Approved: March 29, 2001
Date

MINUTES OF THE HOUSE COMMITTEE ON ENVIRONMENT.

The meeting was called to order by Chairperson Joann Freeborn at 3:30 p.m. on February 6, 2001 in Room 231-N of the Capitol.

All members were present except:

Committee staff present: Raney Gilliland, Kansas Legislative Research Department
Mary Ann Graham, Committee Secretary

Conferees appearing before the committee: Brownie Wilson, Environmental Scientist, Kansas Water Office, 901 S. Kansas, Topeka, KS 66612-1249
Susan Stover, Environmental Scientist, Kansas Water Office, 901 S. Kansas, Topeka, KS 66612-1249
Al LeDoux, Director, Kansas Water Office, 901 S. Kansas, Topeka, KS 66612-1249
Lee Allison, Phd. RG., Director, Kansas Geological Survey, 1930 Constant Avenue, University of Kansas, Lawrence, KS 66047-3726
Clint Riley, Department Attorney, Department Wildlife and Parks, 900 SW Jackson, Ste 502, Topeka, KS 66612-1233
Steven Frost, Exec. Director, SW Kansas Groundwater Management District, 409 Campus Drive, Ste 106, Garden City, KS 67846
Kristen Hanna, Volunteer, Sierra Club, Kansas Chapter, 2417 SW Harrison, Topeka, KS 66604
Greg Krissek, Kansas Corn Growers Association, PO Box 446, Garnett, KS 66032-0446

Others attending: See Attached Sheet

Chairperson Joann Freeborn called the meeting to order at 3:30 p.m. She announced that she may add another bill hearing to the committee agenda for Thursday, February 8, 2001. She welcomed the staff of the Kansas Water Office.

Brownie Wilson, KWO, was welcomed to the committee. He briefed the committee on The High Plains Aquifer by displaying maps with the use of overhead slides. The assessment of the Kansas High Plains Aquifer was undertaken as part of several mandates directed to the Kansas Water Authority from **House Substitute for SB287**, which was passed in 1999. The report on Aquifer Resources was the primary topic for the presentation. The aquifer resources report focuses on the High Plains Aquifer in Kansas. Although there are other aquifer units in Kansas, the High Plains Aquifer represents the most heavily utilized aquifer system in the state and represents the primary source of water for most of western and south central Kansas. A map showing saturated thickness was displayed. Saturated Thickness is the vertical thickness of a hydrogeologically defined aquifer in which the pore spaces are filled (saturated) with water. Saturated Thickness is commonly used as an indicator of the amount of available water and its rate of change. Other maps showing Estimated Predevelopment and Current Saturated Thickness in Feet; Estimated Change in Saturated Thickness from Predevelopment to Current; Estimated Annual Ground-water Recharge (Inches per Year); Maximum Authorized Quantity and Average Percent Reported Used in Acre-Feet; Total Reported Water Used and Seasonal Precipitation (March to October) from 1990 to 1998; Estimated Usable Lifetime for Large Volume Pumping; and Changes in Water Use Necessary to Meet Sustainability or Safe Yield, were displayed and discussed. (See attachment 1)

Susan Stover, KWO, was welcomed to the committee. She briefed the committee on the Ogallala Management Concept. The Kansas Water Authority recently reviewed a new idea for managing the Ogallala Aquifer. This idea, the "two pools" management of the Ogallala, would address the rate of groundwater

depletion, provide time for transition to a reduced water use, protect some ground water for future generations, and have management decisions made on local aquifer conditions. This idea developed out of discussions between the Kansas Water office, the Kansas Department of Agriculture, Division of Water Resources, the Kansas Geological Survey and the western Groundwater Management Districts. The Kansas Water Authority agreed this idea deserved further discussion and directed the Kansas Water Office and the Kansas Department of Agriculture, Division of Water Resources, to present this new management idea at stakeholder and public meetings in western Kansas to get their input. Maps were shown of the Ogallala portion of the High Plains Aquifer with the use of overhead slides. Other maps showing Low Recharge Potential for the Ogallala Aquifer; Two Pools Approach for Aquifer Management; Estimated usable lifetime for large volume pumping from the High Plains Aquifer; and Water Resource Organizations, were displayed and discussed. (See attachment 2) Questions and discussion followed.

Lee Allison, State Geologist and Director of Kansas Geological Survey, was welcomed to the committee. He briefed the committee on Science Needs For Managing The High Plains Aquifer. The Survey has a mission in state statute to make complete surveys of the state for natural resources of economic importance, including groundwater. The Survey is administratively housed at the University of Kansas. The High Plains Aquifer is actually a collection of geological units that includes the Ogallala Aquifer in western Kansas. The KGS has been carrying out a comprehensive research and monitoring program on the High Plains aquifer for many years in cooperation with a variety of state and local agencies. For more than 30 years the KGS along with the Division of Water Resources has measured water well levels in more than 1400 wells across western Kansas. This comprehensive database is a critical resource in understanding the distribution and amount of depletion in the aquifer. (See attachment 3) In June 2000, the geological surveys of the eight states that contain the High Plains aquifer formed the High Plains Aquifer Coalition, in alliance with the U.S. Geological Survey. The purpose of the Coalition is to cooperate in joint investigations and scientific exchanges concerning the earth sciences (including hydrology, geology, geochemistry, geochronology, geophysics, geotechnical and geological engineering and related investigations) on topics of mutual interest. (See attachment 4) Committee discussion and questions followed.

Chairperson Freeborn thanked the Kansas Water Office staff and Mr. Allison for their presentations. She opened the hearing on **HB2042.**

HB2042: An act concerning hunting.

Clint Riley, Department Attorney, Kansas Department of Wildlife and Parks, was welcomed to the committee. He testified before the committee in support of the bill which would require that all nonresidents born after July 1, 1957 carry proof of completion of hunter education while hunting in Kansas. This bill was part of the department's legislative package, and is supported by the department. The hunter education program established by the Legislature in 1973 has been credited with improving hunting safety and decreasing accidents throughout the state. This bill would not require anyone to take hunter education who is not already required to do so, and the department does not believe it would be a substantial burden on the hunting public. (See attachment 5) Questions and discussion followed.

The Chairperson asked if any others wished to testify, no one came forward. She closed the hearing on **HB2042** and opened the hearing on **HCR5009**.

HCR5009: A concurrent resolution urging the Congress of the United States to address the conservation and preservation of the High Plains Aquifer.

Al LeDoux, Director, Kansas Water Office, was welcomed and testified in support of the resolution. He was appearing before the committee as the Secretary of the Kansas Water Authority, which requested introduction of this resolution. The Kansas Water Authority approved the Kansas Water Plan in July of 2000. The Kansas Water Plan contained a recommendation for the Director of the Kansas Water Office to develop recommendations on actions the federal government should take to conserve the High Plains Aquifer. As a result of that recommendation Mr. LeDoux formed an ad hoc committee, which developed the committee report that is attached to his testimony, also attached are copies of letters Governor Graves sent the Kansas

congressional delegation. (See attachment 6) Mr. LeDoux introduced members of the Kansas Water Authority present in today's meeting; Cliff Mayo, Chairman; David Pope, Kansas Department of Agriculture/Division of Water Resources; and Dr. Lee Allison, Director, Kansas Geological Survey. Also Rep. Dennis McKinney is a member as well.

Steven Frost, Executive Director, SW Kansas Groundwater Management District #3, was welcomed to the committee. The Board of Directors respectfully request the committee's most serious consideration for support of this concurrent resolution regarding the High Plains Aquifer and are certain to agree that the physiographic impact of this unique water resource in our nations economy, culture, and environment is not sufficiently recognized and is under-appreciated. They feel it is extremely important to educate, plan, and provide for the long term productivity of the High Plains Aquifer and its associated impacts to local, state, and national economies. (See attachment 7)

Kristen Hanna, Volunteer, Sierra Club, Kansas Chapter, was welcomed to the committee. She testified in support of the resolution. The Sierra Club recognizes the potential dangers of the depletion of our aquifers and are concerned with their preservation. They applaud the Kansas legislature and the administration for investigating this situation and generating potential remedies. The Sierra Club also supports this committee and the legislature in coordinating with other high plains states and the federal government to spur action on this matter. (See attachment 8)

Greb Krissek, Director, Kansas Corn Growers Association, was welcomed. He appeared before the committee in a neutral position to the resolution. The Kansas Corn Growers and the Kansas Grain Sorghum Producers Associations believe information about new efforts to discuss and plan for the future of the Ogallala portion of the High Plains Aquifer is just unfolding and are concerned that legislative action prior to all stakeholders having an opportunity to study and review these new proposals may be premature. (See attachment 9) Committee discussion and questions followed.

Chairperson Freeborn asked if there were other comments or questions concerning the resolution. There were none. She closed the hearing on **HCR5009**. She reviewed the committee agenda for Thursday, February 8.

The meeting adjourned at 5:20 p.m. The next meeting is scheduled for Thursday, February 8, 2001.

HOUSE ENVIRONMENT COMMITTEE GUEST LIST

DATE: February 6, 2001

NAME	REPRESENTING
Virginia Kepley	Southwest Irrigation Assoc
Johnny Kepley	" "
STEVEN FROST	SW KS GMD
Justin Hamby	Southwest Kansas Irrigation Assoc.
Andy Shaw	SWKIA
Wendy Hawkins	KAPA
Chris Tyhesen	KDWP
Clint Riley	KDWP
Brownie Wilson	KWO
Susan Stover	KWO
SCOTT CARLSON	SCC
Kerri Ebert	KS Dairy Association
Chris Wilson	GMD3 - SW Kansas
Rebecca Reed	KDA
Hank Ernst	Kansas Water Office
David Miller	DOB
Al LeDoux	KWO & KWA
Cliff Mayo	KWA
Ron APPLETOFT	Water Dist. No 1 of Jo Co
Greg Krissek	KS Corn Growers
Wendy Moss	KS Pork Prod Assn

HOUSE ENVIRONMENT COMMITTEE GUEST LIST

DATE: February 6, 2001

NAME	REPRESENTING
Doug Smith	Prager-Smith Company
Kirsten Hanna Volunteer	KS Sierra Club
Bill Fuller	Kansas Farm Bureau
Mike Beam	Ks. Lvstk. Assn.
Neal Mann	—
Edward Rowe	League of Women Voters/KS

STATE OF KANSAS

Bill Graves, Governor

KANSAS WATER OFFICE
Al LeDoux
Director

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TESTIMONY BEFORE HOUSE ENVIRONMENT COMMITTEE FEBRUARY 6, 2001 AT 3:30 P.M. IN ROOM 423-S KANSAS HIGH PLAINS AQUIFER RESOURCES

By Brownie Wilson

House Environment
2-6-01
Attachment 1

Slide 1

The Kansas High Plains Aquifer

Kansas Water Office
901 S. Kansas Ave
Topeka, KS 66612
785-296-3185
http://www.kwo.org

Introductory Slide

Slide 2

House Substitute for Senate Bill 287- Aquifer Resources

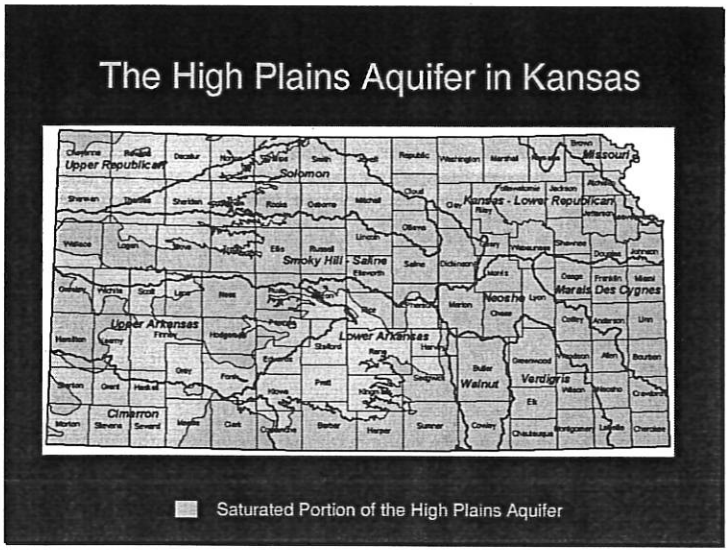
The 1999 Legislative Session- House Substitute for Senate Bill 287

By January 8, 2001, the Kansas Water Authority shall study and develop recommendations related to:

- Aquifer resources, recharge rates, availability of surface water resources and the long-term prospects related to any necessary transition to dryland farming in areas of the state to maintain sustainable yield and minimum streamflow levels
- The potential for competing water needs for at least the next 20 years and the means of addressing the competition

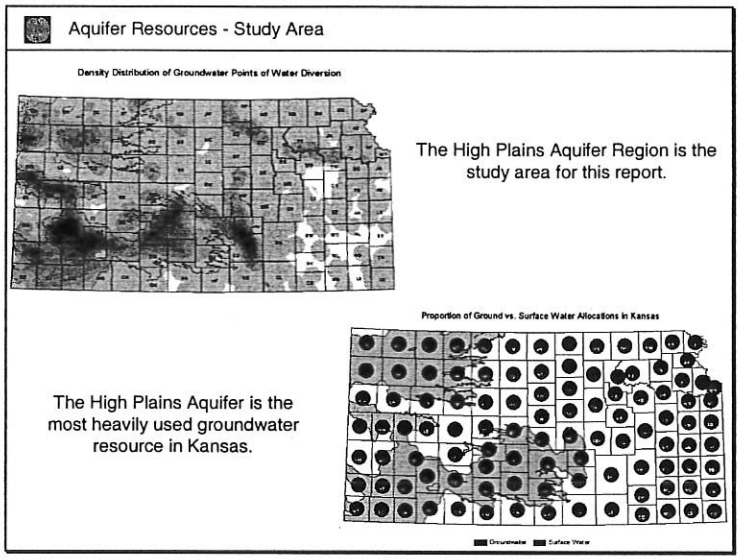
This assessment of the Kansas High Plains Aquifer was undertaken as part of several mandates directed to the Kansas Water Authority from House Substitute for Senate Bill 287 (1999 Legislative Session). The report on Aquifer Resources is the primary topic for this presentation, however, it has related issues to the potential for competing water needs.

