

Abandoned and Inactive Water Wells Rules and Regulations
Equus Beds Groundwater Management District No. 2
Kansas Department of Health and Environment
Effective September 30, 2005

28-30-200. Definitions.

In addition to the definitions in K.A.R. 28-30-2, the following definitions shall apply to the Equus Beds groundwater management district no. 2:

- (a) "Bedrock" means shale, limestone, sandstone, siltstone, anhydrite, gypsum, salt, or other consolidated rock that can occur at the surface or underlie unconsolidated material.
- (b) "Board" means the board of directors constituting the governing body of the Equus Beds groundwater management district no. 2.
- (c) "Borehole" means any hole that is drilled, cored, bored, washed, driven, dug, or otherwise excavated, in which the casing and screen have been removed or in which the casing has not been installed.
- (d) "Contaminate" means to engage in any act or omission causing the addition or introduction of substances to freshwater in concentrations that alter the physical, chemical, biological, or radiological properties of the freshwater, making the water unfit for beneficial use.
- (e) "District" means the Equus Beds groundwater management district no. 2, which is organized for groundwater management purposes pursuant to K.S.A. 82a-1020 et seq., and amendments thereto.
- (f) "Fluid" means any material or substance that flows or moves in a semisolid, liquid, sludge, gas, or any other form or state.
- (g) "Free-fall" means a method used to place grout in a water well or borehole that meets all of the following conditions:
 - (1) The total grouting depth below ground level does not exceed 75 feet.
 - (2) The grouting interval is free of fluids.
 - (3) The diameter of the water well casing or borehole is sufficient to allow the unobstructed flow of grout throughout the entire grouting interval.
 - (4) Grout is poured or discharged into the water well or borehole at a controlled rate.
- (h) "Fresh groundwater" means water containing not more than 1,000 milligrams of total dissolved solids per liter and 500 milligrams of chloride per liter.
- (i) "Grout" has the meaning specified in K.A.R. 28-30-2.
- (j) "Grout seal" means grout that is installed, placed, pumped, or injected to create a permanent, impervious watertight bond in a well casing, annular space, geologic unit, or any other apertures or apparatuses associated with a water well or borehole.
- (k) "Inactive well" means a water well that meets the following conditions:
 - (1) Is not operational;
 - (2) is properly constructed as specified in K.A.R. 28-30-5 or K.A.R. 28-30-6;
 - (3) is equipped with a watertight seal; and

(4) is maintained in good repair until the water well is returned to service as an active water well.

(l) “Licensed geologist” means a geologist licensed to practice geology in Kansas by the Kansas board of technical professions.

(m) “Licensed professional engineer” means a professional engineer licensed to practice engineering in Kansas by the Kansas board of technical professions.

(n) “Monitoring well” means a water well used to monitor, obtain, or collect hydrologic, geologic, geophysical, chemical, or other technical data pertaining to groundwater, surface water, or other hydrologic conditions.

(o) “Test borehole” means a borehole used to obtain or collect hydrologic, geologic, geophysical, chemical, or other technical data pertaining to groundwater, surface water, or other hydrologic conditions by means of placing sampling, logging, testing, casing, screen, or associated tools or equipment in the borehole for fewer than 30 days. (Authorized by and implementing K.S.A. 2004 Supp. 82a-1028 and K.S.A. 82a-1213; effective P-September 30, 2005)

28-30-201. Plugging operations; notification; report.

(a) All plugging operations shall be supervised by one of the following:

- (1) A water well contractor licensed by the department;
- (2) a licensed professional engineer or licensed geologist; or
- (3) the water well or borehole owner, or the landowner of the property on which the water well or borehole is located.

(b) Each water well or borehole owner, or the landowner of the property on which the water well or borehole is located, shall notify the district within 48 hours before any plugging operations occur.

(c) Within 30 days after the plugging operation is completed, one of the following requirements shall be met:

(1) The water well contractor, licensed professional engineer, or licensed geologist that supervised the water well or borehole plugging operations shall submit a completed report of the work on the department’s plugging record form WWC-5P or WWC-5 to the department, the district, and the landowner.

(2) The water well or borehole owner, or the landowner of the property on which the water well or borehole is located, shall submit a completed report of the work on the department’s plugging record form WWC-5P or WWC-5 to the department and the district. (Authorized by and implementing K.S.A. 2004 Supp. 82a-1028 and K.S.A. 82a-1213; effective P-September 30, 2005)

28-30-202. Plugging operations for an abandoned water well or borehole; responsibility.

