, published articles in *DWR Currents* (our e-newsletter), and publicized them in our extensive day-to-day interactions with water users. We also make our flex account literature available to the public when we have a table or booth at water-related events. Information about flex accounts is available on our website at <http://www.ksda.gov/appropriation/content/114/cid/1787>. Despite this work and the significant need for multi-year flexibility, we received only four applications for multi-year flex accounts by the end of 2011.

With the prospects of continued dry conditions, water users have again sought improved tools to manage their water supply over multiple years. Clearly, producers have been unwilling to voluntarily reduce their average reported use by 10 percent in order to obtain multi-year flexibility. We have also heard complaints about using historic water usage figures as the baseline for computing multi-year quantities, on the grounds that such a calculation discourages conservation.

Based on significant interaction with many stakeholders, including the circulation of multiple drafts for comment, DWR developed a set of recommended improvements in the multi-year flex account program. Those improvements are now embodied in Senate Bill 272 as introduced to the Legislature last week.

Rather than require conservation in exchange for multi-year flexibility, SB 272 aims to provide flexibility without increasing long-term use under the water right. The bill provides different alternatives for computing the amount of water that can be used over a five-year flex period, without increasing long-term use.

- The first alternative is the average historic usage of the water right without the 10 percent reduction current required under statute.
- The second alternative is the normal irrigation requirement for crops in the appropriate county, multiplied by the maximum acres irrigated. Attachment 4 is a table showing the proposed allowable flex account net irrigation requirement (NIR) by county.
- The final alternative is a GMD developed alternative, provided that it does not allow an increase in long-term water use. DWR would adopt this alternative in rules and regulations.

Producers can take their choice of the options above.

Those with drought emergency term permits would be allowed to switch to a flex account if they agree to reduce its authorized five-year quantity by the amount of the 2011 overuse.

I believe it highly desirable to have early action by the Legislature on this bill to provide the best opportunity for producers to take advantage of such provisions. And given the technical details that are essential to the bill's success, I would request the Legislature to approach any changes to those details with utmost care.

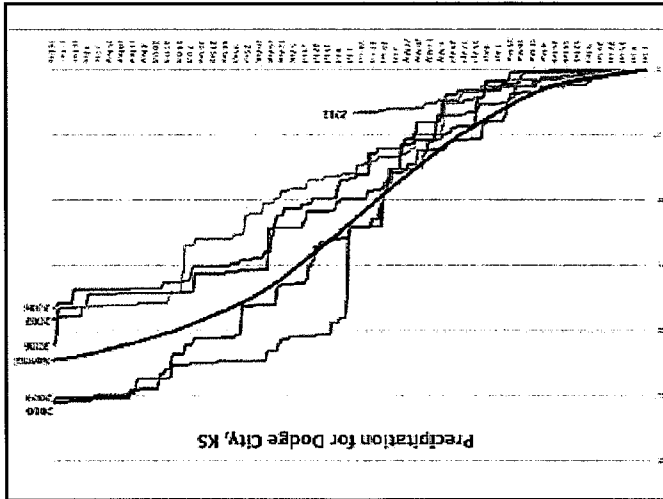
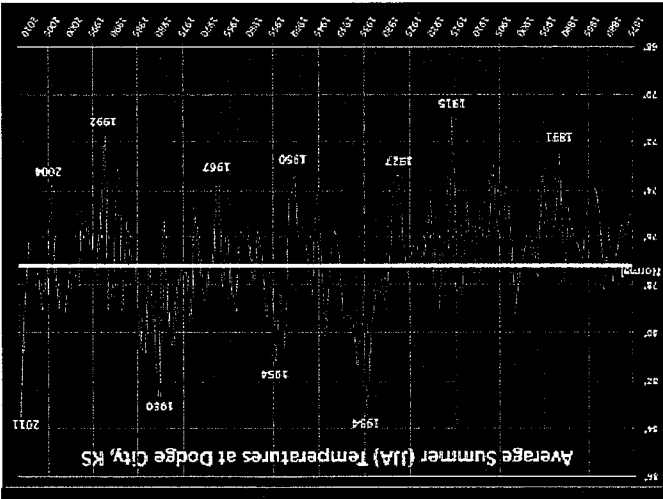
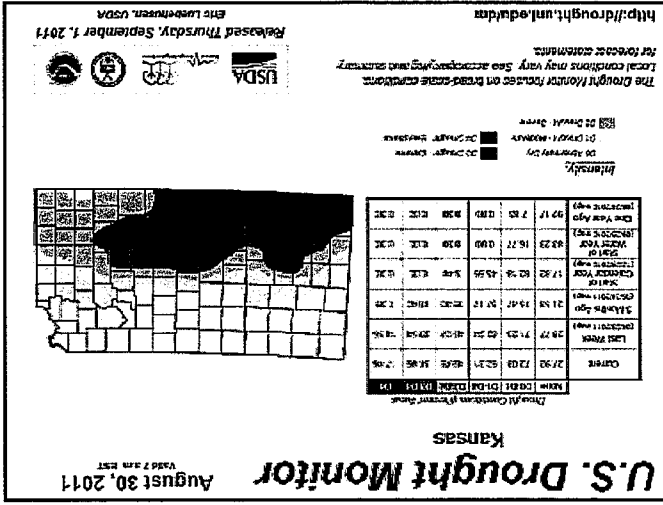
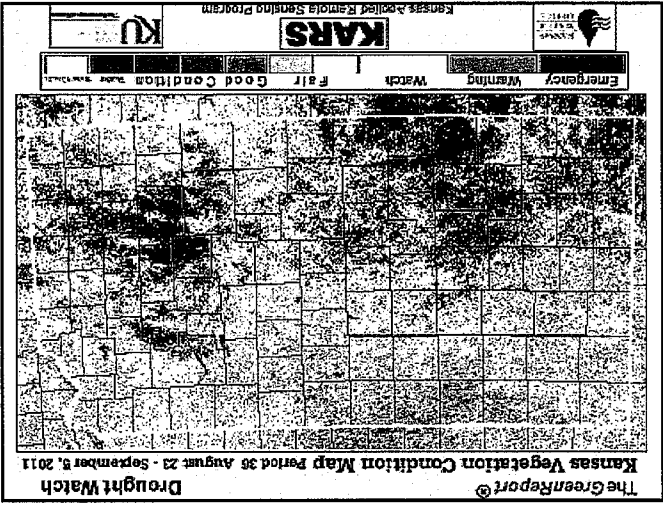
**Attachments:**