Slide 3



This map shows the saturated portion of the High Plains Aquifer in Kansas.

Slide 4

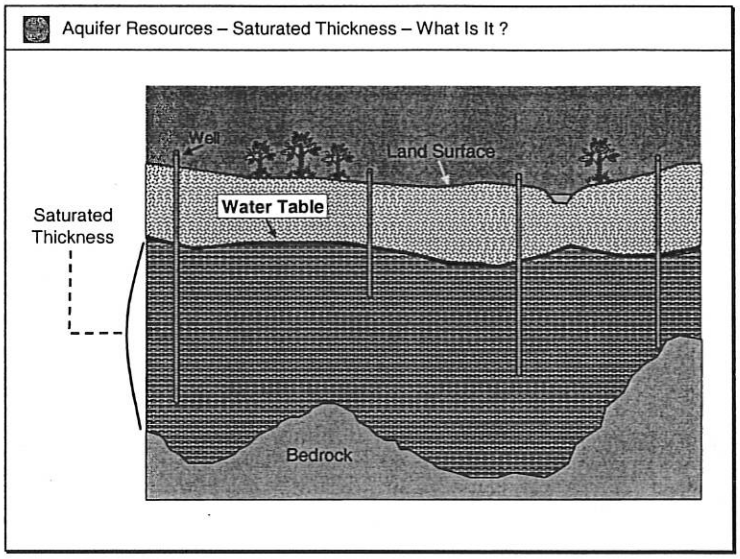


The aquifer resources report focuses on the High Plains Aquifer in Kansas. Although there are other aquifer units in Kansas, the High Plains Aquifer represents the most heavily utilized aquifer system in the state and represent the primary source of water for most of western and south,central Kansas.

The map in the upper left shows the density of all wells for currently active water right allocations where ground water is the source of supply. The red outline represents the saturated portion of the High Plains Aquifer. Although there are areas of extensive well development (e.g. Kansas-Lower Republican alluvium and the Wichita Well Field) throughout the state, the majority of ground water wells in Kansas as a whole are drilled within the High Plains Aquifer Region.

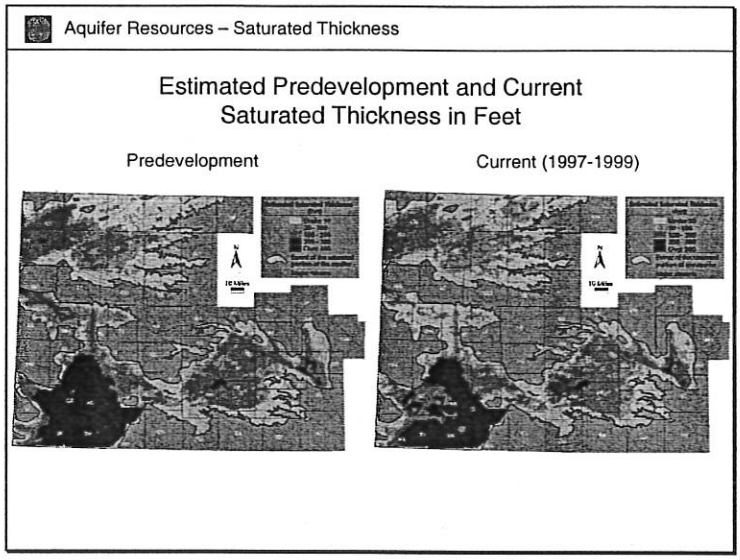
The map in the lower right shows the proportion of ground versus surface water allocations in the state. Again, notice ground water represent the dominant source of supply in the High Plains Aquifer region, although there are some large surface water components associated with surface irrigation ditch companies and reservoirs operations.

Slide 5



Saturated Thickness is the vertical thickness of a hydrogeologically defined aquifer in which the pore spaces are filled (saturated) with water. Saturated Thickness is commonly used as an indicator of the amount of available water and its rate of change. In addition, it is also often used in setting water management and use policies and regulations. Saturated Thickness is a key aquifer component used in this report.

Slide 6

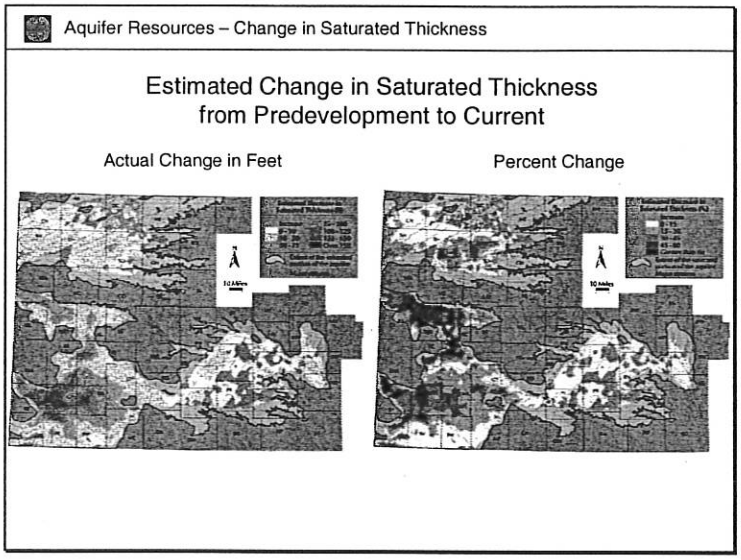


These maps portray the estimated saturated thickness in the Kansas High Plains Aquifer in predevelopment and current time periods. The "blank" or gray areas of the High Plains Aquifer on these maps do not have an adequate number of monitoring wells to permit useful estimates. In western Kansas, these areas are mostly fringe areas of the aquifer and are likely to be in the lowest (0-50 feet) category.

"Predevelopment" is defined as a period of time before extensive ground water development occurred. "Current" saturated thickness represents the average estimated saturated thickness from 1997 to 1999.

In both maps, ground water resources are unevenly distributed in ways primarily controlled by bedrock topography and patterns of recharge and discharge. South, central Kansas operate under "safe yield" policies and as a whole, have shown little change over time. The Ogallala portion of the High Plains Aquifer (e.g. GMD 4, 1, and 3) all show areas of substantial groundwater declines, however, Southwestern Kansas, where the bedrock is the deep beneath the land surface, has historically and still is relatively "water-rich" in terms saturated thickness.

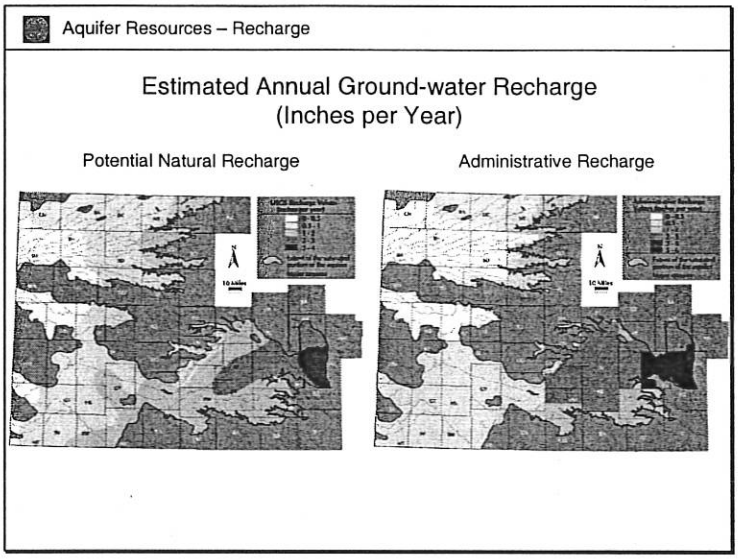
Slide 7



These maps show the actual and percent change in the saturated thickness of the High Plains Aquifer from predevelopment to present day. The maps show the greatest actual change in the saturated thickness has occurred in southwestern Kansas, however, because of the large volume of water currently still present, the percent changes in this area are not proportionately large. For areas that had marginal saturated thickness to start with, the percent change based on the total predevelopment saturated thickness may be somewhat misleading. For example, 30 to 50 feet is used as an approximation of the saturated thickness required to support large volume pumping. If the original saturated thickness was less than 100 feet, then a 50 percent change in the saturated thickness could actually represent 100 percent of the usable water for large volume requirements. The changes, relative and absolute, need to be interpreted in the light of predevelopment and current saturated thickness.

Although the total area showing an increase in saturated thickness (light blue) appears impressive, almost all these regions are either in the fringe areas of less than 50 feet saturated thickness, have relatively small levels of authorized water right allocations, and/or are in regions of poor water quality from natural mineral intrusion. The increases therefore represent more or less natural variations in unstressed portions of the aquifer, and in most areas do not reflect an actual increase in water available for use under current conditions.

Slide 8

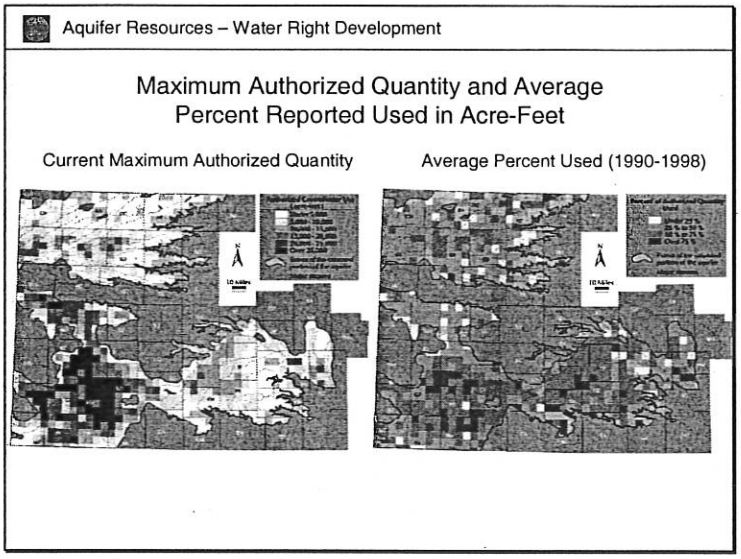


The potential natural recharge map shows the annual amount of precipitation-based recharge in inches for western and central Kansas as estimated in the US Geological Survey (USGS) Water Resources Investigations Report 87-4230. The distribution of annual recharge follows a similar pattern to that of annual precipitation across the state, that is, it progressively decreases as one moves westward across the state. The climatic conditions are such that not only is precipitation low in western Kansas, but most of it is lost to evaporation from the soil surface and transpiration from plants. More than 99% of the rainfall is returned to the atmosphere in 14 southwestern Kansas counties, and more than 95% is returned throughout the western half of the state, thus resulting in meager recharge to the High Plains aquifer in that region. (In eastern Kansas an average of 85% of the rainfall is returned to the atmosphere.) Thus, climatic conditions constitute a primary control on recharge, although vegetation and soils also influence recharge.

The administrative recharge map shows the amount of annual recharge, in inches, that is available for appropriation based on rules and regulations adopted by KDA-DWR. The map shows areas of special administrative recharge, such as the boundaries of the five Groundwater Management Districts (GMDs) and the KDA- DWR Unit Basins in south-central Kansas.

Of all the factors in the evaluation of groundwater resources, the rate of recharge is one of the most difficult to derive with confidence. Estimates of recharge are normally subject to large uncertainties and spatial and temporal variability. The USGS recharge estimates may be considered representative at the county level. No stream seepage, irrigation return flow, or other sources of recharge were considered in this USGS analysis.

