

KANSAS

DEPARTMENT OF AGRICULTURE
ADRIAN J. POLANSKY, SECRETARY

KATHLEEN SEBELIUS, GOVERNOR

KANSAS DEPARTMENT OF AGRICULTURE CERTIFICATE OF ADOPTION

I, David L. Pope, Chief Engineer, Division of Water Resources, Kansas Department of Agriculture, hereby certify the following:

1. That I am authorized to adopt, amend, and revoke regulations pursuant to the Kansas Water Appropriation Act, K.S.A. 82a-701 et seq.

2. That I hereby file, the following documents, with this certificate:

a. The original and two copies of the stamped and approved copies of the following regulations:

K.A.R. 5-23-1

K.A.R. 5-23-3

K.A.R. 5-23-3a

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b. The amended economic impact statement.

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c. The public hearing sign in sheet.

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3. That with due notice a public hearing was held concerning the above regulations at 10:00 a.m. on Wednesday, January 14, 2004 at 409 Campus Drive, Suite 106, Garden City, Kansas.

4. That the above regulations and amendments are hereby adopted as permanent regulations.

IN TESTIMONY WHEREOF, I have set my hand this 30th day of January, 2004.



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

Division of Water Resources David L. Pope, Chief Engineer

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K.A.R. 5-23-1. Definitions. As used in these rules and regulations, by the southwest Kansas groundwater management district in the implementation of the groundwater management district act, and by the division of water resources in the administration of the Kansas water appropriation act and the groundwater management district act, unless the context clearly requires otherwise, the following words and phrases shall have the meanings ascribed to them in this regulation. (a) ~~"Alluvial aquifer" means an aquifer comprised of unconsolidated materials, usually gravel, sand, silt, and clay, that have been deposited by running water in comparatively recent geologic time.~~

~~(b) "Alluvium" means the gravel, sand, silt, and clay and similar unconsolidated material deposited in comparatively recent geologic time by a stream or other body of running water as a sorted or semisorted sediment in the bed of the stream or on its floodplain or delta.~~

~~(c) "Area of consideration" means a two-mile radial area measured in acres, with its center being the proposed well withdrawing water from the high plains aquifer, but limited to the area within the district's boundaries.~~

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(d) ~~"Confined aquifer" means an aquifer overlain and underlain by impermeable layers.~~ Groundwater in a confined aquifer is normally under pressure greater than atmospheric pressure.

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~~(e) "Consolidated aquifer" means an aquifer comprised of particles cemented by heat, pressure, or chemical reaction, or any combination of these, into a solid mass.~~

~~(f) "Dakota aquifer system" means the Dakota aquifer system as defined in K.A.R. 5-1-1.~~

(g) (b) "High plains aquifer" means the aquifer comprised of the undifferentiated Pleistocene-age deposits, Quaternary loess, alluvium, dune sand, the Ogallala formation, and deeper aquifers that are in vertical or horizontal hydraulic contact with the Ogallala formation.

(h) (c) "Hydraulic contact" means the absence of an impermeable layer between aquifers.

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~~(i) "Ogallala aquifer" means the water-bearing portion of the Ogallala formation.~~

~~(j) "Ogallala formation" means the geological unit of the Miocene-Pliocene age, comprised of interbedded sorted clay, silt, sand, and gravel.~~

~~(k) "Section" means a one-mile square unit in the United States land survey, generally consisting of 640 acres.~~

~~(l) "Township" means a unit of territory in the United States land survey, generally six miles square, containing 36 mile-square sections.~~

(d) "Theis analysis" means the Theis non-equilibrium equation analysis described in pp. 108-113 in "ground water and wells: a reference book for the water-well industry," published in 1966 by Edward F. Johnson, Inc. The pages specified in this subsection are hereby adopted by reference.

~~(m) (c) "Unconfined aquifer" means an aquifer in which the groundwater is exposed to the atmosphere through openings in the overlying materials. The upper surface of an unconfined aquifer is the water table.~~

~~(n) "Unconsolidated aquifer" means an aquifer comprised of deposits derived from the disintegration of consolidated materials, including clay, silt, sand, gravel, and caliche.~~

~~(o) "Water conservation plan" means a plan required by the chief engineer in accordance with the provisions of K.S.A. 82a-733 and K.S.A. 74-2608(c), and amendments thereto, and consistent with the water conservation planning guidelines and municipal water conservation plan guidelines adopted by the Kansas water office.~~

~~(p) "Water table" means the top of the saturated zone of an unconfined aquifer. It is the~~