**Attachment 1: Figures (2) and Maps (2) showing the 2011 Drought Conditions**

**Attachment 2: Rules and Regulations for Multi-year flex accounts pursuant to K.S.A. 82a-736 (2011)**

**Attachment 3 Map showing Distribution of 2011 Drought Emergency Term Permits**

**Attachment 4: Table of Proposed Allowable Flex Account Net Irrigation Requirement (NIR)**



Attachment 2

**Regulations, Multi-year Flex Accounts (K.S.A. 82a-736)  
Effective December 16, 2011**

**K.A.R. 5-16-1. Definitions.** As used in this article, in the Kansas water appropriation act, and by the chief engineer in the administration of the Kansas water appropriation act, unless the context clearly requires otherwise, the following words and phrases shall have the meanings specified in this regulation. (a) "Base amount" and "BA" mean the quantity of water deposited into a flex account.

(b) "Base average usage factor" and "BAUF" mean the percentage of the "base average usage," as this term is defined in K.S.A. 82a-736 and amendments thereto, that is multiplied by five as a part of the calculations specified in K.A.R. 5-16-5 to determine the quantity of water that may be deposited into a flex account. The BAUF shall not exceed the maximum of 90% established by K.S.A. 82a-736 and amendments thereto.

(c) "Base water right" means a vested or certified water right or rights for which the owner applies to the chief engineer to establish a flex account pursuant to K.S.A. 82a-736, and amendments thereto.

(d) "BAU" means the "base average usage" as defined in K.S.A. 82a-736, and amendments thereto.

(e) "Good standing," only as that term is used in K.S.A. 82a-736, and amendments thereto, in reference to base water rights, means a base water right that meets the following conditions:

- (1) Has been lawfully exercised within the period specified in K.A.R. 5-16-5;
  - (2) has had all required water use reports filed and any civil fines assessed for failure to timely file a complete and accurate water use report paid; and
  - (3) has had no period of nonuse with a duration of five or more consecutive years since January 1, 1990, except for enrollment in the water right conservation program pursuant to K.A.R. 5-7-4 or L. 2011, ch. 89, sec. 25 and amendments thereto, enrollment in the federal conservation reserve program, or enrollment in another multiyear federal or state conservation program.
- (f) "Significant water conservation measures" means actual physical changes in a water distribution system or management practices that improve water use efficiency, including the following:

- (1) Conversion from flood irrigation to center pivot irrigation with a nozzle package designed to improve water use efficiency;
- (2) irrigation scheduling;
- (3) conversion to subsurface drip irrigation; and
- (4) removal of an end gun, resulting in a significant reduction in the number of irrigated acres.