(a) Each water well or borehole shall be considered abandoned if at least one of the following conditions exists:

- (1) The water well or borehole was not completed.
- (2) The water well or borehole threatens to contaminate fresh groundwater.

- (3) The water well or borehole poses a safety or health hazard.
 - (4) Uncontrolled fluid flow is encountered or present in the water well or borehole.
 - (5) The use of the water well or borehole has ceased.
 - (6) The borehole testing, sampling, or other operations are completed within 30 days of completion of the borehole drilling.
 - (7) The water well or borehole owner has not demonstrated the intention to use the water well or borehole.
 - (8) The water well can not be maintained in an active or inactive status.
 - (9) The water well or borehole is not operational or functional for the intended use.
- (b) Each water well or borehole owner or the landowner of the property shall plug or cause an abandoned water well or borehole to be plugged as required in subsection (c) of this regulation.
- (c) Except as specified in subsection (e), the minimum plugging operations for an abandoned water well or borehole shall include the following:
- (1) Before plugging operations begin, the following water well or borehole data shall be recorded as follows:
 - (A) The legal description of the water well or borehole location, to the nearest 10-acre tract and, if available, the geographic coordinates consisting of the latitude, longitude, and base datum;
 - (B) the diameter of the water well or borehole;
 - (C) the static water level; and
 - (D) the total depth of the water well or borehole.
 - (2) The materials used to plug a water well or borehole shall be clean, free of defects, properly prepared, and installed according to the manufacturer's specifications.
 - (3) All plugging material that forms a bridge, entraps air or other fluids, or forms a blockage in the water well or borehole shall be freed or removed before continuing plugging operations.
 - (4) All pumping, sampling, logging, and related equipment and any other material or debris in the water well or borehole shall be removed from the water well or borehole.
 - (5) The annular space of the water well shall be grouted as specified in K.A.R. 28-30-203.
 - (6) Before plugging operations begin and when plugging operations are suspended or interrupted, the opening of the water well or borehole shall be secured to prevent fluids from entering the water well or borehole.
 - (7) Before placement of any plugging material, the water well or borehole shall be disinfected as specified in K.A.R. 28-30-205.
 - (8) Except as specified in subsection (d) of this regulation, all of the following minimum grouting requirements shall be met:
 - (A) The water well or borehole shall be grouted from the bottom to three feet below ground level.
 - (B) Each water well meeting the requirements of subsection (d) shall be grouted from the top of the sand or gravel plugging material to three feet below ground level.
 - (C) Grout shall be placed in the water well or borehole using one of the following:
 - (i) A grout tremie pipe;
 - (ii) free-fall; or
 - (iii) a grouting procedure recommended by the grout manufacturer.

- (D) Grout shall be allowed to cure as recommended by the grout manufacturer.
- (9) Except as required by K.A.R. 28-30-203, the water well casing shall be cut off at a minimum of three feet below land surface and removed.
- (10) From three feet below land surface to land surface, the water well or borehole shall be backfilled with clean, compacted topsoil and sloped so that drainage or runoff is directed away from the plugged water well or borehole.
- (d) Any water well or borehole owner, landowner of the property, water well contractor, licensed geologist, or licensed professional engineer may utilize coarse sand or fine gravel to plug a water well by filling the water well casing to the static water level or six feet below ground level, whichever is the greater distance below ground level, if both of the following water well conditions are present:
 - (1) The water well is cased.
 - (2) The water well is completed in a single unconfined aquifer.
- (e) Drill cuttings from the original borehole may be used to plug a borehole that meets all of the following conditions:
 - (1) The depth of the borehole is less than the highest historical groundwater level.
 - (2) The depth of the borehole is 25 feet or less below ground level.
 - (3) The borehole is not located in a contaminated area. (Authorized by and implementing K.S.A. 2004 Supp. 82a-1028 and K.S.A. 82a-1213; effective P-September 30, 2005)

28-30-203. Annular space grouting procedures.