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~~upper surface of the underground materials where particle pore space is filled with water. The water is at atmospheric pressure.~~

(q) (f) "Well" means any artificial excavation that is drilled, cored, bored, washed, driven, dug, or otherwise constructed when the intended use of the excavation is for the acquisition, diversion, or artificial recharge of groundwater. (Authorized by K.S.A. 82a-706a and K.S.A. 2002 Supp. 82a-1028(o); implementing K.S.A. 82a-706a and K.S.A. 2002 Supp. 82a-1028(n); effective May 1, 1981; amended May 1, 1985; amended Sept. 22, 2000; amended P-

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K.A.R. 5-23-3. Minimum well spacing requirements: high plains aquifer. (a) ~~Unless a well is being replaced within 300 feet of the currently authorized point of diversion, (1)The minimum horizontal distance between each proposed nontemporary, nondomestic well and all other senior nontemporary, nondomestic wells diverting water from the high plains aquifer shall be determined from the following schedule. The minimum well spacing shall be based on the maximum annual quantity of water in acre-feet either authorized and requested for the proposed well, or authorized and requested by a senior application, permit, or water right for the nontemporary, nondomestic well to which the spacing is being measured, whichever is greater.~~

Quantity per well (acre-feet per year)	Minimum well spacing requirement
15 or less	660 feet
16 - 200	1,300 feet
201 - 300	1,600 feet
301 - 400	1,900 feet
401 - 500	2,100 feet
more than 500	2,300 feet

(2) The minimum well spacing requirement shall be based on the maximum annual quantity of water. The required well spacing shall be the greater of either of the following:

(A) The minimum spacing for the total authorized and requested quantity of water for the proposed well; or

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(B) the total authorized and requested annual quantity of water for the nontemporary, nondomestic well against which the spacing is being measured that is senior to the date on which the application was filed. If the quantity of water applied for includes a fraction of an acre-foot, the quantity of water shall be rounded down to the next whole number of acre-feet for the purpose of applying the table in this subsection.

(b) The location of a well or wells on an application for approval to change the point of diversion under an existing water right shall be no more than 2,640 feet from the currently authorized and completed point of diversion and shall meet either of the following conditions:

~~(1) Not decrease the distance to other wells or authorized well locations by more than 300 feet; or~~

~~(2) meet the minimum well spacing requirements;~~

(c) A well shall be exempt from the minimum well spacing requirements of this regulation if the well meets either of the following conditions:

(1) The well is being replaced within 300 feet of the currently authorized point of diversion.

(2) The proposed replacement well location improves the spacing to all other wells for which the spacing requirement was not met on the date on which the application for a change in point of diversion was filed and continues to meet requirements for spacing to all wells for which the spacing requirement was met at the time the application for change in point of diversion was filed.

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(d) No application for approval to change the point of diversion under an approved application for which the original well has not been drilled shall be approved if the location of the proposed point of diversion decreases the distance from the approved location to any other existing wells to less than the spacing requirement for new applications.

(e) Each nondomestic, nontemporary well shall be located a minimum of 660 feet from all domestic wells with a priority earlier than the date on which the change application was filed, except those owned by the applicant unless all of the following conditions are met:

(1) The domestic well is owned by the applicant.

(2) The applicant signs a written request to waive the requirements for spacing to the domestic well.

(3) The applicant submits information documenting the location and depth of the domestic well and any other information necessary for the chief engineer to determine whether the domestic well is likely to be impaired.

(4) A Theis analysis or other hydraulic analysis shows that the domestic well is not likely to be impaired by the proposed well.

(f) In the case of a battery of wells, as defined in K.A.R. 5-1-1, the minimum horizontal distance shall be measured from the geographic center of the wells comprising the battery. **RECEIVED
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(g) The total annual quantity per well shall be the sum of all of the quantities authorized or requested by any water rights, permits, or applications requesting or authorizing that well as a point of diversion. (Authorized by K.S.A. 82a-706a and K.S.A. 2002 Supp. 82a-

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1028(o): implementing K.S.A. 82a-706a, K.S.A. 2002 Supp. 82a-711, K.S.A. 2002 Supp. 82a-708b, and K.S.A. 82a-1028(n); effective May 1, 1981; amended May 1, 1985; amended Aug. 28, 1989; amended Sept. 30, 1991; amended Sept. 22, 2000; amended P.
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K.A.R. 5-23-3a. Minimum well spacing requirements: confined aquifers. (a) (1) The minimum horizontal distance between each proposed nontemporary, nondomestic well and all other senior nontemporary, nondomestic wells diverting water from a confined aquifer shall be determined based on from the following schedule. ~~The minimum well spacing shall be based on the maximum annual quantity of water in acre-feet either requested by the proposed well, or authorized or requested by a senior applicant, permit, or water right for the nontemporary, nondomestic well to which the spacing is being measured, whichever is greater.~~

