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Kansas Intensive Groundwater Use Control Areas

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I. Introduction

A. Summary

This paper summarizes the Kansas intensive groundwater use control area statutes and their interrelationship with the Kansas Water Appropriation Act and the Kansas Groundwater Management District Act. The paper includes a discussion of the circumstances and provisions resulting from establishment of the Burrton Intensive Groundwater Use Control Area which was established to deal with a deterioration of the quality of water in the area and the Lower Smoky Hill Intensive Groundwater Use Control Area which was established to deal with a shortage of water in a stream-aquifer system wherein it was necessary to allocate water among the various water right holders.

B. General References

Kansas Water Appropriation Act, K.S.A. 82a-701, et seq.

Kansas Groundwater Management District Act, K.S.A. 82a-1020, et seq.

Peck and Nagel, "Legal Aspects of Kansas Water Resources Planning," 37 Kan.L.Rev. 2 (1989).

II. Kansas Water Laws

In order to provide a meaningful description of the Kansas intensive groundwater use control area statutes and how they have been applied, it is necessary to provide a brief description of

current Kansas law as it pertains to water rights and the management of groundwater in our state.

A. Kansas Water Appropriation Act

1. The Water Appropriation Act was originally enacted in 1945. While the legislature had enacted laws allowing the appropriation of water since prior to the turn of the century, the Kansas Supreme Court continued to hold that common law rights must be recognized. The Kansas Water Appropriation Act has been upheld as being constitutional on several occasions. Kansas is now considered to be a modified appropriation doctrine state. The Act provides that,

All water within the state of Kansas is hereby dedicated to the use of the people of the state, subject to the control and regulation of the state in the manner herein prescribed.

The Chief Engineer, Division of Water Resources, Kansas State Board of Agriculture, is the state official responsible for the administration of the Water Appropriation Act.

The Act provides for a determination of "vested rights" to allow a person under the common law to continue the use of water having been actually applied to beneficial use prior to June 28, 1945, to the extent of the maximum quantity and rate of diversion for the beneficial use made prior to that time. All of these rights have been determined by order of the Chief Engineer. The Act further provides that except for that water withheld from appropriation in order to establish and maintain minimum desirable

streamflows and subject to vested rights, all water within the state may be appropriated for beneficial use. As between persons with appropriation rights, the first in time is the first in right.

The Act provides a statutory mechanism whereby a person may file an application for permit to appropriate water for beneficial use for either groundwater or surface water. Such applications are to be approved if they will not impair vested rights or prior appropriation rights nor prejudicially or unreasonably affect the public interest. A water right can then be perfected by the actual use of water in accordance with the terms, conditions and limitations of the approved application. The Chief Engineer may regulate the use of water during periods of shortage in accordance with the rights of priority of appropriation. In addition, there are many other provisions of the Act that deal with areas such as abandonment and forfeiture of water rights, changes to existing water rights, temporary permits and water use reporting.

The use of water for other than domestic purposes and other minor exceptions without a vested right or an appropriation right or the violation of any of the terms, conditions and limitations of such rights is a criminal offense.

B. Kansas Groundwater Management District Act

1. In 1972, the Groundwater Management District Act (GMDA) was passed in order to authorize the creation of special districts for the conservation and management of groundwater resources of the state. The stated policy of the GMDA is to preserve basic water use doctrine and to establish the right of

local water users to determine their destiny with respect to the use of groundwater insofar as it does not conflict with the basic laws and policies of the State of Kansas. Since 1972, five groundwater management districts have been organized in the State of Kansas. The boundary of each district is required to include all of the contiguous area which overlies one or more aquifers subject to management and that comprises a hydraulic community of interest. These five districts include most of the major irrigated areas in the State of Kansas. Approximately 2/3 of the total points of diversion authorized by water rights in the State and approximately 90% of the irrigated acreage are contained within the boundaries of a groundwater management district. The districts primarily include various portions of the High Plains Aquifer system. The Ogallala Aquifer is the principal unit for three of the districts in the extreme western portion of the State. (See attached map in Appendix A)

2. The districts operate with an elected Board of Directors who must be landowners or water users within the district. They have the authority to levee special water user charges and land assessments within certain limits in order to fund the programs and operations of the district.