(Authorized by K.S.A. 82a-706a; implementing K.S.A. 2010 Supp. 82a-736, as amended by L. 2011, ch. 89,

sec. 28; effective Oct. 11, 2002; amended Jan. 6, 2006; amended, T-5-8-29-11, Aug. 29, 2011; amended Dec. 16, 2011.)

**K.A.R. 5-16-2. Fee to establish flex account and apply for term permit.** The filing fee for establishing a flex account and applying for a five-year term permit to exercise the flex account shall be \$400. (Authorized by K.S.A. 82a-706a; implementing K.S.A. 2001 Supp. 82a-708a(d), as amended by L. 2002, Ch. 181, § 21; effective Oct. 11, 2002.)

**K.A.R. 5-16-3. Establishing a flex account.** (a) A flex account shall be established by filing an application for a flex account and a term permit on a form prescribed by the chief engineer. Each application shall meet the following requirements.

(1) Show the location of all wells located within one-half mile of the proposed point of diversion, and the names, addresses, and telephone numbers of the owners of those wells.

Except as specified in subsection (e), a separate application shall be filed for each water right and each point of diversion for which the owner desires to establish a flex account. Each application shall be accompanied by the filing fee specified in K.A.R. 5-16-2;

(2) be date-stamped showing the date the application was filed with the chief engineer;

(3) indicate the five consecutive years that are to be designated as the flex account period; and

(4) indicate whether the flex account period will commence with the year in which the application is filed or with the next year after the year in which the application is filed.

(b) Before any application to establish a flex account and a term permit will be accepted for filing, the application shall be signed by at least one owner of the water right, or a duly authorized agent of an owner of the water right.

(c) Before the flex account can be established or the term permit approved, all of the water rights owners, or a duly authorized agent of the owners, shall verify upon oath or affirmation that the statements contained in the application are true and complete.

(d) If one or more owners refuse to sign the application or if a written request is filed by one or more of the owners to withdraw their signatures from the application before the application is approved, the application shall be dismissed.

(e) A single application to establish a flex account and apply for a term permit may be filed in the following situations:

(1) Multiple water rights authorize the diversion of water from a single point of diversion that diverts water to an identical place of use for a single type of use.

(2) Multiple points of diversion are authorized by the chief engineer to divert water through a single water flowmeter before going to an identical place of use.

(f) The flex account shall not be established, and the term permit to exercise the flex account shall not be valid until both have been approved by the chief engineer. (Authorized by K.S.A. 82a-706a;



implementing K.S.A. 2010 Supp. 82a-736, as amended by L. 2011, ch. 89, sec. 28; effective Oct. 11, 2002; amended, T-5-8-29-11, Aug. 29, 2011; amended Dec. 16, 2011.)

**K.A.R. 5-16-4. Conditions on the term permit.** (a) The place of use authorized by a term permit shall be identical to the place or places of use authorized by the base water right or rights.

(b) The type of use authorized by a term permit shall be limited to one of the types of use authorized by the base water right or rights.

(c) The rate of diversion authorized by a term permit shall not exceed the maximum instantaneous rate of diversion authorized by the base water right or rights. (Authorized by K.S.A. 82a-706a; implementing K.S.A. 82a-706a and K.S.A. 2001 Supp. 82a-736; effective Oct. 11, 2002.)

**K.A.R. 5-16-5. Maximum annual quantity of water authorized by term permit.** (a) Except as specified in subsections (b) through (e), the maximum quantity of water deposited in a flex account and authorized to be diverted in five consecutive calendar years under the authority of a term permit shall be determined in accordance with K.S.A. 82a-736, and amendments thereto, by means of performing the following calculations:

(1) Add the quantity of water lawfully used under the base water right or rights each year during the period 2000 through 2009. This sum is the total quantity of water;

(2) divide that total quantity of water by 10;

(3) multiply that resulting quantity in paragraph (a)(2) by the BAUF;

(4) multiply that resulting quantity in paragraph (a)(3) by five; and

(5) if the application required by K.A.R. 5-16-3 was filed after November 1 of the year designated as the first year of the flex account period, subtract the quantity of water used under the base water right during the year in which the application was filed from the resulting quantity in paragraph (a)(4).