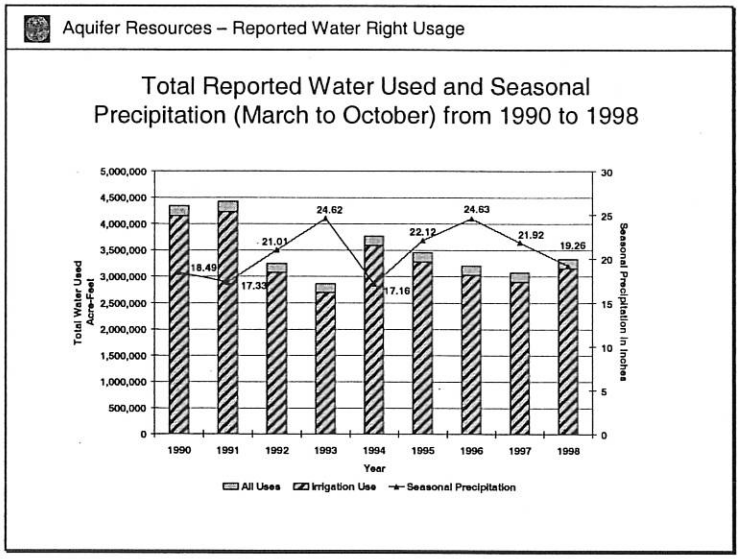
Slide 9



The current maximum authorized quantity map represents the amount of ground water currently authorized or allocated, by township, to water rights located within the High Plains Aquifer region. This is not the amount of water actually pumped but rather how much could be pumped if all water right allocations pumped their full authorized quantity. Due to climate, economic factors, and farm management practices, the actual reported amount of water used in an area is typically somewhat less than the total use authorized for that area.

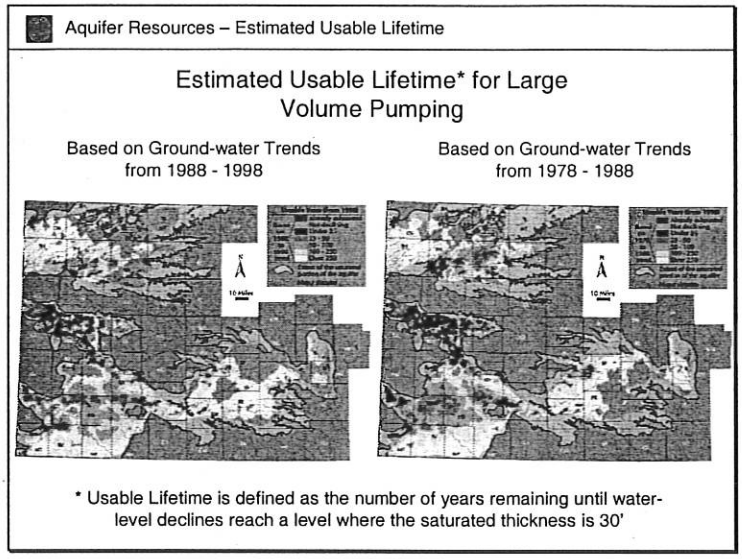
The average percent used map shows the average amount of ground water reported used, expressed as a percentage of the maximum authorized quantity appropriated, and is based on the average reported water use from 1990 to 1998 for each township. For all water rights within the Kansas High Plains Aquifer region as a whole, the average percent of the authorized allocations of groundwater is just over 50 percent.

Slide 10



This graph shows the total amount of ground water reported used by water rights within the High Plains aquifer in comparison with the seasonal precipitation from 1990 to 1998. For water rights within the Kansas High Plains aquifer region, groundwater consistently accounts for approximately 99 percent of the total reported use, and the average fraction of groundwater used for irrigation is approximately 95 percent of the total. The graph also shows the inverse relationship between water use and seasonal precipitation that occurs between the months of March to October. As would be expected, when more precipitation occurs during the growing season, the need for supplemental water use, primarily irrigation, decreases.

Slide 11



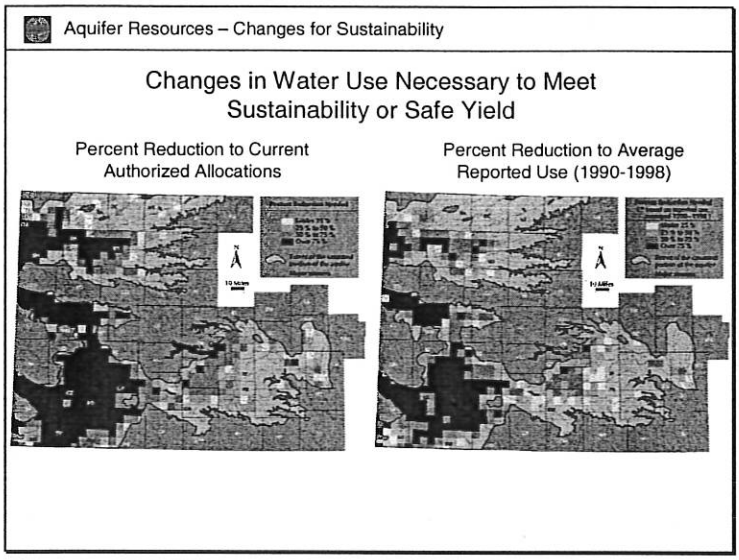
Usable lifetime is defined here as the number of years remaining until water-level declines reach the level where saturated thickness is 30' -- an approximate value at which large-volume pumping, primarily irrigation, is likely to be impractical, even though other low-volume wells can still function if they are completed at the base of the aquifer. At this point of 30 feet, it is assumed, other lower volume water demands, such as municipal, industrial, and stockwatering, can still operate within the safe yield of the aquifer if they are completed to bedrock. The water demands for these lower volume uses are anticipated to be within or less than amount of natural ground water recharge, and thus can be operated on a sustainable level.

Both maps presented here use the current estimated saturated thickness to determine areas in which the resource has already been exhausted for large volume pumping (saturated thickness 30' or less), and as a starting point for determining the number of years remaining in the aquifer's usable lifetime. The difference between the two maps comes from their use of water-level data from different time periods to calculate the trend in water level change -- the first map presented uses the difference between the average water-levels from 1987-1989 (1988) to 1997-1999 (1998) to establish a linear trend in water-level change based on a ten-year period. The second map is based on water-level trends between 1977-1979 (1978) to 1987-1989 (1988). The water-level trends are then applied to the current saturated thickness values to project the number of years it will take for the saturated thickness to reach the 30' mark assuming that the trend in groundwater change is constant.

These two time periods show a consistent linear trend in water level in most regions experiencing decline (see appendix on groundwater decline rates) although they represent significantly different climatic conditions. The decade of the 1990s has been significantly wetter than the 1980s, resulting in less water use and higher rates of recharge (see Water Usage). Other factors that may have contributed to the overall reduction in the rate of water-table declines in the 1990s include untimely climatic events, more efficient use of water, and increasing awareness that groundwater is a limited resource.

The estimates are not predictions of aquifer depletion, but rather projections -- what would probably happen if past rates and patterns of use continue into the future. It is also important to note that these estimates do not consider the increased costs of pumping, well replacement, etc., as water tables drop or future climatic conditions.

Slide 12



In order to reach a level of long-term sustainable use of a groundwater resource, average withdrawal must be no greater than average recharge. These maps show the percent change required in terms of the maximum authorized quantity and average reported use. The maps mirror to some extent the map of Current Maximum Authorized Quantity. Because large-scale recharge changes gradually across the region, and actual pumping is related to authorized pumping, the fraction, or percentage of use reduction required for sustainability is lower in areas of low or moderate water right development than it is in regions with high densities of water rights.

The most striking feature of the two maps is the very high percentage of reduction in authorized use required to match recharge. Overall, a lower percentage reduction in actual use is required. The difference is most noticeable in northwest Kansas and in regions close to the boundary of the saturated portion of the aquifer. Although reductions in actual use of a third to a half at the township level would bring extraction to the approximate magnitude of the recharge in some areas, the core irrigation regions in southwestern and western Kansas are pumping 3-4 times the estimated long-term recharge value.

Given that some amount of recharge is assumed to occur everywhere, some level of sustainable use is possible throughout the aquifer system. It is anticipated that this sustainable use would consist of lower volume water demands, such as municipal, industrial, and stockwatering, which can operate within the safe yield of the aquifer if they are completed to bedrock.

It is important to note that the apparent changes required in the 'safe yield' districts of the eastern High Plains are the result of using the natural recharge map as a basis rather than the administrative recharge map. If the recharge values defined by regulation were used, there would be very few areas of apparent over-appropriation in Groundwater Management Districts 2 and 5.

The values presented here are estimates intended to provide general information on the scale of the reduction. Recharge values are one of the more uncertain hydrologic parameters and the USGS recharge data used in these assessments is based on broad regional intervals (e.g. 1 to 2 inches) representative at the county scale. The amount of recharge used in these maps represents the maximum value from each recharge class interval for each township. As such, the estimated reduction probably represents the lower end of the estimated required reductions to meet sustainability.

Slide 13

Need More Information?

Kansas Water Office
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Topeka, KS 66612
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STATE OF KANSAS

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Director

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TESTIMONY BEFORE HOUSE ENVIRONMENT COMMITTEE FEBRUARY 6, 2001 AT 3:30 P.M. IN ROOM 423-S OGALLALA AQUIFER

By Susan Stover

My name is Susan Stover, and I am with the Kansas Water Office. I want to thank you for this opportunity to speak to the Committee on the Ogallala Aquifer.

(Slide 1): The Kansas Water Authority recently reviewed a new idea for managing the Ogallala Aquifer. This idea, the "two pools" management of the Ogallala, would address the rate of groundwater depletion, provide time for transition to a reduced water use, protect some ground water for future generations, and have management decisions made on local aquifer conditions. This idea developed out of discussions between the Kansas Water Office, the Kansas Department of Agriculture-Division of Water Resources, the Kansas Geological Survey and the western Groundwater Management Districts. The Kansas Water Authority agreed this idea deserved further discussion and directed the Kansas Water Office and the Kansas Department of Agriculture, Division of Water Resources to present this new management idea at stakeholder and public meetings in western Kansas to get their input.

We prepared a four-page public information sheet that introduces this idea, to be used at those meetings. We want this to be a starting point for discussions, and expect revisions based on the input we receive from stakeholders and the public.

(Slide 2): The management approach proposed would be only for the Ogallala Aquifer. The Ogallala is the largest aquifer within the High Plains Aquifer, which also includes the Great Bend Prairie and the Equus Beds aquifers. This map outlines the High Plains Aquifer and shades the Ogallala portion in gray, with a rough eastern boundary noted by the dashed line. This management approach is proposed for the Ogallala because that is where most of the ground water declines problems occur.

House Environment
2-6-01
Attachment 2

(Slide 3): Recharge is part of the reason the Ogallala Aquifer has had more serious declines. This map shows the potential recharge rates for the High Plains Aquifer. In far western Kansas, recharge is estimated at roughly ¼ inch per year. Moving eastward, the rate of recharge increases, but most of the Ogallala receives little more than an inch per year, on average. Further east, in the Equus Beds Aquifer, this map indicates a potential recharge rate of 3-4 inches per year. The more water coming in to an aquifer on an annual basis, the more water that can be withdrawn with no net decrease. Western Kansas also has a lower precipitation rate than central Kansas, and very limited surface water supplies. People in western Kansas have a greater dependence and demand on ground water, than those that live further east.

(Slide 4): This slide is a schematic of the "two pools" management idea. The Ogallala Aquifer can be considered to consist of two volumes of water: one, the conservation pool, would be based on the amount of annual recharge plus an additional volume necessary for it to be a source that could be used by communities; the other, the usable pool, would be the existing volume in excess of the conservation pool. In most areas, the usable pool would be much larger than the conservation pool. The usable pool would be managed as it is now, and will be used up in some period of time depending on the level of use. This is the pool to emphasize the use of conservation measures, such as more efficient irrigation systems and less water intensive crops, to extend the life of the usable pool. Once the usable pool is exhausted, and only the conservation pool remains, then the water must be managed for sustainable yield. By that, we mean the withdrawals from the aquifer cannot exceed the average, annual recharge rate *minus* any natural outflows, such as to streams or wetlands. This is the point at which zero depletion must be attained. In theory, the conservation pool could sustain healthy communities for all time.

How might implementation of this management approach impact an individual water right holder? This approach would operate within the legal water framework currently in place. The same priorities and restrictions on an individual water right that exists under the Kansas Water Appropriation Act and the specific groundwater management district's management plan would still apply. Technically, a junior water right holder may be forced to stop pumping sooner under this management approach. When only the conservation pool remains, junior rights whose use of water would continue to deplete the aquifer must stop pumping. In practice, a water right holder may decide to stop pumping long before regulations force that person to stop; higher energy costs, low commodity prices, and physical difficulties of large volume pumping from an aquifer of thin saturated thickness may make it uneconomical or impractical to pump far before the usable pool is gone. Senior water rights, whose collective annual allocated water use does not exceed the annual recharge rate minus natural outflows, would be protected through management of the pool for sustainability.