3. Each district is required to develop a management program that describes the characteristics of the district and the nature and methods of dealing with groundwater supply problems within the district. The management program developed by the district must be approved by the Chief Engineer with the primary

criteria being that it is compatible with the Water Appropriation Act and any other applicable state laws or policies. In addition, the district may recommend rules and regulations to the Chief Engineer necessary to implement and enforce the policies of the Board of Directors of the district. These rules and regulations then become the Chief Engineer's rules and regulations but are applicable only within the specified district. The Board of Directors of the district also have certain other powers. Significant examples include the authority to require the installation of meters, gages or other measuring devices and to adopt and enforce reasonable standards and policies relating to the conservation and management of groundwater within the district which are not inconsistent with the Water Appropriation Act.

4. Each of the five districts has a very active management program and has become a significant factor in the development of policies and rules and regulations pertaining to the use of water within their respective district. However, final authority related to permitting and administration of water rights rests with the Chief Engineer. In essence, the groundwater management district has a significant role in the development of policy at the local level and in initiating solutions to groundwater management problems within the district but its authority is limited by the requirement that their regulatory programs pertaining to the appropriation and use of water must be compatible with state laws and policies. The districts and the Chief Engineer each play a significant role in this local-state

partnership. Frequently the groundwater management district is the more visible entity, but the primary authority dealing with water rights rests at the state level. Outside the boundaries of groundwater management districts no similar mechanisms exists. However, state adopted rules and regulations and administrative policies and procedures are used to determine whether or not permits to appropriate water should be granted. All other water right related matters are administered in accordance with the provisions of the Water Appropriation Act or in accordance with the provisions of an intensive groundwater use control area, if one exists in the area.

C. Intensive Groundwater Use Control Area Statute

1. Kansas law provides a mechanism to establish intensive groundwater use control areas under certain circumstances. These statutes, K.S.A. 82a-1036 through 1038 (see Appendix B), are found as a part of the Groundwater Management District Act but may also be used outside the boundaries of an existing groundwater management district. Conceptually, such an area may be established in order to provide for the adoption of corrective control provisions, if deemed necessary, to respond to groundwater problems in a specific area in need of special management.

Inside the boundaries of a groundwater management district, the proceedings for the designation of an intensive groundwater use control area (IGUCA) are initiated whenever a groundwater management district recommends the same or whenever a petition meeting certain criteria is received by the Chief Engineer.

Outside the boundaries of a groundwater management district, the Chief Engineer may initiate such proceedings on his or her own initiative if he or she has reason to believe that any one or more of the following conditions exist:

- 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.

The statutes further provide for notice and the holding of a public hearing at which documentary and oral evidence must be taken and a full and complete record of the same must be kept. In actual practice, these hearings are formal in nature and may take anywhere from a few days to several weeks of actual hearing time.

2. In a pending case in the Walnut Creek Basin in central Kansas, approximately five weeks of hearings have been held in segments over a several month time period, resulting in around 4,000 pages of transcript. In this case, twelve formal participants representing the Kansas Department of Wildlife and

Parks, the groundwater management district, a watershed district, two cities, a water utility, three environmental groups, a farm group and two organizations primarily representing the holders of a large number of water rights for irrigation have intervened and actively participated by calling approximately 25 witnesses, introducing approximately 70 exhibits and cross examining other witnesses. In addition, more than 30 people testified at an informal phase of the hearing. This case has been especially contentious due to a significant shortage of water for Cheyenne Bottoms, which has been identified as a wetland of international importance.

D. Use of the IGUCA Statute

1. Seven IGUCA's have been established in Kansas since 1980 and one such area is pending designation at this time. (See Appendix C) These areas have been established as a result of a variety of different circumstances. In two cases, the primary circumstance that lead to the designation of the IGUCA was an excessive decline of the water table wherein existing appropriations were resulting in withdrawal of groundwater in excess of the natural recharge. In one area, which will be discussed in more detail later, the area was designated as a result of a deterioration in the quality of groundwater as a result of pollution from oil and gas activities many years ago. In three cases, the interrelationship between surface water and groundwater was a significant factor in the designation of the IGUCA. Consequently, it was necessary to deal with both sources of water

in order to provide special management for these areas. Additional details will also be provided on one of these cases. Finally, one small area was designated as a result of a request from a city in which many privately owned domestic wells were in use for watering lawns, gardens, trees and landscape. In this case, the IGUCA statute was used to provide a degree of regulation over the use of the domestic wells, which would otherwise not be regulated under state law, through requiring the users to conserve water by not using the wells during the heat of the day. In this particular area, water is very limited and the city involved has a rather strict water conservation plan in effect for its customers.

