

Kansas Administrative Regulations

Kansas Department of Agriculture—Division of Water Resources

Article 3.—Appropriation Rights

5-3-11. Availability of water for appropriation—safe yield; unconfined groundwater aquifers.

(a) Each application to appropriate groundwater from an unconfined aquifer shall be processed in accordance with this regulation.

(b) To determine the safe yield available for appropriation from an unconfined aquifer at a specific location, the following procedure shall be used by the chief engineer:

(1) The amount of calculated recharge occurring within the area of consideration shall be determined by the chief engineer.

(2) That amount shall be multiplied by the percent of calculated recharge determined by the chief engineer to be available nondomestic groundwater and surface water for appropriation.

(3) The total quantity of water authorized and requested in the same area of consideration shall be subtracted from the number derived from paragraph (b)(2) above. If a water right or permit authorizes more than one point of diversion and not all of them are within the area of consideration, the authorized quantity shall be divided equally between or among all the points of diversion, unless information is available to more accurately distribute the authorized quantity between or among the multiple points of diversion.

(c) (1) If the quantity of water remaining is sufficient to satisfy the proposed application, then the safe yield criteria shall be deemed to have been met, unless there are other relevant factors that need to be taken into account in order to protect the public interest. The application shall then be processed according to other criteria in effect in that area.

(2) If there is sufficient water available to reasonably satisfy part of the request, then the application shall be approved for the quantity available if the remaining quantity is reasonable for the proposed use and the application meets the other applicable criteria in that area.

(3) If no water is available to satisfy the proposed application, then the application shall be denied by the chief engineer.

(d)(1) In making a safe yield calculation, unless the context clearly requires otherwise, the following words and phrases shall have the meanings ascribed to them:

(A) "Circle" means a circle with a two-mile radius, with the proposed point of diversion as the center.

(B) "Area of consideration" means the portion of the two-mile circle located within the limits of the unconfined aquifer expressed in acres, including any area of the circle located within the boundaries of a groundwater management district. The area of consideration shall not include any portion of the circle located outside the state of Kansas.

(C) "Total quantity of water" means the total combined authorized annual quantities under all groundwater rights and approvals of applications, and requested by pending applications with a senior priority in that unconfined aquifer except for domestic use, temporary permits, and term permits for five or fewer years with priority dates senior to the proposed application and with points of diversion located within the area of consideration.

(D) "Calculated recharge" means that portion of the average annual precipitation that becomes recharge to the unconfined aquifer, calculated using the data shown on water resources investigations report 87-4230, plate no. 4, dated 1987, prepared by the United States geological survey, hereby adopted by reference, interpolated to the nearest tenth of an inch, unless better or more specific recharge data for the area of consideration, basin, or aquifer is supplied by the applicant or is already available to the chief engineer.

(2) The calculated recharge in the Kansas river alluvium shall be determined by taking 25% of the average annual rainfall in the area of consideration as taken from

figure 2, United States geological survey water resources investigation report 92-4137, dated 1993, hereby adopted by reference, interpolated to the nearest 0.1 of an inch.

(3) For each application to appropriate groundwater from an unconfined aquifer filed on or after the effective date of this regulation, the percentages of calculated recharge that shall be considered to be available for appropriation shall be determined using the following table:

Percent of Calculated Recharge Available for Appropriation	River Basin
(A) 100% plus the recharge from the Missouri River available to the well, as calculated by a Jenkins or similar stream-depletion technique.	Missouri
(B) 100%	Arkansas River below Hutchinson * Big Blue River ** Black Vermillion River ** Delaware River ** Little Arkansas River below GMD No. 2 * Little Blue River ** Little Osage River ** Lower Republican River Basin outside the

effective
alluvium and
the Belleville
formation that
does not
contribute
significant
baseflow to a
stream **

Marais des
Cygnes River
**

Mill Creek **
Marmaton
River **
Nemaha
River **
Pottawatomie
Creek **
Smoky Hill
River below
its
confluence
with the
Saline River
**

Spring River *
Stranger
Creek **
Sugar Creek
**

Vermillion
Creek **
Wakarusa
River **
Walnut River
*

Any
hydrologic
unit that
does not
contribute
significant
baseflow to a
stream.