(b) If significant water conservation measures were implemented under the base water rights at any time during the period of calendar years 2000 through 2009, the average annual quantity of water actually used may be calculated using the five consecutive calendar years immediately preceding the implementation of significant water conservation measures, but these five calendar years shall not begin before calendar year 1995. The five-year allocation under the term permit shall be determined by performing the following calculations:

(1) Add the quantity of water lawfully used each year under the base water right or rights for the five consecutive calendar years. This sum is the total quantity of water;

(2) divide that total quantity of water by five;

(3) multiply that resulting quantity in paragraph (b)(2) by the BAUF;

(4) multiply that resulting quantity in paragraph (b)(3) by five; and

(5) if the application required by K.A.R. 5-16-3 was filed after November 1 of the year designated as the first year of the flex account period, subtract the quantity of water used under the base water right during the year in which the application was filed from the resulting quantity in paragraph (b)(4).

(c) If water use records for a base water right are inadequate to accurately determine actual water use during any calendar year during the period used to determine the base average usage, then that year shall be counted as having no water use.

(d) No flex account shall be allowed if the flex account is inconsistent with the provisions of any intensive groundwater use control area created pursuant to K.S.A. 82a-1036 through K.S.A. 82a-1040, and amendments thereto.

(e)(1) If water was authorized to be diverted for less than the entire period used to determine the base average usage, the five-year allocation shall be determined by means of these calculations:

(A) Add the quantity of water lawfully used each year under the base water right or rights for the entire period used. This sum is the base average usage;

(B) divide the base average usage by the number of years, or parts thereof, that water was authorized to be diverted by the chief engineer;

(C) multiply that resulting quantity in paragraph (e)(2) by the BAUF;

(D) multiply that resulting quantity in paragraph (e)(3) by five; and

(E) if the application required by K.A.R. 5-16-3 was filed after November 1 of the year designated as the first year of the flex account period, subtract the quantity of water used under the base water right during the year in which the application was filed from the resulting quantity in paragraph (e)(4).

(2) Water rights that authorized use of water for less than two calendar years during period used to determine the base average usage shall not be eligible for a flex account. (Authorized by K.S.A. 82a-706a; implementing K.S.A. 2010 Supp. 82a-736, as amended by L. 2011, ch. 89, sec. 28; effective Oct. 11, 2002; amended Jan. 6, 2006; amended, T-5-8-29-11, Aug. 29, 2011; amended Dec. 16, 2011.)

**K.A.R. 5-16-6. Flex accounts and term permits.** (a) The duration of the flex account and term permit shall be five consecutive calendar years.

(b) There shall be no extension of a flex account or a term permit beyond the period of five consecutive calendar years originally authorized.

(c) There shall be no carryover of unused quantities of water from one flex account or term permit to another flex account or term permit.

(d) Only one flex account shall be in force for a point of diversion or a water right at any time.

(e) A water flowmeter meeting the requirements of the chief engineer shall be installed on each point of diversion authorized by the term permit. If an existing water flowmeter had been required on or after September 22, 2000 or if there is no existing water flowmeter, the water flowmeter shall meet

the requirements of the chief engineer in effect at the time the term permit is approved. If a water flowmeter was installed before September 22, 2000, the water flowmeter shall meet the requirements of K.A.R. 5-1-6(b).

(f) Only an entire water right, or a portion of a water right that has been formally divided, may be deposited in a flex account.