E. Burrtton Intensive Groundwater Use Control Area

1. On June 1, 1984, an intensive groundwater use control area was established in an area consisting of approximately 36 square miles in Harvey and Reno Counties in the vicinity of Burrtton, Kansas. The area was established as a result of the deterioration of the quality of the groundwater primarily as a result of pollution originating from oil production practices consisting of disposal of salt brines using surface ponds, pits or depressions. Most of the disposal occurred in the 1930's and 1940's. In addition, other sources of pollution resulted from shallow disposal wells in a hydraulically connected aquifer, pipeline breaks, salt water tank leaks and overflows, and malfunctioning disposal wells. The contamination resulted in chloride concentrations of up to 2105 parts per million although it varied by location and depth in the aquifer system.

Approximately 2,000 acre feet per calendar year was being withdrawn for irrigation use, approximately 230 acre feet for industrial use and approximately 4,000 acre feet for municipal use. The area is also located just upgradient from a large well field in the Equus Beds Aquifer which constitutes a major portion of the public water supply for the City of Wichita.

An initial hearing was held in August 1982 in the matter of the proposed designation of the IGUCA. At that time testimony was received from the manager of the Equus Beds Groundwater Management District No. 2, a scientist with the Kansas Geological Survey who had conducted studies in the area and representatives of the Kansas Department of Health and Environment and the Kansas Corporation Commission, each of which has certain regulatory responsibilities related to contamination and oil and gas activities.

As a result of the initial evidence, the Chief Engineer continued the hearing to allow additional research and investigations on matters relevant to whether an IGUCA should be established and, if so, what the boundaries should be and what controls, if any, should be adopted. The Chief Engineer created and appointed a task force consisting of representatives of the groundwater management district, several state agencies, the oil and gas industry and holders of water rights in the area. The task force was requested to investigate and research the water quality problems in the Burrton area and to submit findings and conclusions and recommendations for any control provisions they deemed appropriate within a period of six months from the date of the

hearing. In addition, the Chief Engineer declared a moratorium on the further processing of any pending applications for permit to appropriate water after the time and date of the hearing. This provision allowed applications to be filed and to receive a priority in time but resulted in the applications being held until such time as a decision was made as to whether or not additional water was available for appropriation at the conclusion of the studies and a decision as to whether or not an IGUCA was to be established.

As it turned out, the Burrton Task Force was a very active group. Each task force member made a significant contribution to the overall effort on behalf of their respective entity. For example, representatives of state agencies researched agency files, compiled information and investigated the various sources of contamination. The Kansas Geological Survey conducted an extensive study and developed a computer model to simulate the effects of additional appropriation on the movement of contaminants in the area. Representatives of the oil and gas industry were quite cooperative in taking the appropriate steps to analyze existing facilities and ensure that the source of contaminants had been stopped. The task force submitted a rather extensive report containing their findings, conclusions and recommendations as to actions that needed to be taken. These recommendations included items related to revising the boundaries for the proposed IGUCA, checking the integrity of salt water lines, checking the competency of lined salt water pits, investigating the integrity of plugs of

wells suspected of leaking, conducting mechanical integrity tests on all injection or disposal wells in the area, establishing deeper aquifer monitoring wells, utilizing polluted groundwater for enhanced recovery of oil in the area, establishing additional monitoring and educational activities, and enhancing water well construction standards. The task force also recommended appropriating water under a safe yield policy with a case-by-case analysis to ensure that the additional withdrawal of groundwater would not cause any special problems such as the movement of contaminants in the area.

After receipt of the task force report, the hearing was reconvened and additional testimony and evidence was taken from representatives of the task force and others. On June 1, 1984, the area was established as an IGUCA with modified boundaries as recommended by the task force. The corrective control provisions adopted were consistent with the recommendations of the task force and the groundwater management district. The primary corrective control provisions include:

a. A special review of applications for permit to appropriate groundwater and changes in point of diversion under existing water rights consistent with the task force recommendations.

b. A requirement by the district to annually review all the hydrological data in the area such as static water level information and water use and water quality information so that the district could request a rehearing before the Chief Engineer for

reconsideration of any corrective control provisions relative to the control area.

c. A requirement that all existing water users install flow meters in accordance with specifications approved by the Chief Engineer and report pumpage data to the Chief Engineer on a certain time each year and as otherwise needed.