- (a) Each water well or borehole owner or landowner of the property with an abandoned water well that was constructed on or after May 1, 1983 shall have the water well's annular space grouted as follows:
 - (1) From three feet below ground level to a minimum of 20 feet below ground level; or
 - (2) below the point at which a pitless well adapter attaches to the well casing to a minimum of 20 feet below the pitless well adapter.
- (b) The annular space of each abandoned water well in which the water well was constructed before May 1, 1983 shall be grouted as follows:
 - (1) If the annular space does not contain grout or gravel pack and is free of debris, the grout shall be placed in the annular space in the following manner:
 - (A) From three feet below ground level to 20 feet below ground level; or
 - (B) below the point at which a pitless well adapter attaches to the well casing to a minimum of 20 feet below the pitless well adapter.
 - (2) If the annular space contains gravel pack or other material, all of the following requirements shall be met:
 - (A) The well casing shall be removed to a depth of four feet below ground level.
 - (B) The annular space shall be freed of gravel pack, any other material, and fluid from the top of the casing to six feet below the top of the well casing.
 - (C) The grout shall be placed in the annular space from six feet below the top of the well casing to one foot above the top of the well casing.

(c) From three feet below ground level to ground level, the water well or borehole shall be backfilled with clean, compacted topsoil and sloped so that the drainage or runoff is directed away from the plugged water well or borehole.

(d) If groundwater is encountered at a depth less than the minimum grouting requirement, the annular space grouting requirement may be modified by requesting a variance from the district as specified in K.A.R. 28-30-208. (Authorized by and implementing K.S.A. 2004 Supp. 82a-1028 and K.S.A. 82a-1213; effective P-September 30, 2005)

28-30-204. Inactive well; application; construction and extension.

(a) Each owner of an inactive water well shall meet the following requirements:

(1) Submit a completed, signed, and notarized inactive water well agreement, on a form provided by the district, to the district manager 30 days before placing the well on inactive status. The form shall include a statement that the water well does not pose a public health or safety hazard and does not threaten to contaminate the groundwater;

(2) remove all pumping equipment from the water well;

(3) construct the water well and the annular space as specified in K.A.R. 28-30-6;

(4) seal and maintain the water well and the annular space to prohibit the entrance of surface fluids and materials and the vertical movement of subsurface water into the well and to prevent damage;

(5) post a sign that meets the following conditions within three feet of the water well:

(A) Has a minimum height of three feet above land surface;

(B) is easily visible;

(C) is continually maintained; and

(D) is constructed with the words "Inactive Water Well" and a legal description consisting of the 10-acre tract, section, township, and range description printed legibly; and

(6) securely install a watertight seal or cap on the water well casing opening a minimum of one foot above land surface that consists of one of the following:

(A) Steel plating that is a minimum of 1/4 inch thick and is welded to the casing opening;

(B) a polyvinylchloride cap glued to the water well casing opening, with a minimum standard dimension ratio (SDR) of 21 or less on well casing less than four inches in diameter and a minimum SDR of 26 or less on well casing four or more inches in diameter. The SDR shall be calculated by dividing the casing's outside diameter (OD) by its minimum wall thickness (MWT); or

(C) any other seal or cap that is approved by the district manager.

(b) Each water well owner shall repair all damage to the water well within 30 days, unless the district manager determines that the water well poses a public health or safety hazard, in which case the district manager shall set the time period for fewer than 30 days.

(c) Each water well owner shall notify the district within 30 days after the water well is returned to service as an active water well.

- (d) The district manager or a staff member of the district may inspect any inactive water well.
- (e) Each water well owner shall be responsible for properly maintaining the water well in the inactive status.
- (f) A radius of 50 feet around the inactive well shall be free of contamination.
- (g) An inactive water well shall not be used for disposal or injection of any fluids or materials.
- (h) Each inactive water well shall be easily accessible for routine maintenance and inspection.
- (i) Each water well owner shall notify the district manager of any change in the condition of the water well.
- (j) Each inactive water well that does not meet the requirements of these regulations shall be deemed abandoned and shall be plugged in accordance with these regulations.
- (k) The expiration date of the inactive water well period may be extended beyond the date authorized in the approved inactive water well agreement or the date of any extension authorized by the district manager, if the water well is in good repair and meets the requirements of these regulations. The extension of time shall not exceed one year beyond the expiration date of the inactive well agreement or the date of any authorized extension.
- (l) Each approved inactive water well request and each approved extension of time shall be reported by the district to the department, in writing, within 30 days of approval on a form provided by the district. (Authorized by and implementing K.S.A. 2004 Supp. 82a-1028 and K.S.A. 82a-1213; effective P-September 30, 2005)

28-30-205. Disinfection of an abandoned water well or borehole.