(Slide 5): This map shows the estimated usable lifetime of the High Plains Aquifer for large volume pumping, such as irrigation, assuming current water level trends continue and the aquifer is effectively exhausted when the saturated thickness is 30 feet or less. The areas in red are those with an estimated 25 years or less before the aquifer may be exhausted. This map, which is included on the handout, communicates two important messages. The first is the vivid image that the depletion of the Ogallala is a real problem; this is an issue that will not go away. The second important message, I think, is that the map isn't all red; the entire Ogallala is not projected to be exhausted within 25 years. The Ogallala Aquifer is highly variable in thickness and other characteristics throughout western Kansas. The variation in the estimated usable lifetime shown on this map reflects, in part, the variation in the aquifer itself.

(Slide 6): Because of that variation within the aquifer, the two pools approach would manage based on conditions in an aquifer subunit. Geographic areas with similar aquifer characteristics would be delineated. Within each aquifer subunit, then, the two pools would be defined. Management decisions would then be based on local conditions.

(Slide 7): Another very important component to this approach is community input. Communities share a common interest as they share a common water resource. They should have an input on the management approach. Scientists would estimate the volume in a aquifer subunit's conservation pool, based on average, annual recharge and the minimal additional amount necessary to actually use it. Beginning with the information, communities then would have input on defining the conservation pool. Areas to consider include: 1) uncertainties with the scientific data. An example is the estimated recharge rate may be a range of values; communities may want to use a conservative number, or an optimistic number. 2) Water quality; there may be areas where there are salinity or other water quality concerns with the bottom of the aquifer. 3) Physical limits on pumping as the aquifer gets thinner and thinner. 4) Environmental impacts; as the water level drops, there will be fewer natural outflows. And 5) a community may want to add more volume to the conservation pool to provide more options for the future.

Communities would also have a voice in the time frame in which the usable pool will be exhausted. This can be done informally through voluntary, incentive based conservation programs, such as installation of more efficient irrigation systems, better management of those systems, water right purchase, and other options. This can also be done formally, working through the groundwater management districts.

(Slide 8): Communities include irrigators and other producers, cities and towns, businesses and industries, and any individual who relies on water in western Kansas. Individuals can be involved in the development of water policy and in defining the two pools by participating in the state water planning process.

(Slide 9): There are currently water organizations that traditionally represent communities on water resource issues. In western Kansas, these are the Groundwater Management Districts #1, 3, and 4, the Basin Advisory Committees, the Conservation Districts and the Watershed Districts. We expect them to be very important participants in this water management idea.

(Slide 10): This management approach provides us tools to plan for the future.

1) Reduced irrigation will have a large economic impact on western Kansas, not only on the individual operator, but also on the secondary and tertiary businesses. Whenever this reduction comes, whether it occurs next year, in the year 2020, when the aquifer is effectively gone or when the usable pool is gone, there will an economic impact. By planning for that change, we can lessen the severity of that impact.

2) The two pools management approach will help in that transition from intensive irrigation. Through this management approach, there will be an increased awareness of local aquifer conditions, and communities will have input on defining the two pools and their options for the future.

3) The time to deplete the usable pool is an important opportunity to adjust to a reduced water consumption, once the usable pool is gone and water use must stay within the recharge rate. It also provides an opportunity to extend the usable life of the pool.

4) Water for human consumption must be the high priority use from the conservation pool. I think we would all agree that water to keep people alive and healthy is the most important use of water. However, …

5) Seniority of the water right is based on first in time, and not the type of use. The Water Appropriation Act gives senior water rights priority to use the water when there is not enough to meet all needs, except for special situations.

6) Water rights can be sold, bought and leased. This approach would encourage use of the open market system to shift the most senior water rights that could withdraw from the conservation pool to meet municipal needs.

7) Cities and towns can project their needs and plan to take necessary action. In some areas, where a city is located may not be where water is available; this could be addressed through water transportation infrastructure.

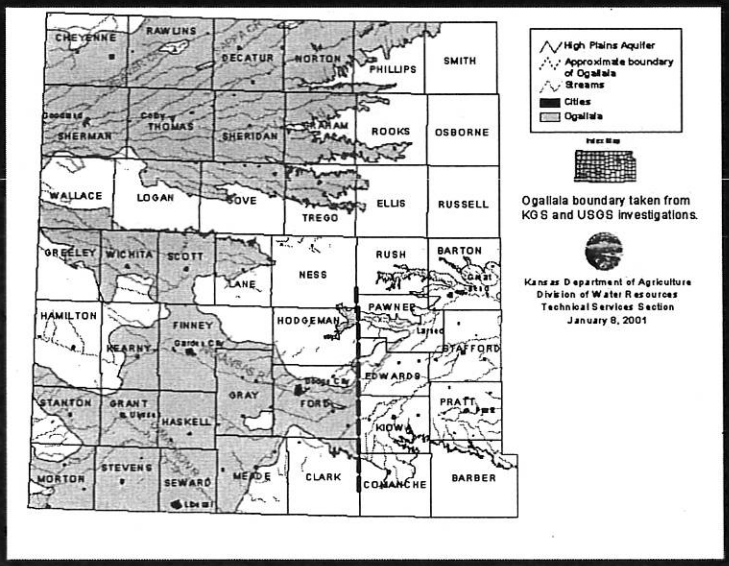
(Slide 11) Is the two pools management of the Ogallala a good idea for western Kansas? That is what we want to discuss and hear ideas from others. Most important is that people, especially those that live in western Kansas whose families and livelihoods depend on the Ogallala Aquifer, discuss a plan for the future of western Kansas. What will it look like? What sort of plan is needed to assure there will be water available for that future?

A New Idea for Managing the Ogallala Aquifer

- Address Rate of Depletion
- Help transition to less water use
- Protect ground water for future generations
- Manage on Local Aquifer Conditions

Kansas Water Office

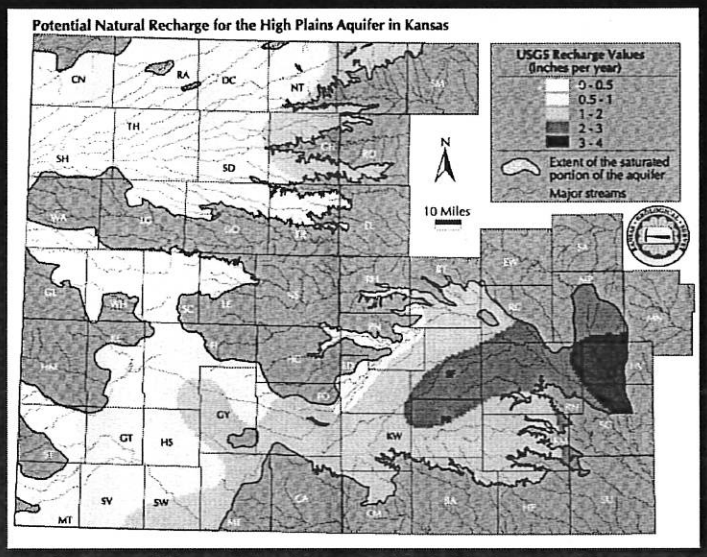
Ogallala portion of the High Plains Aquifer



Kansas Water Office

2-5

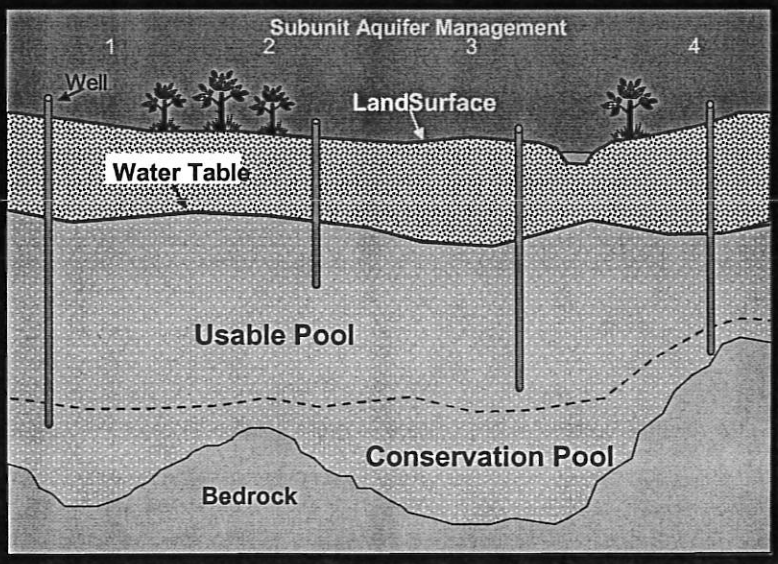
Low Recharge Potential for the Ogallala Aquifer



Source- Atlas of the Kansas High Plains Aquifer

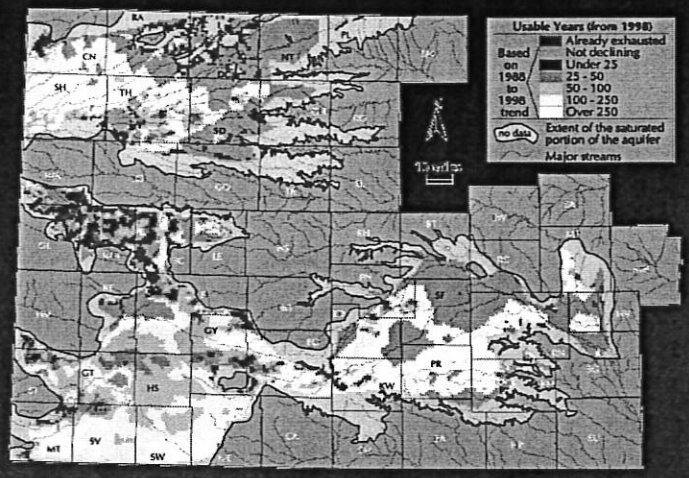
Kansas Water Office

Two Pools Approach for Aquifer Management



Kansas Water Office

Estimated usable lifetime for large volume pumping from the High Plains Aquifer, assuming current water-level trends continue and the aquifer is exhausted when saturated thickness is 30 feet or less



Source- Atlas of the Kansas High Plains Aquifer

Kansas Water Office

Aquifer Subunits

- Geographic Areas with Similar Aquifer Characteristics
- Two Pools Would be Defined Within Each Subunit
- Management Decisions Would be Made on Local Conditions

Kansas Water Office

Communities Share A Common Interest

Communities Would Have Input on Management Approach

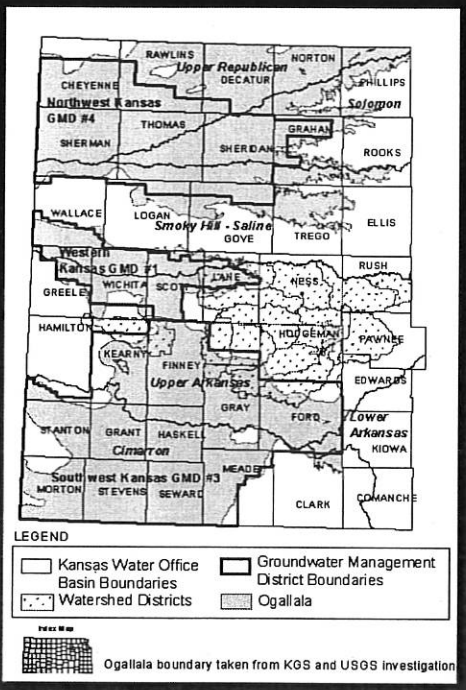
- Defining the Conservation Pool
  - Uncertainties with Scientific Data
  - Water Quality
  - Physical Limits on Pumping
  - Environmental Impacts
  - Water Options for the Future
- Time Frame in which Usable Pool will be Exhausted

Kansas Water Office

Communities Include:

- Irrigators and Other Producers
- Cities and Towns
- Businesses
- Industries
- Individuals Who Rely on Water in Western Kansas

Kansas Water Office



Water Resource Organizations

Kansas Water Office

Planning for the Future

- Reduced Irrigation Will Have an Economic Impact
- Two Pool Management Approach will Help in that Transition
- Time to Deplete Usable Pool Is an Opportunity to Adjust
- Water for Human Consumption Must be the Highest Priority Use From the Conservation Pool
- Seniority of the Water Right Determines Priority
- Water Rights Can be Sold, Bought, and Leased
- Cities and Towns Can Project Their Needs