The order also requested that certain other agencies implement the remaining recommendations of the task force that were within their jurisdiction. These recommendations are the ones relating to the regulation of oil and gas activities not within the normal authority of the Division of Water Resources. However, it should be noted that the inclusion of recommendations related to these activities was very effective in that it highlighted the importance of dealing with these matters to the other agencies, all of which had participated in task force activities. Consequently, while the establishment of an IGUCA in order to deal with these particular matters would not have been necessary, it served as a mechanism to allow all of the agencies involved to concentrate on the problem at hand in a coordinated and effective way.

In the years since the IGUCA was established, the Burrton Task Force has continued to operate in order to coordinate the implementation of the various recommendations, which have now all been implemented. The task force itself has also been utilized to investigate and coordinate similar activities related to oil and gas pollution in nearby locations in the same aquifer system within the Equus Beds Groundwater Management District No. 2. While

additional IGUCA's were not established, very similar activities have taken place using the Burrton situation as a model. In one nearby instance, cleanup of past contamination is also underway with the task force serving as the entity to coordinate the activity between several agencies.

All in all, it is my conclusion that this has been a very successful endeavor. Ironically, it was not necessary to exercise some of the authority available through the IGUCA statute to regulate existing water users to the extent that might be necessary under different circumstances either for water quality or other reasons.

F. Smoky Hill River Intensive Groundwater Use Control Area

On May 31, 1984, an IGUCA was established along the alluvial valley of the Smoky Hill River below Cedar Bluff Reservoir in Trego, Ellis and Russell Counties, Kansas. This area was established as a result of shortages of both surface water and groundwater to meet the demand for domestic use, public water supply, irrigation and other uses. In this particular area, approximately 1/2 of the withdrawal of groundwater is for the City of Hays who holds a series of groundwater rights of various priority dates ranging from fairly senior to fairly junior. In addition, the small town of Schoenchen, a rural water district and the City of Russell divert water from this same source. Cedar Bluff Reservoir, operated by the U.S. Bureau of Reclamation, also provided irrigation supply for approximately 6,000 acres in the same area below the reservoir, a fish hatchery and storage for the

City of Russell. However, this project has been short of water and has provided few benefits other than reservoir recreation for 10 or 15 years. Some individual irrigators also hold direct flow surface rights or groundwater rights from the hydraulically connected alluvium.

In this case, the issue of allocation of water was a major concern. There was not a sufficient supply to satisfy all of the users. In addition, there was the issue of the interrelationship between surface water and groundwater withdrawals from a hydraulically connected system. The area was established as an IGUCA with the following general provisions in an interim order:

1. The area was closed to all future appropriation of surface water and groundwater, with minor exceptions.

2. All existing surface water and groundwater users were required to install water meters and report the readings to the Chief Engineer.

3. Irrigation users were limited to a withdrawal of groundwater not to exceed 15 acre inches per acre per year based upon the maximum number of acres irrigated during the previous five year period. This compared to existing rights and permits ranging from an average of 18 to 24 acre inches per acre on a significantly larger number of authorized acres.

4. Municipal users were limited to the withdrawal of groundwater not to exceed 95% the first year and 90% for each year thereafter of maximum historic use.

5. A task force with representatives of all the various interests was created to make recommendations to the Chief Engineer regarding how to balance long term supply and demand in the area and regarding what modifications, if any, should be made to the interim corrective control provisions.

The task force met extensively for over a year. Ultimately, the task force recommended that no changes be made in the type of controls established in the interim order of the Chief Engineer. They further indicated that if additional restrictions were needed they preferred the type of restrictions that were made wherein each of the users would accept a certain reduction in the amount of water that could be withdrawn rather than curtailment of junior appropriations. The task force also made a number of other recommendations of a general nature aimed at solving the water problem in the area.

In summary, the Smoky Hill IGUCA represents an example of an area where water has been allocated through a system other than the utilization of the first in time-first in right aspects of our Water Appropriation Act. In this particular instance, the Chief Engineer determined that the amount of water allocated through the IGUCA order was a "reasonable" amount for the intended uses. The Kansas Water Appropriation Act does contain a provision indicating that appropriations rights in excess of the reasonable needs of the water user shall not be allowed. However, one can argue that this provision only applies at the time the original permit is granted rather than at some subsequent time. In addition to this issue,

a variety of other circumstances existed that made application of first in time-first in right administration more difficult to achieve. Some of these were the relative location of the rights, the fact that various users had both senior and junior rights, a general desire by the holders of rights to share a shortage rather than adhere to the strict priority system and the recognition that everyone could conserve and use water more efficiently.