(a) Except as specified in subsection (b), the following minimum quantities of sodium hypochlorite with 5.25 percent to 6.0 percent strength, manufactured under trade names including Clorox, Purex, Sno-White, and Topco, and other bleach products with similar properties, shall be used to disinfect each abandoned water well or borehole:

Well casing or hole diameter (inches)	Sodium Hypochlorite (fluid ounces per foot of water column)
1.25	0.015
1.5	0.023
2	0.041
2.5	0.064
3	0.094
3.5	0.127
4	0.165
5	0.259
6	0.381
8	0.660
10	1.036
12	1.490
14	2.031
16	2.650
18	3.354
24	5.966
30	9.317

(b) Any concentration of sodium hypochlorite not specified in subsection (a) or any combination of calcium hypochlorite may be used to disinfect an abandoned water well or borehole, if a minimum concentration of 100 milligrams of chlorine solution per liter per foot of water column in the water well or borehole is produced. (Authorized by and implementing K.S.A. 2004 Supp. 82a-1028 and K.S.A. 82a-1213; effective P-September 30, 2005.)

28-30-206. Administrative appeal to the board.

(a) Any owner of a water well or borehole or any person whose legal rights, duties, privileges, immunities, or other legal interests are affected by an order issued by the district may request an appeal hearing with the board.

(b) The request for hearing shall be filed with the board within 30 days after service of the order on the owner or owners of the water well or borehole or any person whose legal rights, duties, privileges, immunities, or other legal interests are affected by the order. The request for hearing shall state the basis for requesting a hearing and shall be accompanied by documentation supporting the request.

(c) During the hearing, the board may take into consideration any relevant information or data, including information and data from any person whose legal rights, duties, privileges, immunities, or other legal interests may be affected by the order.

(d) After consideration of all information and data presented, the board shall issue one of the following:

- (1) An order remanding the case to the district manager with instructions for additional investigation; or
- (2) a final order that contains findings of fact and conclusions of law.

(e) Within 15 days of the service of a final order, the owner or owners of the water well or borehole or any person whose legal rights, duties, privileges, immunities, or other legal interests are affected may file a written petition for reconsideration to the board. The petition for reconsideration shall state the basis and contain any facts and conclusions of law that are in dispute.

(f) The board shall render a written order denying the petition for reconsideration, granting the petition for reconsideration and modifying the final order, or granting the petition for reconsideration and setting the matter for further proceedings. After further proceedings, the petition for reconsideration may be denied or granted in whole or in part.

(g) Unless clear and convincing evidence is presented to the board, the board shall not render a written order if the order would result in any of the following:

- (1) The impairment of an existing groundwater use;
- (2) an adverse effect on public health, safety, or the environment;
- (3) the threat of groundwater contamination;
- (4) an adverse effect on the public interest; or
- (5) the impairment of the board's ability to apply and enforce these regulations or the management program specified in K.S.A. 82a1029, and amendments thereto.

(h) Any owner or owners or any person whose legal rights, duties, privileges, immunities, or other legal interests are affected by a final order or order rendered upon reconsideration may seek judicial review pursuant to the act for judicial review and civil enforcement of agency actions specified in K.S.A. 77-601 et seq., and amendment thereto.

(i) Each order issued by the board shall be mailed to the owner or owners; any person whose legal rights, duties, privileges, immunities, or other legal interests are affected by the order; and the department. Service shall be deemed complete upon mailing. (Authorized by and implementing K.S.A. 2004 Supp. 82a-1028; effective P-September 30, 2005)

28-30-207. Variance; extension of time.

(a) If an individual or party wants a variance from any of the regulations contained in K.A.R. 28-30-200 through K.A.R. 28-30-206 or an extension of time pursuant to K.A.R. 28-30-204, the individual or party shall submit a request, in writing, to the district.

(1) Each request shall include the following:

(A) The name, address, telephone number, and contact person of the individual or party requesting the variance or extension of time;

(B) the specific legal description of the site location to which the variance or extension of time would apply;

(C) the specific regulation from which the variance is sought or the amount of time requested; and

(D) the reason for requesting the variance or extension of time and any supporting data.

(2) A variance or extension of time may be granted by the district manager if the variance or extension is in keeping with the purposes of the Kansas groundwater exploration and protection act and the groundwater management district act.

(b) Each variance or extension of time granted by the district manager shall be reported by the district to the department within 30 days of approval.

(c) Each individual or party who wants an extension of time for the inactive water well period shall submit the request at least 30 days before the expiration date on a form provided by the district. (Authorized by and implementing K.S.A. 2004 Supp. 82a-1028; effective P-September 30, 2005.)