Quantity per well (acre-feet per year)	Minimum well spacing requirement	Required distance from hydraulic contact point
15 or less	660 feet	None <u>2,640 feet</u>
16 to 25	2,300 feet	None <u>1 mile</u>
26 to 100	5,280 feet	2 miles
More than 100	10,560 feet	5 miles

~~The minimum horizontal distance between a nontemporary, nondomestic well withdrawing water from a confined aquifer and a well withdrawing water from an unconfined aquifer shall be 300 feet.~~

~~Each nondomestic, nontemporary well shall be located a minimum of 660 feet from all earlier priority domestic wells, except those owned by the applicant.~~

(2) The minimum well spacing requirement shall be based on the authorized maximum annual quantity of water. The well spacing requirement shall be the greater of either of the following:

(A) The minimum spacing for the total authorized and requested annual quantity of water

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of the proposed well; or

(B) the total authorized and requested quantity of water for nontemporary, nondomestic well against which spacing is being measured that is senior to the date on which the application was filed.

The total annual quantity of water per well shall be the sum of all of the quantities authorized or requested by any water rights, approvals of applications, or applications requesting or authorizing that well as a point of diversion.

If the quantity of water applied for includes a fraction of an acre-foot, the quantity of water shall be rounded down to the next whole number of acre-feet for the purpose of applying the table in this subsection.

~~(b) A proposed nontemporary, nondomestic well shall maintain a minimum horizontal distance to the nearest known point of hydraulic contact with the high plains aquifer, in accordance with the schedule set forth in subsection (a):~~

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(c) In the case of a battery of wells, as defined in K.A.R. 5-1-1, the minimum horizontal distance shall be measured from the geographic center of the wells comprising the battery.

~~(d)~~ (c) A well penetrating both a confined and unconfined aquifer shall be constructed to prevent the vertical migration of water between the aquifers. A well diverting water from the Dakota aquifer system shall be constructed to prevent the vertical migration of water between the Dakota aquifer system and all other freshwater aquifers.

~~(e)~~ (d) The location of a well or wells on an application for approval to change the point

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of diversion under an existing water right shall be no more than 2,640 feet from the currently authorized and completed point of diversion ~~and shall meet either of the following conditions:~~

~~(1) Not decrease the distance to other wells or authorized well locations by more than 300~~

~~feet, or~~

~~(2) meet the minimum well spacing requirements.~~

(c) A well shall be exempt from the minimum well spacing requirements of this

regulation if the well meets either of the following conditions:

(1) The well is being replaced within 300 feet of the currently authorized point of

diversion.

(2) The proposed replacement well location improves the spacing to all other wells for

which the spacing requirement was not met on the date on which the application for a change in

point of diversion was filed and continues to meet requirements for spacing to all wells for which

the spacing requirement was met at the time the application for change in point of diversion was

filed.

(f) No application for approval to change the point of diversion under an approval of

application for which the original well has not been drilled shall be approved if the location of

the proposed point of diversion decreases the distance from the approved location to any other

existing wells to less than the spacing requirements for a new application.

(g) Each nondomestic, nontemporary well shall be located a minimum of 1,320 feet from

all domestic wells in the same or a hydraulically connected aquifer with a priority earlier than the

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date on which the change application was filed, unless all of the following conditions are met:

(1) The domestic well is owned by the applicant.

(2) The applicant signs a written request to waive the requirements for spacing to the domestic well.

(3) The applicant submits information documenting the location and depth of the domestic well and any other information necessary for the chief engineer to determine whether the domestic well is likely to be impaired.

(4) A Theis analysis or other hydraulic analysis shows that the domestic well is not likely to be impaired by the proposed well.

(h) The minimum horizontal distance between a nontemporary, nondomestic well withdrawing water from a confined aquifer and a well withdrawing water from an unconfined aquifer shall be 660 feet. (Authorized by K.S.A. 82a-706a and K.S.A. 2002 Supp. 82a-1028(τ); implementing K.S.A. 82a-706a, K.S.A. 2002 Supp. 82a-711, K.S.A. 2002 Supp. 82a-708b, and K.S.A. 2002 Supp. 82a-1028(π); effective Sept. 22, 2000; amended P-

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