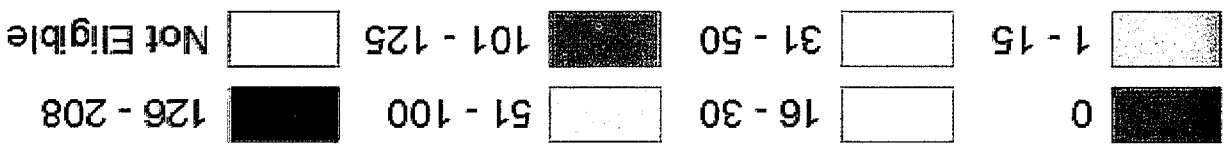
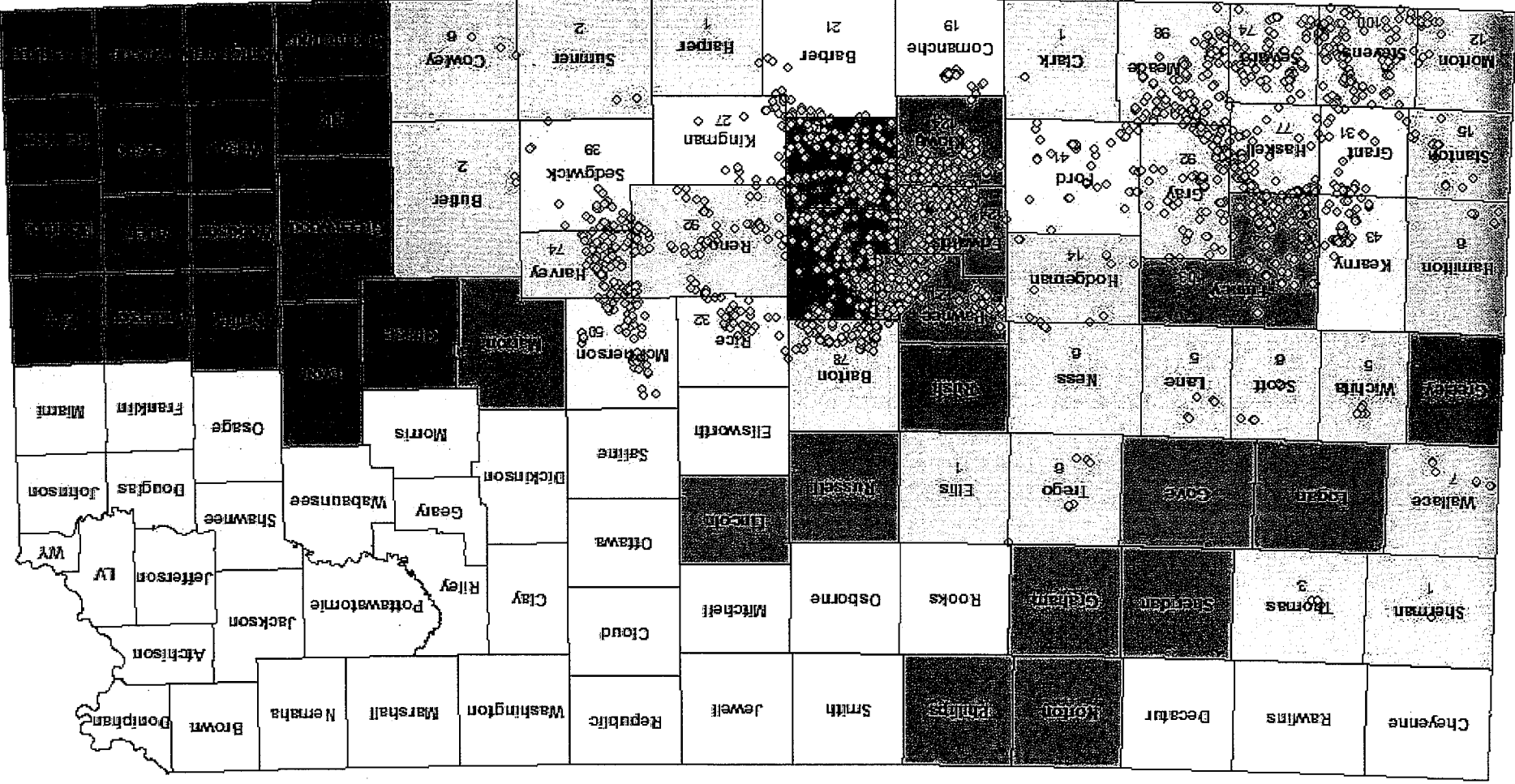
(g) All water diverted pursuant to a term permit and the base water rights associated with the term permit shall be counted against the quantity of water deposited in the flex account. (Authorized by K.S.A. 82a-706a; implementing K.S.A. 82a-706a and K.S.A. 2001 Supp. 82a-736; effective Oct. 11, 2002.)

K.A.R. 5-16-7. Conditions under which a base water right may be exercised. Each term permit approved by the chief engineer according to this article shall include the condition that if the term permit can no longer be exercised because of an order issued by the chief engineer, including an intensive groundwater use control area order, a minimum desirable streamflow order, or an order to administer water rights to prevent impairment, then any base water right may be exercised to the extent that all of the following conditions are met:

- (a) The base water right is in priority.
- (b) The annual quantity of water authorized by the base water right has not been diverted during that calendar year.
- (c) The five-year allocation authorized by the term permit has not been used.
- (d) The use of water under the base water right does not impair water rights senior to the base water right. (Authorized by K.S.A. 82a-706a; implementing K.S.A. 82a-706a and K.S.A. 2001 Supp. 82a-736; effective Oct. 11, 2002.)