(C) 75%

Any
hydrologic
units in the
following river
basins that
contribute
significant
baseflow to a
stream:

Arkansas
River above
Hutchinson *
Caney River *
Cottonwood
River *
Cow Creek
outside the
boundaries of
GMD No. 2
and GMD No.
5*

**

Little
Arkansas
River above

GMD No. 2 *
Lower
Republican
River Basin
outside the
effective
alluvium and
the Belleville
formation that
contributes
significant
baseflow
to a stream. **
Neosho River

*

Ninnescah
River *
Saline River

**

Salt Creek **
Smoky Hill
above its
confluence
with the
Saline River

**

Solomon
River **
South Fork
Ninnescah
River
(except
Smoots
Creek) *

Upper
Republican
Basin

outside areas
closed to
new
appropriations
as set
forth in
paragraph
(d)(5)
of this
regulation. **
Verdigris
River *
Any other
basin in
Kansas
not
specifically
identified

(D) 50%

Any
hydrologic
units in the
following river
basins that
contribute
significant
baseflow to a
stream:
Bluff Creek-
Chikaskia
River *
Bluff Creek-
Cimarron
River *
Chikaskia
River *
Cimarron

River outside
 GMD No. 3 *
 Medicine
 Lodge River *
 North Fork
 Ninnescah
 River *
 Rattlesnake
 Creek *
 Salt Fork
 Arkansas
 River *
 Sandy Creek
 *
 South Fork
 Ninnescah
 River
 (Smoots
 Creek only) *

* Located in Arkansas River Basin

** Located in Kansas River Basin

(4) The total quantity of water and the percent of calculated recharge originally available to be appropriated for nondomestic groundwater and surface water use in all or part of the following basins, subbasins, stream reaches, and other hydrologic units identified in electronic data file unitbsn.e00, dated July 30, 1997, prepared by the division of water resources, Kansas department of agriculture and hereby adopted by reference for the purpose of defining the boundaries of the hydrologic units, shall be determined using the following table:

South-Central Kansas Designated Unit Areas

Map	Effective	Area	Recharge	Recharge	Percentage of	Original	General	Abbreviation for
Label	Date	(acres)	Rate	Quantity	Recharge	Quantities	Location	Portion of Basin
			(in/yr)	(Ac-ft/yr)	to	Available	(Twp.-Range)	or Basins
					Appropriat	(Ac-ft/yr)		

e

1	November 28, 1994	32204	1.8	4831	100%	4831	29-12w	Chikaskia
2	November 28, 1994	41426	1.8	6214	100%	6214	30-11w	Chikaskia
3	November 28, 1994	55524	1.8	8329	50%	4164	29-10w	Chikaskia
4	November 28, 1994	43603	1.8	6540	50%	3270	30-10w	Chikaskia
5	November 28, 1994	46828	2.0	7805	50%	3902	31-05w	Chikaskia
6	November 28, 1994	46895	2.5	9770	50%	4885	33-03w	Chikaskia
7	November 28, 1994	37378	3.0	9344	50%	4672	34-02w	Chikaskia
8	November 28, 1994	42210	3.0	10553	50%	5276	33-01w	Chikaskia
9	November 28, 1994	15145	2.0	2524	100%	2524	30-08w	Chikaskia
10	November 28, 1994	6855	2.0	1143	100%	1143	31-06w	Chikaskia
11	November 28, 1994	2824	2.0	471	100%	471	31-06w	Chikaskia
12	November 28, 1994	8548	2.0	1425	100%	1425	31-05w	Chikaskia
13	November 28, 1994	12165	2.0	2027	50%	1014	31-07w	Chikaskia
14	November 28, 1994	27213	2.0	4535	50%	2268	32-05w	Chikaskia
15	November 28, 1994	21101	1.5	2638	50%	1319	31-15w	Medicine Lodge
16	November 28, 1994	7489	1.5	936	50%	468	32-11w	Medicine Lodge
17	November 28, 1994	20516	1.5	2564	50%	1282	33-11w	Medicine Lodge
18	November	34426	1.5	4303	50%	2152	29-19w	Rattlesnake