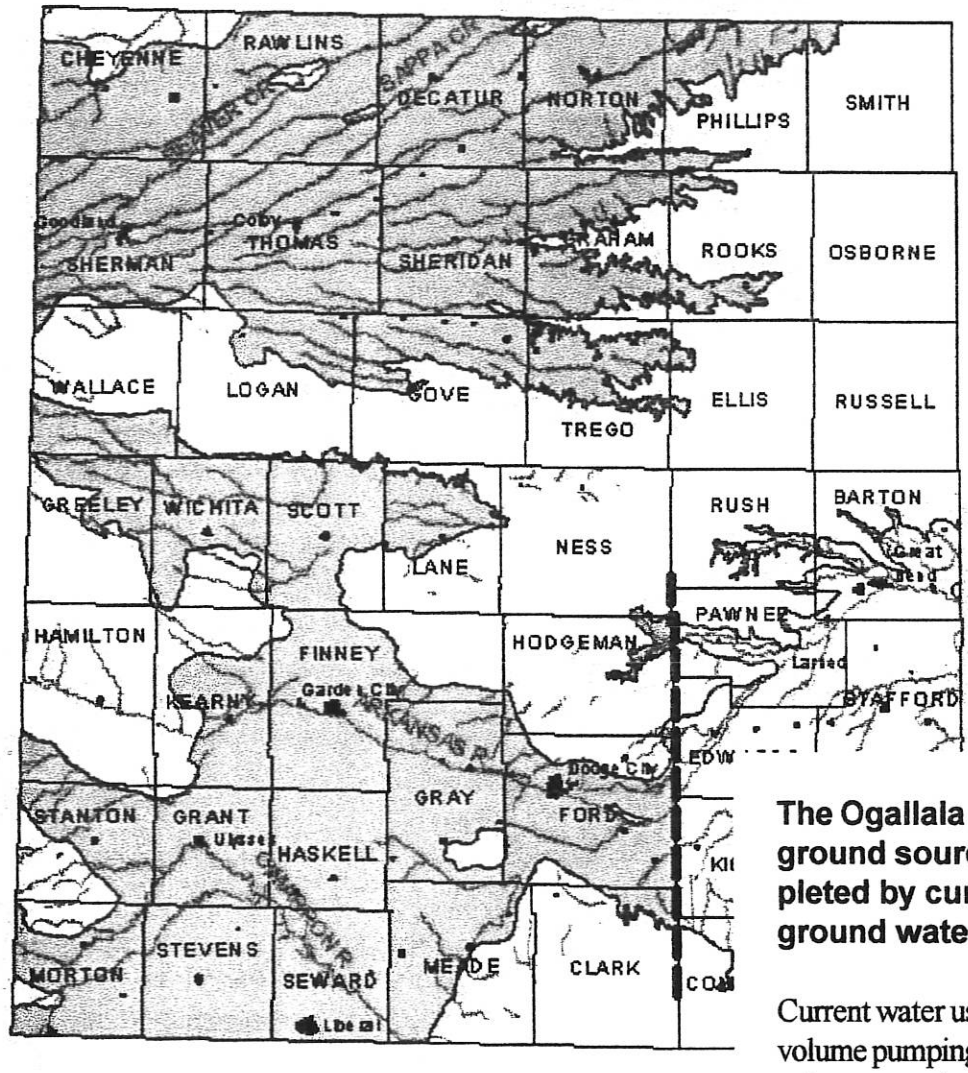
Kansas Water Office

Plan for the Future of Western Kansas

Kansas Water Office

A New Idea for Managing the Ogallala Aquifer for the Future

A new idea for managing the Ogallala aquifer is proposed that will address the rate of depletion of ground water supplies in western Kansas and protect some of it for future generations.



Ogallala boundary taken from KGS and USGS investigations.

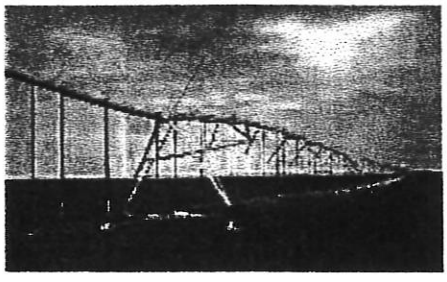
Kansas Department of Agriculture
Division of Water Resources
Technical Services Section
January 8, 2001

The Ogallala Aquifer, a large underground source of water, is being depleted by current water usage and ground water development

Current water usage, primarily widespread large-volume pumping for irrigation, is depleting the primary supply for western Kansas. Water is being pumped faster than it can be replenished each year by precipitation that seeps through the soil and down to the aquifer. If current pumping rates continue, the usable supply of ground water eventually will be exhausted.

The decline of the Ogallala Aquifer poses a tremendous challenge to the economy of western Kansas.

As ground water supplies become inadequate to support widespread, large volume irrigation, not only will farmers be affected, but so will the businesses and communities that are part of the irrigated agriculture economy. Water planning and management can help individuals, businesses, and communities prepare for the future.



2-11

The idea of managing "two pools" of water in the Ogallala: a plan for the future?

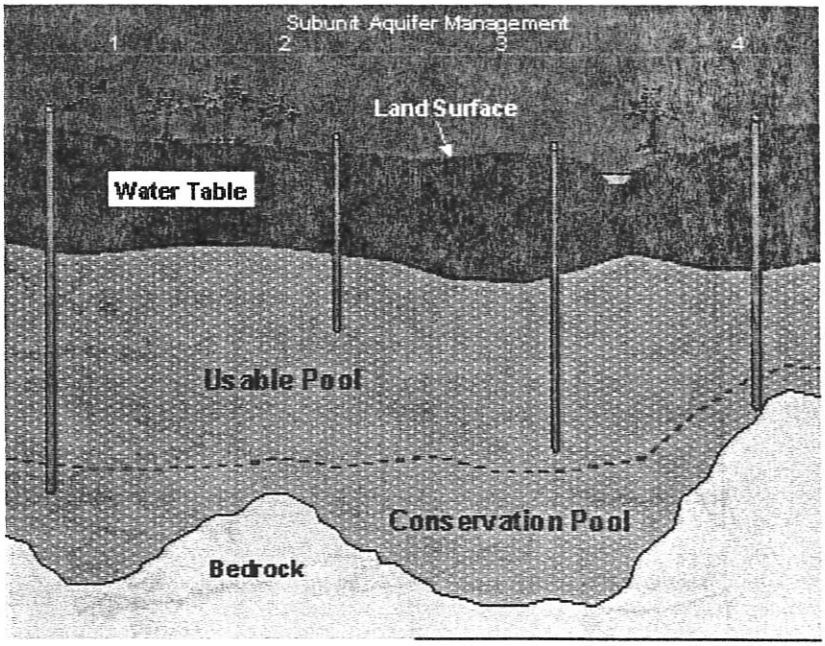
The two-pool idea could make the inevitable transition to reduced water consumption a successful one.

The two-pool idea is based on the premise that the remaining water supply in the Ogallala can be divided into two separate volumes of water. One volume, the conservation pool, would be based on the recharge rate, plus any additional volume necessary for the water to sustain communitites and the environment. The annual recharge is that portion of the annual precipitation that seeps down through the soil into the ground water. This small pool of water renewed each year by recharge is a supply that could sustain healthy communities for all time if annual pumpage remained less than the annual recharge minus the stream outflows. The other much larger pool of water, the usable pool, is the remaining quantity that will be depleted over time. It is stored in the aquifer and will eventually be used up within some period of time depending on the level of use.

In most areas of the Ogallala, existing pumping uses ground water in excess of the amount replenished by recharge minus stream outflows. If the two pools concept is adopted, water use must decrease as the level of aquifer depletion approaches the volume in the conservation pool.

Is this a good idea for western Kansas?

The distinction between the conservation pool and the usable pool could facilitate the management, transition, and planning for reduced, sustainable regional water use. Ultimately, to sustain healthy communities, water usage must be limited to an amount that will not deplete the conservation pool. Also, the length of time it takes to deplete the usable pool provides an opportunity to prepare for this decrease in water use.



Kansas Water Office, 2000

Communities must decide how to manage water use.

Communities share common interest in the ground water resource and in the management approach. Therefore they should provide some input to assumptions made by scientists that involve water management risks when technical data is uncertain. This is particularly important in helping determine how to control the rate of depletion, protect the conservation pool, and define the line that separates the volume in the conservation pool and the usable pool. They must also help decide the water management options for a healthy community and the time frame in which the usable pool will be depleted. Various local organizations, such as groundwater management districts, watershed and conservation districts, and basin advisory committees, that typically represent communities are essential participants in these matters.

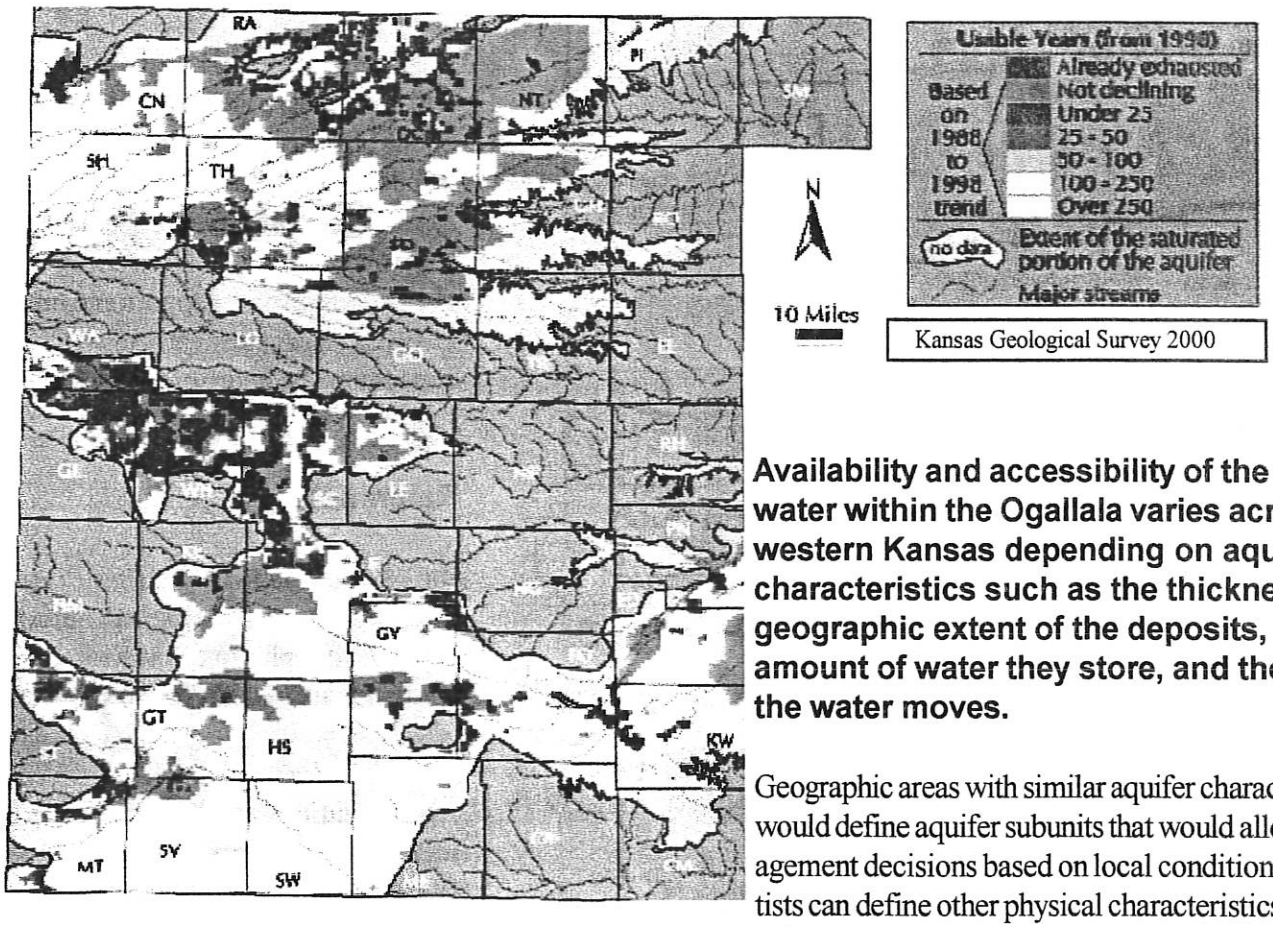
Communities include those who use water in western Kansas:

- o Irrigators, other producers
- o Businesses
- o Cities/towns
- o Industries
- o Individuals who rely on water in western Kansas

The Ogallala Aquifer is not uniform across western Kansas

The aquifer consists of stored ground water that is moving slowly through deposits of sand, gravel, silt and clay.

Estimated usable lifetime for large volume pumping from the High Plains Aquifer, assuming current water-level trends continue and the aquifer is exhausted when saturated thickness is 30 feet or less



Kansas Geological Survey 2000

Availability and accessibility of the ground water within the Ogallala varies across western Kansas depending on aquifer characteristics such as the thickness and geographic extent of the deposits, the amount of water they store, and the rate the water moves.