# Distribution of 2011 Drought Emergency Term Permits as of January 13, 2012

(Total of 1,950 Drought Term Permits Entered into WRIS)



Kansas Department of Agriculture  
 Division of Water Resources  
 Basin Management Team  
 January 13, 2012



**Proposed Allowable Flex Account Net  
Irrigation Requirement (NIR), October 6, 2011**

| <b>County</b> | <b>Proposed Flex Account NIR (Inches)*</b> |
|---------------|--|
| Allen         | 7.9  |
| Anderson      | 6.8  |
| Atchison      | 8.0  |
| Barber        | 14.0                                       |
| Barton        | 13.3                                       |
| Bourbon       | 7.6  |
| Brown         | 7.9  |
| Butler        | 10.2                                       |
| Chase         | 9.7  |
| Chautauqua    | 9.6  |
| Cherokee      | 7.8  |
| Cheyenne      | 15.2                                       |
| Clark         | 15.2                                       |
| Clay          | 10.2                                       |
| Cloud         | 11.4                                       |
| Coffey        | 7.6  |
| Comanche      | 14.4                                       |
| Cowley        | 10.8                                       |
| Crawford      | 7.8  |
| Decatur       | 14.1                                       |
| Dickinson     | 10.4                                       |
| Doniphan      | 8.1  |
| Douglas       | 7.6  |
| Edwards       | 14.4                                       |
| Elk           | 9.7  |
| Ellis         | 13.6                                       |
| Ellsworth     | 12.8                                       |
| Finney        | 16.1                                       |
| Ford          | 15.2                                       |
| Franklin      | 6.4  |
| Geary         | 9.3  |
| Gove          | 14.6                                       |
| Graham        | 13.8                                       |
| Grant         | 16.6                                       |
| Gray          | 15.3                                       |
| Greeley       | 16.3                                       |
| Greenwood     | 9.0  |
| Hamilton      | 16.9                                       |
| Harper        | 13.0                                       |
| Harvey        | 11.3                                       |
| Haskell       | 16.1                                       |
| Hodgeman      | 14.9                                       |
| Jackson       | 8.2  |

|              |      |
|--------------|------|
| Jefferson    | 7.8  |
| Jewell       | 11.8 |
| Johnson      | 7.3  |
| Kearny       | 16.6 |
| Kingman      | 13.0 |
| Kiowa        | 14.7 |
| Labette      | 8.1  |
| Lane         | 15.2 |
| Leavenworth  | 7.8  |
| Lincoln      | 12.6 |
| Linn         | 6.2  |
| Logan        | 15.4 |
| Lyon         | 8.3  |
| Marion       | 10.7 |
| Marshall     | 9.7  |
| McPherson    | 12.0 |
| Meade        | 15.9 |
| Miami        | 5.6  |
| Mitchell     | 12.0 |
| Montgomery   | 9.0  |
| Morris       | 9.4  |
| Morton       | 17.1 |
| Nemaha       | 8.7  |
| Neosho       | 7.9  |
| Ness         | 14.8 |
| Norton       | 13.7 |
| Osage        | 7.8  |
| Osborne      | 13.0 |
| Ottawa       | 11.7 |
| Pawnee       | 14.1 |
| Phillips     | 13.0 |
| Pottawatomie | 9.0  |
| Pratt        | 14.0 |
| Rawlins      | 14.7 |
| Reno         | 12.7 |
| Republic     | 11.1 |
| Rice         | 12.8 |
| Riley        | 9.4  |
| Rooks        | 13.3 |
| Rush         | 14.0 |
| Russell      | 12.6 |
| Saline       | 12.0 |
| Scott        | 15.6 |
| Sedgwick     | 11.9 |
| Seward       | 16.1 |
| Shawnee      | 8.2  |
| Sheridan     | 14.3 |

|            |      |
|------------|------|
| Sherman    | 15.7 |
| Smith      | 12.7 |
| Stafford   | 13.7 |
| Stanton    | 17.3 |
| Stevens    | 16.4 |
| Sumner     | 11.4 |
| Thomas     | 15.0 |
| Trego      | 14.3 |
| Wabaunsee  | 8.7  |
| Wallace    | 15.9 |
| Washington | 10.2 |
| Wichita    | 16.0 |
| Wilson     | 8.9  |
| Woodson    | 8.2  |
| Wyandotte  | 7.8  |

\*Allowable Flex Account NIR = 50% Chance  
Rainfall NIR with 90% Efficiency Factor