Since the Chief Engineer's order was not appealed to the District Court, a judicial determination of the application of the IGUCA statute was not tested in the courts.

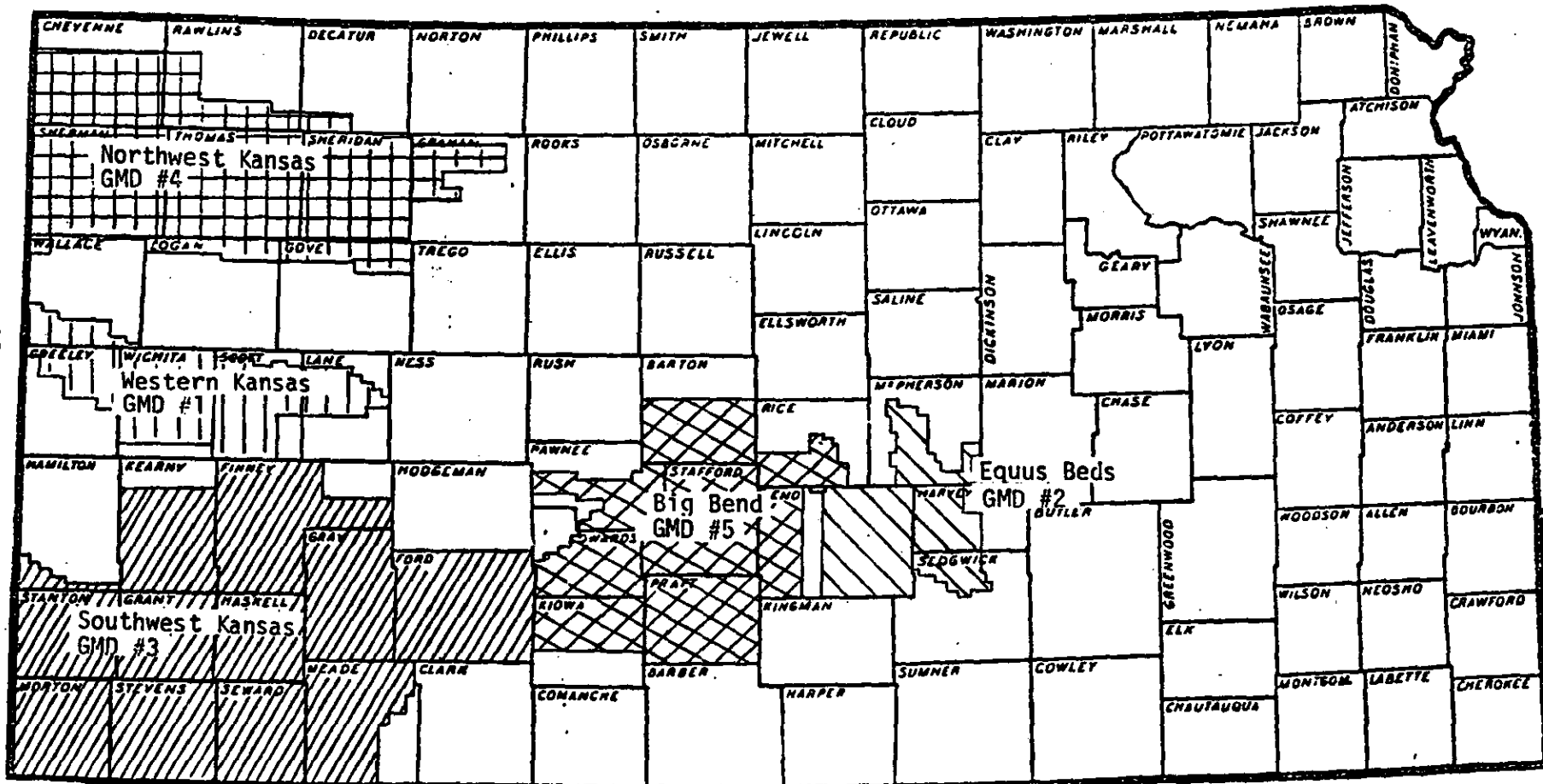


Figure 1. Organized Groundwater Management Districts in Kansas

SCALE - STATUTE MILES
0 10 20 30 40 50

82a-1036. Initiation of proceedings for designation of intensive groundwater use control areas; duties of chief engineer; findings. Whenever a groundwater management district recommends the same or whenever a petition signed by not less than three hundred (300) or by not less than five percent (5%) of the eligible voters of a groundwater management district, whichever is less, is submitted to the chief engineer, the chief engineer shall initiate, as soon as practicable thereafter, proceedings for the designation of a specifically defined area within such district as an intensive groundwater use control area. The chief engineer upon his or her own investigation may initiate such proceedings whenever said chief engineer has reason to believe that any one or more of the following conditions exist in a groundwater use area which is located outside the boundaries of an existing groundwater management district: (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; (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.

History: L. 1978, ch. 437, § 2; July 1.

Law Review and Bar Journal References:

"Kansas Groundwater Management Districts," John C. Peck, 29 K.L.R. 51, 57, 82 (1980).

"Groundwater Pollution I: The Problem and the Law," Robert L. Clicksman, George Cameron Coggins, 35 K.L.R. 75, 145, 146 (1986).

"A State Agency's Role in Protecting Groundwater Quality," Leland E. Rolfs, 35 K.L.R. 419, 424 (1987).

"High Noon on the Ogallala Aquifer: Agriculture Does Not Live by Farmland Preservation Alone," Myrl L. Duncan, 27 W.L.J. 16, 77 (1987).

Attorney General's Opinions:

Power to initiate proceedings to institute intensive groundwater use control areas. 81-57.

82a-1037. Same; hearings. In any case where proceedings for the designation of an intensive groundwater use control area are initiated, the chief engineer shall hold and conduct a public hearing on the question of designating such an area as an intensive groundwater use control area. Written notice of the hearing shall be given to every person holding a water right in the area in question and notice of the hearing shall be given by one publication in a newspaper or newspapers of general circulation within the area in question at least thirty (30) days prior to the date set for such hearing. The notice shall state the question and shall denote the time and place of the hearing. At the hearing, documentary and oral evidence shall be taken, and a full and complete record of the same shall be kept.