	28, 1994							
19	November 28, 1994	25566	1.5	3196	50%	1598	29-18w	Medicine Lodge
20	November 28, 1994	56730	1.8	8509	100%	8509	29-14w	Medicine Lodge
21	November 28, 1994	41800	1.8	6270	50%	3135	30-12w	Medicine Lodge
22	November 28, 1994	15825	1.2	1582	50%	791	30-17w	Medicine Lodge
23	November 28, 1994	59864	1.5	7483	50%	3742	29-16w	Medicine Lodge
24	November 28, 1994	37658	1.5	4707	100%	4707	29-15w	Medicine Lodge
25	November 28, 1994	102144	1.9	16173	75%	12130	28-09w	SF Ninnescah
26	November 28, 1994	10638	2.0	1773	75%	1330	28-07w	SF Ninnescah
27*	Revision	84047	2.0	14008	50%	7004	26-07w	SF Ninnescah
28	November 28, 1994	5196	2.2	953	75%	714	28-04w	SF Ninnescah
29	November 28, 1994	73816	1.9	11688	100%	11688	28-07w	Chik/SFNin/Nin
30	November 28, 1994	38651	2.0	6442	100%	6442	30-05w	Chik/SFNin/Nin/Ark
31	November 28, 1994	5572	2.3	1068	100%	1068	31-04w	Chik/Ark
32	November 28, 1994	21937	2.0	3656	100%	3656	27-07w	SF Ninnescah
33	November 28, 1994	40646	2.5	8468	75%	6351	23-08w	Arkansas
34	November 28, 1994	41974	2.3	8045	75%	6034	24-08w	NF Ninnescah
35	November 28, 1994	3917	2.0	653	75%	490	26-08w	NF Ninnescah
36	November 28, 1994	12106	2.0	2018	75%	1513	27-10w	NF Ninnescah

37	November 28, 1994	8135	2.0	1356	75%	1017	26-08w	NF Ninnescah
38*	Revision	34550	1.2	3455	50%	1728	32-20w	Bluff Creek (Cim)
39	November 28, 1994	21875	1.2	2188	50%	1094	33-20w	Bluff Creek (Cim)
40	November 28, 1994	11466	1.2	1147	50%	573	33-20w	Bluff Creek (Cim)
41	November 28, 1994	8565	1.6	1142	50%	571	34-17w	Salt Fork Arkansas
42	November 28, 1994	3746	1.6	499	50%	250	33-15w	Salt Fork Arkansas
43	November 28, 1994	9763	1.6	1302	50%	651	34-15w	Salt Fork Arkansas
44	November 28, 1994	33060	1.8	4959	100%	4959	31-10w	Sandy Cr
45	November 28, 1994	3922	1.8	588	100%	588	33-09w	Sandy Cr
46	November 28, 1994	26959	1.8	4044	50%	2022	32-10w	Sandy Cr
47	November 28, 1994	41296	1.8	6194	50%	3097	34-09w	Sandy Cr
48	November 28, 1994	36364	1.9	5758	50%	2879	31-08w	Bluff Creek (Chik)
49	November 28, 1994	45511	2.0	7585	50%	3793	32-07w	Bluff Creek (Chik)
50	November 28, 1994	23546	2.3	4513	50%	2257	34-06w	Bluff Creek (Chik)
51	November 28, 1994	25608	2.7	5762	50%	2881	35-03w	Bluff Creek (Chik)
52	November 28, 1994	4460	1.9	706	100%	706	32-09w	Sandy Cr
53	November 28, 1994	17083	2.0	2847	100%	2847	33-08w	Sandy Cr/Bluf (Chik)
54	November 28, 1994	3845	2.0	641	50%	320	32-08w	Sandy Cr/Bluf (Chik)
55	July 5,	3582	1.2	358	50%	179	35-18w	Cimarron