Geographic areas with similar aquifer characteristics would define aquifer subunits that would allow management decisions based on local conditions. Scientists can define other physical characteristics of the subunits that would affect the amount and availability of water such as:

- o Water table level
- o Recharge rate
- o Ground water outflows to streams
- o Aquifer decline rate trends

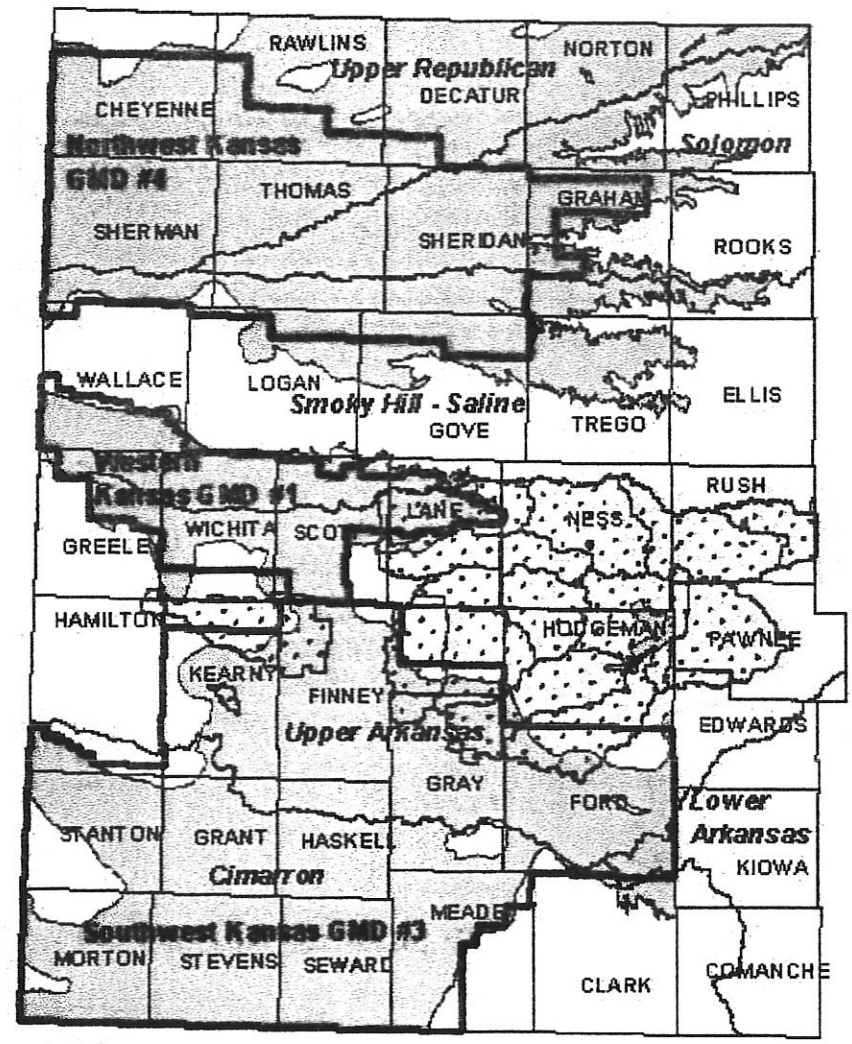
Many technical issues must be worked out to make this concept work. The volume of water contained in the conservation pool is determined by the annual recharge and the water level that must be maintained in the aquifer to make it available for use. The rate water is pumped will determine the time remaining to deplete the usable pool. Scientific analysis within each subunit will determine its geographic extent, estimated volumes in the two pools, and a refined time to deplete the usable pool based on given water use throughout the Ogallala.

The market for land and water rights within the context of the Water Appropriation Act and the related rules and regulations will serve to protect water users and to support transitions to decreased water use.

Water in the conservation pool would be administered according to prior appropriation, not on type of use; that is, first in time is first in right. A water right is a real property right that can be bought, sold, or leased. Communities can project when the usable pool might be exhausted, and plan for buying, if needed, senior water rights that would allow them to withdraw from the conservation pool. Availability of water in sufficient quantities for priority uses will determine the value of water rights as time passes. The existing Water Appropriation Act would continue to protect existing water rights as the usable pool is depleted.

This idea, if implemented, would be consistent with the Kansas Water Plan 20[illegible]

Objective: By 2010, reduce water level declines within the Ogallala Aquifer and implement enhanced water management in targeted areas.



LEGEND

- Kansas Water Office Basin Boundaries
- Watershed Districts
- Groundwater Management District Boundaries
- Ogallala

Ogallala boundary taken from KGS and USGS investigations.

The water planning process will work through local community organizations

Public education and consensus on a plan will be addressed through a series of public information meetings. Water users in the communities within the Ogallala Aquifer area will have an opportunity to learn about the idea of two pools. They also will be given an opportunity to be involved in management decisions concerning the future of their water supply.

References

An Atlas of the Kansas High Plains Aquifer, Kansas Geological Survey, 2000. Available on the website: www.kgs.ukans.edu/HighPlains/atlas

Rules and Regulations, Kansas Water Appropriation Act, Kansas Department of Agriculture, Division of Water Resources, Sept. 22, 2000.

Kansas Water Appropriation Act, K.S.A. 82a-730

Kansas Water Plan, Fiscal Year 2002, Kansas Water Authority, July, 2001. Available on the website: www.kwo.org

For current schedules and further information contact:

The Kansas Water Office
1-888-KAN-WATER or 785-296-3185
www.kwo.org

The Kansas Department of Agriculture/Division of Water Resources
785-296-3710

KWO & KDA/DWR
Public Information Sheet 1/2001

TESTIMONY
PRESENTED TO THE
HOUSE ENVIRONMENT COMMITTEE

February 6, 2001

SCIENCE NEEDS FOR MANAGING THE HIGH PLAINS AQUIFER

M. Lee Allison, PhD
State Geologist and Director
Kansas Geological Survey
University of Kansas

My name is Lee Allison. I am the State Geologist of Kansas and Director of the Kansas Geological Survey (KGS). The Survey has a mission in state statute to make complete surveys of the state for natural resources of economic importance, including groundwater. The Survey is administratively housed at the University of Kansas.

KGS role in the High Plains – Ogallala aquifers

The High Plains aquifer is actually a collection of geological units that includes the Ogallala aquifer in western Kansas. The KGS has been carrying out a comprehensive research and monitoring program on the High Plains aquifer for many years in cooperation with a variety of state and local agencies. For more than 30 years the KGS along with the Division of Water Resources has measured water well levels in more than 1400 wells across western Kansas. This comprehensive database is a critical resource in understanding the distribution and amount of depletion in the aquifer. For example, preliminary results from the approximately 600 wells measured by the KGS in January as part of this year's measurements show that 85% of the High Plains wells had declines, versus only 55% in 1997. About 2% of the wells had a decline of 10 feet or more, compared to only 0.5% in 1997. These dramatic changes clearly demonstrate the impact of last year's drought on water usage.

We believe that we have an obligation to do more than produce unbiased, high quality scientific and technical data. We also need to translate our results into formats that non-scientists can understand, to widely disseminate these results, and to work with decision-making groups to make recommendations that incorporate the best data available.

KGS, with support from the Kansas Water Office, produced the "Atlas of the Kansas High Plains Aquifer" which all of you should have received. This is an example of interpreting large volumes of scientific information in ways that everyone can understand and use.

Aquifer management

The Kansas Water Office is developing a "two-pools" management approach for the Ogallala aquifer. For such a plan to work, additional information will be needed on the

House Environment
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Attachment 3

shape and depth of the bottom of the aquifer. We also need to map the lateral variations in the aquifer characteristics in order to define the aquifer subunits used to establish a two-pools management plan.

I was pleased that the Governor, in his State of the State address last month saw the need for additional technical data collection and interpretation by the KGS. Detailed, reliable data is required to evaluate and implement any aquifer management plan, whether it is the two-pools concept or other plans that come forward as part of the continuing dialogue on how best to extend the life of this dwindling resource. This is a role KGS has played for many years, in oil and gas issues and mining, as well as in water resources. We expect to continue to serve as we always have, as scientific and technical advisors to the Kansas Water Authority, where I serve in *ex officio* capacity, and to the other state and local agencies and boards that deal with water issues.

A question that is sometimes asked, is whether we have sufficient data in hand to make the critically important decisions on the Ogallala that are needed. When you look at the High Plains Atlas, your first impression may be to say that we do have enough data. Obviously, we made all the maps that clearly show the problems. Doesn't that mean there must be enough data for us to now make decisions? In fact, most of the maps that are used in understanding and managing the Ogallala aquifer are based on only 1 or 2 wells per township. Are we prepared to tell a farmer in western Kansas that his water use and future may be based on the data from a well that may be as much as 6 miles away? When I talk with local water managers they tell me that much more data will be needed for them to make and justify determinations for water management on the scale that is proposed.

In addition to a possible increase in the density of data for adequate aquifer management we identified a preliminary list of other data that would be needed to develop an aquifer plan such as the two-pool plan. These include:

1. Assessment of a conservation pool in terms of sustainable amount that could be pumped, and additional saturated thickness needed for practical operation of wells in different areas of the Ogallala aquifer.

2. Determination of the approach to define aquifer subunits, such as hydrologic boundaries, ground-water divides, hydrological characteristics, aquifer extent, major differences in recharge, or saturated thickness, in conjunction with administrative boundaries.

3. Determination of recharge, stream outflow, and ground-water inflow and outflow to give estimates of net sustainable quantities of water to be pumped from areas of different saturated thickness in the Ogallala aquifer.

4. Estimates of total saturated thickness that will be needed for the conservation pool and how they vary across the aquifer.

5. Estimates of depth ranges from ground surface to conservation pool.

6. Assessment of uncertainties for estimating sustainable yield volumetrics of the conservation pool, including practical saturation thickness, water level measures, and depth to bedrock in different areas.

7. Determination of methods to reduce the largest uncertainties in calculating the conservation pool.

High Plains Aquifer Coalition

In June 2000, the geological surveys of the eight states that contain the High Plains aquifer formed the High Plains Aquifer Coalition, in alliance with the U.S. Geological Survey.

The purpose of the Coalition is to cooperate in joint investigations and scientific exchanges concerning the earth sciences (including hydrology, geology, geochemistry, geochronology, geophysics, geotechnical and geological engineering and related investigations) on topics of mutual interest. This agreement was specifically undertaken to advance the understanding of the three-dimensional distribution, character, and nature of the sedimentary deposits that comprise the High Plains aquifer in the eight-state Mid-continent region. It recognizes that the distribution, withdrawal, and recharge of groundwater, and the interaction with surface waters is profoundly affected by the geology and the natural environment of the High Plains aquifer in all eight States – New Mexico, Texas, Oklahoma, Colorado, Kansas, Nebraska, South Dakota, and Wyoming – thereby establishing a commonality of interests among the Surveys and citizens of these states. The Geological Surveys have agreed that reaching a fuller understanding of the three-dimensional framework and hydrogeology of the High Plains aquifer is needed to provide regional and national policymakers with the earth-science information required to make wise decisions regarding urban and agricultural land use, the protection of aquifers and surface waters, and the environmental well being of the citizens of this geologically unique region.

Subject areas of cooperation are those of regional interest and may include:

1. Research on the regional geologic framework, particularly the completion of detailed, quadrangle-size (1:24,000 scale), surface and subsurface geologic maps and models in digital format, and the public dissemination of these maps and models, as well as interpretive information derived from them.

2. Research on geologic processes relating to deposition of sedimentary sequences – their definition, nature, extent, origin, and bounding surfaces - forming the High Plains aquifer and adjacent aquifers.

3. Other areas of earth-science research and development as may be mutually agreed upon.

4. Research on the region's hydrogeology and its fluid systems.

5. Research on processes controlling the quantity and quality of water recharging the High Plains aquifer, including the effect of past and future changes in climate and land-use activities on recharge.

6. Research on enhancing the recharge of the High Plains aquifer.

7. Research on the porosity, permeability, storativity, and specific yield of the aquifer.

8. Research on the geological and hydrological processes controlling regional differences and temporal changes in water quality.

9. Research on the vertical and lateral exchange of groundwater between different formations that make up the High Plains and adjacent aquifers and the effect of such exchange on water quality in the High Plains aquifer.

10. Research on the age of groundwater recharging and moving through the aquifer.

11. Research on improved techniques for modeling the occurrence, movement, and quality of water in the High Plains aquifer.

12. Research on using geophysical techniques, procedures, and models for regional application in mapping subsurface deposits in the Mid-continent region.

13. Transfer of technology and information among the Surveys and to both the private and public sectors.

All eight states and the USGS have now approved the coalition charter. Our first cooperative effort was a preliminary proposal to the National Science Foundation for a 5-year, $7.3 million program to develop commonality and web-based access among all the High Plains databases in the 8-state region. This would include creating digital databases in those states that have not yet done so. We expect to hear in early March whether we will be invited to submit a formal proposal for funding.