History: L. 1978, ch. 437, § 3; July 1.

82a-1038. Designation of intensive groundwater use control area; orders; corrective control measures; appeals. (a) In any case where the chief engineer finds that any one or more of the circumstances set forth in K.S.A. 82a-1036 and amendments thereto 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.

(b) The order of the chief engineer shall define specifically the boundaries of the intensive groundwater use control area and shall indicate the circumstances upon which the findings of the chief engineer are made. The order of the chief engineer may include any one or more of the following corrective control provisions: (1) A provision closing the intensive groundwater use control area to any further appropriation of groundwater in which event the chief engineer shall thereafter refuse to accept any application for a permit to appropriate groundwater located within such area; (2) a provision determining the permissible total withdrawal of groundwater in the intensive groundwater use control area each day, month or year, and, insofar as may be reasonably done, the chief engineer shall apportion such permissible total withdrawal among the valid groundwater right holders in such area in accordance with the relative dates of priority of such rights; (3) a provision reducing the permissible withdrawal of groundwater by any one or more appropriators thereof, or by wells in the intensive groundwater use control area; (4) a provision requiring and specifying a system of rotation of groundwater use in the intensive groundwater use control area; (5) any one or more other provisions making such additional requirements as are necessary to protect the public interest. The chief engineer is hereby authorized to delegate the enforcement of any corrective control provisions ordered for an intensive groundwater use control area to groundwater management district number 4 or to any city, if such district or city is located within or partially within the boundaries of such area.

(c) The order of designation of an intensive groundwater use control area shall be in full force and effect from the date of its entry in the records of the chief engineer's office unless and until its operation shall be stayed by an appeal therefrom in accordance with the provisions of the act for judicial review and civil enforcement of agency actions. The chief engineer upon request shall deliver a copy of such order to any interested person who is affected by such order, and shall file a copy of the same with the register of deeds of any county within which such designated control area lies.

History: L. 1978, ch. 437, § 4; L. 1984, ch. 338, § 31; L. 1990, ch. 363, § 1; July 1.