	1996							
56	July 5, 1996	10967	1.2	1097	50%	548	35-19w	Cimarron
57	July 5, 1996	37387	1.2	3739	50%	1869	34-20w	Cimarron
58	July 5, 1996	3379	1.3	366	50%	183	33-21w	Cimarron
59	July 5, 1996	5885	1.3	638	50%	319	35-22w	Cimarron
60	July 5, 1996	14854	1.3	1609	50%	805	33-22w	Cimarron
61	July 5, 1996	34080	1.3	3692	50%	1846	34-22w	Cimarron
62	July 5, 1996	25419	1.3	2754	50%	1377	31-17w	Salt Fork
63	July 5, 1996	29813	1.3	3230	15%	484	32-17w	Salt Fork
64	July 5, 1996	90035	1.3	9754	50%	4877	31-18w	Salt Fork
65	July 5, 1996	35931	1.3	3893	50%	1946	31-19w	Bluff Creek
66	July 5, 1996	100983	1.3	10940	50%	5470	30-20w	Bluff-Rattlesnake
67	July 5, 1996	111132	1.2	11113	50%	5557	30-24w	Bluff-Crooked
68	July 5, 1996	12188	1.2	1219	50%	609	31-23w	Cimarron
69	July 5, 1996	5518	1.2	552	50%	276	31-24w	Cimarron
70	July 5, 1996	32689	1.2	3269	50%	1634	32-25w	Cimarron
71	July 5, 1996	94734	1.3	10263	50%	5131	32-26w	Cim-Crooked
72	July 5, 1996	44833	1.3	4857	50%	2428	33-27w	Cim-Crooked
73	July 5,	50088	1.3	5426	50%	2713	34-27w	Cim-Crooked

	1996							
74	July 5, 1996	25210	1.3	2731	50%	1366	35-27w	Cim-Crooked
75	July 5, 1996	103816	1.3	11247	50%	5623	34-24w	Cim-Crooked
76	July 5, 1996	23296	1.2	2330	50%	1165	30-22w	Bluff-Rattlesnake
77	July 5, 1996	27666	1.2	2767	50%	1383	32-15w	Salt-Medicine
78	July 5, 1996	5261	1.2	526	100%	526	35-13w	Salt Fork
79	July 5, 1996	8249	1.8	1237	50%	619	31-12w	Medicine

* Revision is effective the date of this regulation.

(5) The following hydrologic units, which have been determined by the chief engineer to be fully appropriated based on the safe yield criteria, shall be closed to further new surface water and groundwater appropriations except for domestic use, temporary permits, and term permits for five years or less:

(A) Big Creek, its tributaries and their valley alluviums, and any other aquifer that has a substantial hydraulic connection to an alluvium;

(B) Beaver Creek and Little Beaver Creek, their tributaries and their alluviums, and any other aquifer that has a substantial hydraulic connection to an alluvium;

(C) North Fork Solomon River, its tributaries and their alluviums, and any other aquifer that has a substantial hydraulic connection to an alluvium;

(D) Prairie Dog Creek, its tributaries and their alluviums, and any other aquifer that has a substantial hydraulic connection to an alluvium;

(E) Sappa Creek, its tributaries and their alluviums , and any other aquifer that has a substantial hydraulic connection to an alluvium;

(F) South Fork of the Solomon River, its tributaries and their alluviums above Glen Elder Dam, and any other aquifer that has a substantial hydraulic connection to an alluvium;
and

(G) Walnut Creek, its tributaries and their alluviums, and other hydraulically connected aquifers outside the boundaries of the intensive groundwater use control area created by order of the chief engineer shall be those set forth below:

Section	Township	Range	County
28 through 33	18S	23W	Barton
4 through 10 and 14 through 36	18S	14W	Barton
1 through 36	18S	25W	Barton
3 through 11 and 14 through 23	29S	13W	Barton
1 through 6, 9 through 15, and 22 through 24	29S	14W	Barton
1	19S	15W	Barton
31 through 35	17S	16W	Rush
19 through 36	17S	17W	Rush
19 through 36	17S	18W	Rush
23 through 26 and 31 through 36	17S	19W	Rush
35 and 36	17S	20W	Rush
1 through 36	18S	16W	Rush
1 through 36	18S	17W	Rush
1 through 36	18S	18W	Rush
1 through 36	18S	19W	Rush
1 through 36	18S	20W	Rush
3 through 6	19S	16W	Rush
1 through 6	19S	17W	Rush
1, 2, 11, and 12	19S	20W	Rush
32 through 34	17S	25W	Ness
1 through 36	18S	21W	Ness
1 through 4 and 7 through 36	18S	22W	Ness
19, 25 through 36	18S	23W	Ness
23 through 27, 35, and 36	18S	24W	Ness
1 through 5, 10 through 13, 24, 33, and 34	28S	25W	Ness
4 through 9	19S	21W	Ness
1 through 12, 17 and 18	19S	22W	Ness

1 through 23	19S	23W	Ness
1, 2, and 7 through 29	19S	24W	Ness
1 through 3 and 11 through 13	19S	25W	Ness

(6) "Technical guidelines for determining the availability of groundwater for appropriation in the Lower Republican River Basin and Belleville Formation and the availability of surface water for appropriation in the Lower Republican River Basin," adopted by the chief engineer, division of water resources, Kansas department of agriculture, on October 1, 1999, is hereby adopted by reference as determining the availability of groundwater for appropriation in the lower Republican River basin and Belleville formation and the availability of surface water for appropriation in the lower Republican River basin.

(7) (A) All applications for a permit to appropriate groundwater from the area described in paragraph (7) (B) for any beneficial use, except for domestic use, temporary permits, and short-term permits for five or fewer years, shall be accepted for filing and given a file number, if acceptable for filing. The application shall be returned by the chief engineer, and the reason that the application will be denied shall be specified by the chief engineer. The applicant shall be given 30 days to show cause why the application should not be denied. If the applicant does not show good cause, the application shall be dismissed.

(B) The area is described as sections 17, 18, 19, 20, township 7 south, range 6 west, and sections 13, 14, township 7 south, range 7 west, all in Mitchell County, Kansas.

(C) All applications for permits to appropriate groundwater from sections 29 and 30 in township 7 south, range 6 west, and sections 12, 15, 16, 21, 22, 23, 24, 25, 26, and 27 in township 7 south, range 7 west, all in Mitchell County, Kansas, for any beneficial use, except for domestic use, temporary permits, and term permits for five or fewer years, shall be processed based on the criteria set forth below in paragraph (7) (D).

(D) No new wells shall be allowed in the area described in paragraph (7) (C) above if the proposed well would produce one foot or more of additional drawdown at any existing well in that area and if the proposed well was pumped continuously for 45 days (1,080 hours) at the rate requested on the application. This analysis shall be done by

using the Theis equation, with a coefficient of transmissivity of 71,000 gallons per day per foot (gpd/ft) and a coefficient of storage of 0.02.

(E) Any application for a change in the point of diversion filed for a well located in the areas described in paragraphs (7) (B) and (C) above shall be limited to a move of no more than 100 feet, unless the applicant can show the chief engineer that the proposed move will not prejudicially and unreasonably affect the public interest, will not impair existing water rights, and otherwise complies with the provisions of K.S.A. 82a-708b, and amendments thereto.

(Authorized by K.S.A. 82a-706a; implementing K.S.A. 1999 Supp. 82a-711; effective Nov. 28, 1994; amended Sept. 22, 2000.)

***** Authenticated Kansas Administrative Regulation *****