Conclusion

In conclusion, the KGS has a long history of providing the data and analyses necessary to make informed decisions about the state's ground water resources. We are prepared to undertake the Governor's direction to us on the Ogallala aquifer. We will do so by continuing to work through the same state and local agencies and boards that we have always worked with. We are a science agency but realize that we have an obligation to explain and interpret the technical data and how it affects public policy.

We have ideas on what data will be needed to fully develop and implement management plans for the Ogallala aquifer, whether that plan is the two-pool concept or alternatives that may arise in the ongoing discussions.

We also are taking the lead in creating a regional cooperative effort among science agencies in the Mid-continent. It is important to develop an integrated understanding of the aquifer. We need to know what is happening to the aquifer across our borders and how that affects Kansas. A regional approach will also be necessary to justify appropriating federal funds to address the many problems associated with extending the life of our ground water resources.

Thank you for your attention.

Programs:

- Joint research and development projects, which may include joint planning and/or joint project execution and/or a cost-sharing arrangement

- Scientific, engineering, and technical information including publications, reports, technical data, samples, specimens, and other materials, including data bases, computer codes, results, and methods of research and development as needed for cooperative projects

- Exchange and/or sharing of instruments and components to help characterize, model, predict, test, or verify earth materials and their occurrences

- Collaborative exchange visits of individual scientists

- Joint organization of symposia, conferences, and workshops

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U.S. Department of the Interior

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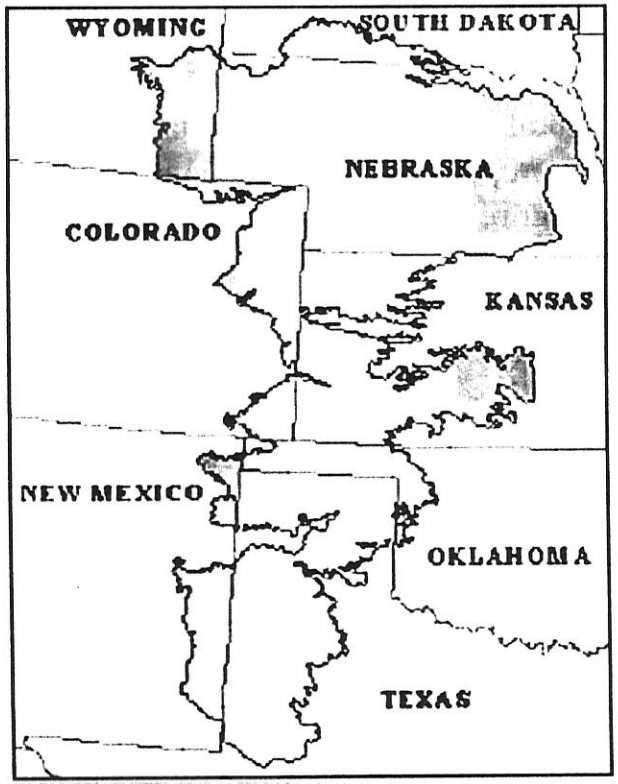
Attachment 4

PROPOSAL FOR THE HIGH PLAINS AQUIFER COALITION



Investigations into:

- Regional geologic framework, particularly completion of detailed, quadrangle-size (1:24,000-scale), surface and subsurface geologic maps and models in digital format, and public dissemination of these maps and models, as well as interpretive information derived from them

- Geologic processes relating to deposition of sediments forming the High Plains aquifer and related deposits

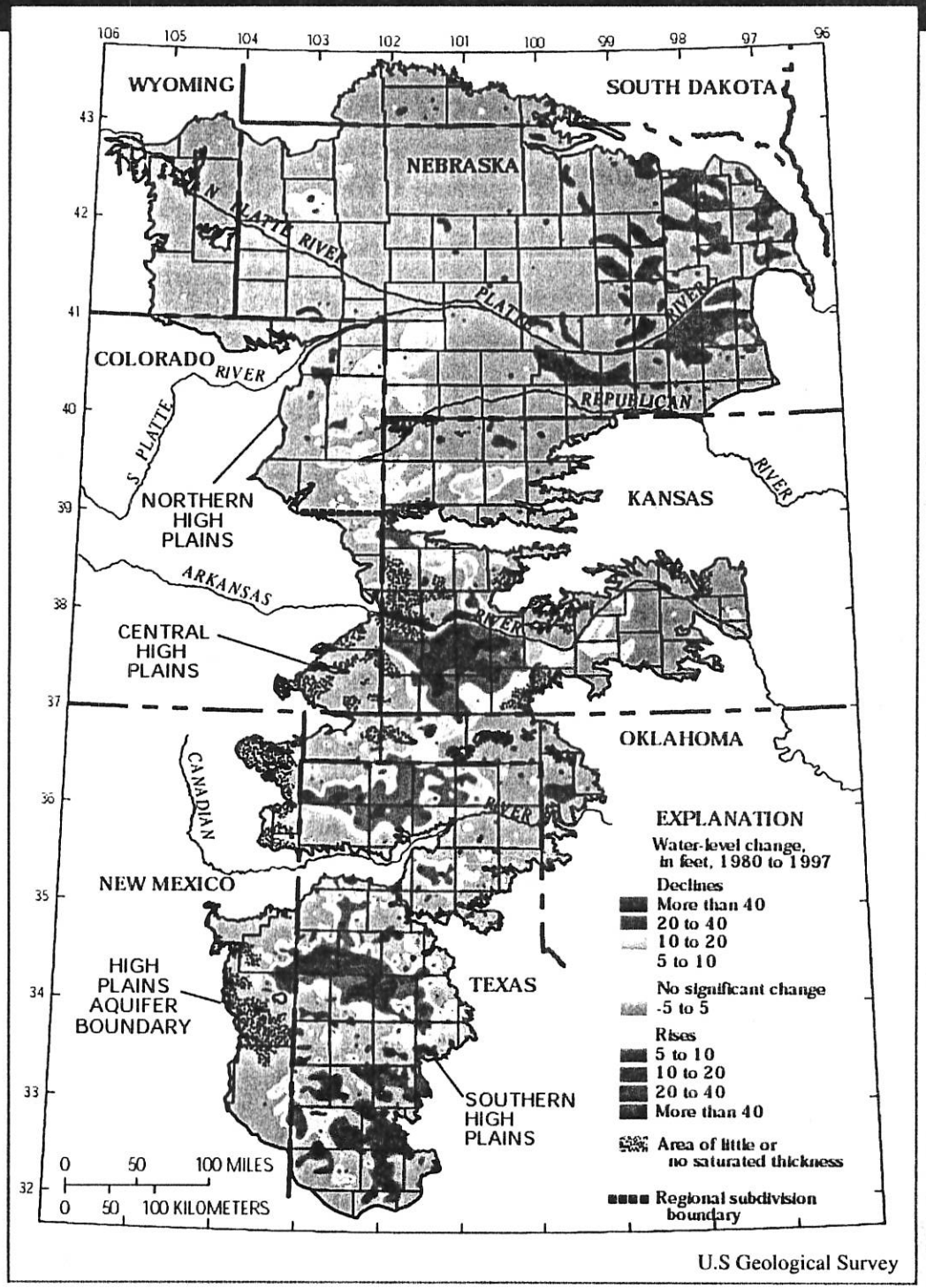
- Region's hydrogeology and its fluid systems

- Natural resources, with special emphasis on nature, location, quantity, and quality of water resources

- Establishing understanding of interactions between surface and ground waters

- Geophysical techniques, procedures, and models with potential for regional application in mapping subsurface deposits in midcontinent region

- Transfer of technology and information



STATE OF KANSAS
DEPARTMENT OF WILDLIFE & PARKS

Office of the Secretary
900 SW Jackson, Suite 502
Topeka, KS 66612-1233
785/296-2281 FAX 785/296-6953

HOUSE BILL NO. 2042

Testimony Provided to
House Committee on Environment
February 6, 2001

House Bill No. 2042 would require that all nonresidents born after July 1, 1957 carry proof of completion of hunter education while hunting in Kansas. This bill was part of the department's legislative package, and is supported by the department.

Under current law, all persons born after July 1, 1957, whether resident or nonresident, must complete hunter education in order to hunt in Kansas (unless hunting on that person's own land), and must carry proof of hunter education while hunting in the field until 27 years of age. Neither residents and nonresidents 27 years of age or older are required to carry their card while hunting. Consequently, the impact of HB 2042 would be that nonresidents would be required to continue carrying their hunter education card even after reaching age 27.

The department proposes this bill in response to a series of discussions held over the past few years concerning enforcement of the hunter education requirement. In past years, the department has proposed legislation that would have required all persons, resident and nonresident, to carry proof of hunter education after age 27. HB 2042 is offered as an alternative to that legislation.

While it is not yet possible to check the validity of a person's hunter education number (written on the hunting license) during a license check in the field, individuals who completed hunter education in Kansas are listed on a computer, and therefore are comparatively easy to check. In contrast, it is quite difficult to verify a hunter education number from another state, since each state uses its own computer database, and some are not listed by computer at all. Consequently, requiring a nonresident to carry the hunter education card while hunting greatly improves the possibility of enforcing the hunter education requirement. As with other department issues, if a person demonstrates that he or she did have a valid hunter education card at the time a citation was issued, but simply didn't have it in possession at the time, the law allows that citation to be wiped off.

The hunter education program established by the Legislature in 1973 has been credited with improving hunting safety and decreasing accidents throughout the state. HB 2042 would not require anyone to take hunter education who is not already required to do so, and the department does not believe it would be a substantial burden on the hunting public. However, the department believes it would assist enforcement of the current law, and therefore requests that the committee support HB 2042.

W:\WPDOCS\LEGISLAT\01BILLS\HB2042TE.WPD

House Environment
2-6-01
Attachment 5

KANSAS WATER AUTHORITY
901 South Kansas Avenue, Topeka, KS 66612-1249 (785) 296-3185

Kent Lamb, Chairman
RR 1, Box 69, Macksville, KS 67557 (316) 348-2315

TESTIMONY BEFORE
HOUSE ENVIRONMENT COMMITTEE
February 6, 2001 at 3:30 p.m. in Room 231-N
House Concurrent Resolution 5009
By Al LeDoux Secretary of the Kansas Water Authority

My name is Al LeDoux, and I am the Director of the Kansas Water Office. I am appearing today as the Secretary of the Kansas Water Authority, which requested introduction of this Resolution under its authority in K.S.A. 74-2622 (c). K.S.A. 74-2622 (a) established the Kansas Water Authority within and a part of the Kansas Water Office.

The Kansas Water Authority approved the *Kansas Water Plan* formulated under K.S.A. 82a-901 in July of 2000. The *Kansas Water Plan* contained a recommendation for the Director of the Kansas Water Office to develop recommendations on actions the federal government should take to conserve the High Plains Aquifer. As a result of that recommendation I formed an ad hoc committee, which developed the committee report that is attached. In November 2000, the Kansas Water Authority endorsed this report and recommended that the Governor and the Legislature also support this report.

On December 28, 2000, Governor Graves sent the attached letters on this report to the Kansas congressional delegation.

On behalf of the Kansas Water Authority, I would encourage your favorable consideration of this Resolution.

Attachments:
1. Report Summary
2. Governor's Letters
3. Committee Report

House Environment
2-6-01
Attachment 6

HIGHLIGHT OF REPORT

Member	Community	Representing
Cliff Mayo, Chair	Garden City	Local Governments
Lon Frahm	Colby	GMD #1, #3, and #4
Rep. Carl Holmes	Liberal	KS House of Representatives
Dr. Marc Johnson	Manhattan	KSU Ag Experiment Station
Larry McCants	Goodland	Local Economics
Rep. Dennis McKinney	Greensburg	KGS Advisory Council
Sen. Steve Morris	Hugoton	Kansas Senate
Don Paxson	Penokee	KS Assn. Of Conservation Districts
David Pope	Topeka	KDA/Div. Of Water Resources
Gordon Schmidt	Inman	GMD's #2 and #5

Section I – Highlights of General Policies:

- Conserving the Aquifer will require action at all levels.
- Jurisdiction over the allocation, priority and use of water will remain with each state.
- Federal assistance should be for voluntary, incentive-based programs.
- Assistance for economic development needs to occur prior to the reduction of irrigation.

Section II – Highlights of Federal Assistance to States:

- Research for mapping and analysis, water conservation, and crop production.
- Expand ground water conservation programs for cost share assistance to water users.
- Preserve environmental needs through water right purchase in priority decline areas.
- Provide education to allow for more informed decisions on water use.

Section III – Highlights of Federal Farm Programs:

- Create a Preservation Reserve program for irrigators to switch to dryland agriculture.
- Expand eligibility of Conservation Reserve Enhancement Program to irrigated.
- Provide a USDA Commodity Incentive Payment Water Conservation Option for irrigators to receive the same payments for low water crops they have historically received for high water crops.

Section IV – Highlights of Federal Assistance for Economic Stability:

- Research the economic futures of communities that rely on irrigation.
- Support Regional Economic Assistance Centers and telecommunication infrastructure to stabilize the economy.
- Target existing economic development assistance programs to the Aquifer.
- Cost share grants to agricultural operators to develop value added products.
- Provide economic development incentives to High Plains communities to stimulate growth and expand beyond irrigated agriculture.

Section VI - Impact on Federal Budget:

- Federal appropriation should, at a minimum, be 250 million dollars a year for 20 years.
- The Congressional Budget Office should determine if this program could be revenue neutral, considering the savings from reduced commodity and economic payments.

STATE OF KANSAS

BILL GRAVES, *Governor*
State Capitol, 2nd Floor
Topeka, Kansas 66612-1590

(785) 296-3232
1-800-748-4408
FAX: (785) 296-7973

OFFICE OF THE GOVERNOR

December 28, 2000

The Honorable Sam Brownback
United States Senate
303 Hart Senate Office Building
Washington, DC 20510

Dear Sam:

As you are aware, the High Plains Aquifer is the most important water resource in western Kansas. The High Plains Aquifer, which includes the Ogallala, has been critical to the development of western Kansas' extensive agricultural production. However, the Kansas Geological Survey has estimated the remaining useable life of the aquifer is 25 years or less for many areas of western Kansas, based on current decline trends. Among other activities, action is needed to assist with transitions to less water intensive agriculture.

Enclosed is the report "Federal Actions Necessary for the Conservation and Environmental Preservation of the High Plains Aquifer" prepared by an ad hoc committee appointed by the Kansas Water Office. The members of this committee are all involved with the High Plains Aquifer in their professional lives. Many are irrigators that depend on High Plains water, and all are deeply concerned about the future of this vital resource.

I encourage you to give these recommendations serious consideration. Members of the Kansas Water Office and the ad hoc committee would be happy to meet with you and your staff to discuss these recommendations. The Kansas Water Office has already briefed J.D. Johannes on this report.

Sincerely,

BILL GRAVES
Governor

6-3

STATE OF KANSAS

BILL GRAVES, *Governor*
State Capitol, 2nd Floor
Topeka, Kansas 66612-1590

(785) 296-3232
1-800-748-4408
FAX: (785) 296-7973

OFFICE OF THE GOVERNOR

December 28, 2000

The Honorable Jerry Moran
United States House of Representatives
1519 Longworth House Office Building
Washington, DC 20515-1601

Dear Jerry:

As you are aware, the High Plains Aquifer is the most important water resource in western Kansas. The High Plains Aquifer, which includes the Ogallala, has been critical to the development of western Kansas' extensive agricultural production. However, the Kansas Geological Survey has estimated the remaining useable life of the aquifer is 25 years or less for many areas of western Kansas, based on current decline trends. Among other activities, action is needed to assist with transitions to less water intensive agriculture.

Enclosed is the report "Federal Actions Necessary for the Conservation and Environmental Preservation of the High Plains Aquifer" prepared by an ad hoc committee appointed by the Kansas Water Office. The members of this committee are all involved with the High Plains Aquifer in their professional lives. Many are irrigators that depend on High Plains water, and all are deeply concerned about the future of this vital resource.

I encourage you to give these recommendations serious consideration. Members of the Kansas Water Office and the ad hoc committee would be happy to meet with you and your staff to discuss these recommendations. The Kansas Water Office has already briefed Mike Zamrzla on this report.

Sincerely,

BILL GRAVES
Governor

6-4

STATE OF KANSAS

BILL GRAVES, *Governor*
State Capitol, 2nd Floor
Topeka, Kansas 66612-1590

(785) 296-3232
1-800-748-4408
FAX: (785) 296-7973

OFFICE OF THE GOVERNOR

December 28, 2000

The Honorable Pat Roberts
United States Senate
302 Hart Senate Office Building
Washington, DC 20510

Dear Pat:

As you are aware, the High Plains Aquifer is the most important water resource in western Kansas. The High Plains Aquifer, which includes the Ogallala, has been critical to the development of western Kansas' extensive agricultural production. However, the Kansas Geological Survey has estimated the remaining useable life of the aquifer is 25 years or less for many areas of western Kansas, based on current decline trends. Among other activities, action is needed to assist with transitions to less water intensive agriculture.

Enclosed is the report "Federal Actions Necessary for the Conservation and Environmental Preservation of the High Plains Aquifer" prepared by an ad hoc committee appointed by the Kansas Water Office. The members of this committee are all involved with the High Plains Aquifer in their professional lives. Many are irrigators that depend on High Plains water, and all are deeply concerned about the future of this vital resource.

I encourage you to give these recommendations serious consideration. Members of the Kansas Water Office and the ad hoc committee would be happy to meet with you and your staff to discuss these recommendations. The Kansas Water Office has already briefed Chuck Banks on this report.

Sincerely,

BILL GRAVES
Governor

Committee Report

On

Federal Actions Necessary For the Conservation and Environmental Preservation of The High Plains Aquifer

Presented to Director, Kansas Water Office

October 27, 2000

Member	Community	Representing
Cliff Mayo, Chair	Garden City	Local Governments
Lon Frahm	Colby	GMD #1, #3, and #4
Rep. Carl Holmes	Liberal	KS House of Representatives
Dr. Marc Johnson	Manhattan	KSU Ag Experiment Station
Larry McCants	Goodland	Local Economics
Rep. Dennis McKinney	Greensburg	KGS Advisory Council
Sen. Steve Morris	Hugoton	Kansas Senate
Don Paxson	Penokee	KS Assn. Of Conservation Districts
David Pope	Topeka	KDA/Div. of Water Resources
Gordon Schmidt	Inman	GMD's #2 and #5

STATE OF KANSAS

Bill Graves, Governor

KANSAS WATER OFFICE
Al LeDoux
Director

901 S. Kansas Ave.
Topeka, Kansas 66612-1249

785-296-3185
FAX 785-296-0878
TTY 785-296-6604

October 31, 2000

Al LeDoux, Director
Kansas Water Office
901 S. Kansas Avenue
Topeka, KS 66612

Dear Al:

Enclosed is the committee report recommending the federal High Plains Aquifer Conservation and Environmental Preservation Act. This report completes the work of your committee to identify actions that should be taken by the federal government to conserve the High Plains Aquifer.

The recommendations in this report were designed for the federal government to help individual water users, local units of government and the states in carrying out their responsibility for management of the High Plains Aquifer. The committee discussed ideas and incentives that could be considered by the state to ensure the proper management of the High Plains Aquifer. Individual members of the committee would welcome the opportunity to share these ideas with you, the Kansas Water Authority, and the Governor.

The recommendations in this report will only be successful if they are implemented. The Committee discussed implementation of these recommendations during its meetings and would like to assist in the development of a strategy to ensure these recommendations become a reality. These recommendations could be incorporated into the fiscal year 2002 U.S. Farm Bill or as independent legislation.

Sincerely,

Cliff Mayo

Cliff Mayo, Chairman

CM:CD:kf

The High Plains Aquifer Conservation and Environmental Preservation Act

The High Plains Aquifer is the most important water resource in the eight state high plains region. The area overlying the High Plains Aquifer, in general, receives low amounts of precipitation and has limited surface water. For example, in southwestern Kansas, groundwater was the source for over 99% of the reported water uses, and irrigation accounted for 97% of reported uses (1997 Kansas water use reports). The High Plains Aquifer consists primarily of the Ogallala Formation, plus a few other distinct, but hydraulically connected formations. It underlies 33,500 square miles of 46 counties in Kansas, and extends through eight states from South Dakota to Texas.

The High Plains Aquifer has a limited economic life for large volume irrigation and is currently under intense management by most groundwater districts and state governments. It is the principle source of water for irrigation throughout this heavily agricultural region. An estimated 15 million-acre feet of water is withdrawn from the aquifer for irrigation each year.

There are extensive areas in Kansas in which the estimated useable life of the aquifer for large volume pumping is less than 25 years. The High Plains Aquifer is being mined; water is being withdrawn from the aquifer at a much faster rate than it is being recharged. Based on current use demands, the end is in sight for large volume irrigation for many areas in Kansas, Oklahoma, Texas, Colorado and New Mexico.

Section I. Administration of Act.

A. General Policies. The following general policies should be considered in administration of this Act.

1. Conserving the High Plains Aquifer will require commitments and action at the national, state, local and individual levels.

2. States are to maintain primary jurisdiction over the allocation, priority and use of water resources within each state.

3. Federal assistance should support state mechanisms for solutions.

4. Federal assistance should be for voluntary, incentive-based programs. This approach has been successful in Kansas.

5. Federal programs should provide a menu of program options for irrigators in the High Plains region. This will allow individuals to choose the best option for their situation thus increasing opportunities for success.

6. States should identify priority High Plains Aquifer decline areas, and wetlands and streams dependent on the aquifer baseflow. Resources should be targeted to those priority areas by the level of support offered.

7. Water conservation programs funded by this Act shall result in reduced depletion of the High Plains Aquifer.

8. Irrigation is energy intensive. Rising energy costs, particularly with low commodity prices, will be the deciding factor for many farmers in ceasing irrigation. Assistance is needed to educate, plan and transition from water intensive agriculture.

9. The consequence of reduced irrigation will have a direct economic impact on secondary and tertiary businesses. There needs to be assistance for economic development for communities prior to the reduction of irrigation in the region.

10. The environmental benefits of preserving the aquifer are as important and as significant as the economic benefits.

11. This Act has the potential to be revenue neutral to the federal government over the 20-year life of the program, as it would be offset by the redirection of federal dollars.

B. High Plains Aquifer Area

The term "High Plains Aquifer" is the groundwater reserve depicted as Figure 1 in the United States Geological Survey Professional Paper 1400-B, titled Geohydrology of the High Plains Aquifer in Parts of Colorado, Kansas, Nebraska, New Mexico, Oklahoma, South Dakota, Texas and Wyoming. All individual and non-federal entities in this area should be eligible for federal assistance programs. However, highest priority areas for assistance should be targeted to priority groundwater declines with the advice of each state. Assistance is to be provided to states in proportion to the area of severe High Plains Aquifer declines in each state, and the potential amount of economic disruption and environmental impact that could occur with those declines.

C. High Plains Aquifer Coordination Council

A High Plains Aquifer Coordination Council shall be established comprised of two representatives of the federal government, one from the U.S. Department of Agriculture and one from the U.S. Department of Interior, and two representatives from each of the eight states selected by each state's governor, one representing irrigation production agriculture and the other representing state government. The purpose of this council will be for the federal government to coordinate all federal assistance programs of the federal agencies to carry out the provisions of this Act. The responsibilities of the eight state council representatives will be to ensure coordination within each state and to coordinate activities with federal government and other state representatives. The High Plains Aquifer Coordination Council shall

report to Congress every three years on the progress toward the High Plains Aquifer conservation and environmental preservation. In addition the Council shall recommend changes to this Act, if necessary to ensure this Act is successful.

Section II. Federal Assistance for State Water Conservation and Environmental Preservation Programs.

A. High Plains Aquifer Research

1. Federal financial assistance shall be provided to the eight state geologic surveys as each state's lead agency, in the mapping and analysis of the three-dimensional framework and hydrogeology of the High Plains Aquifer. The Secretary of the Interior, working through the United States Geological Survey (USGS), shall assist the states in the mapping and analysis of the High Plains Aquifer in the eight state regions. The purpose of this research effort will be to help the High Plains Aquifer Coordination Council ensure the efficient administration and assessment of programs referenced in this Act.

2. Federal financial assistance shall be provided to land grant universities in the high plains region to enhance research and extension education in water conservation, increasing economic value of agricultural output per unit of water, and crops suitable for low water farming. Additional water conservation research funds are to be made available on a competitive basis to any university or research organization within the high plans region.

B. Groundwater Conservation Assistance Program

1. The federal government shall provide financial and technical assistance to the eight high plains region states for the development of a new or expansion of a state's existing groundwater conservation assistance program. The states are encouraged to administer these programs in conjunction with local units of government. The state program would provide water conservation cost share assistance to water users in the High Plains Aquifer that have state approved certified water conservation plans. This action will extend the economic life of the High Plains Aquifer. The Secretary of Agriculture shall establish within the Natural Resources Conservation Service a groundwater conservation assistance program that provides technical assistance and coordination with each state program.

2. Federal funding shall be provided to be administered through state groundwater conservation programs for water conservation cost share grants for individual farming operations to implement farm water conservation measures approved in certified water conservation plans. States are to target priority High Plains Aquifer areas through weighting the water resource cost share program incentives; participants in higher priority areas would receive a greater level of cost share. The state program options may:

a. Include an agreement with the landowner to decrease total water usage over a five-year period that is beneath their current five-year total water usage.

b. Provide cost share grants for conversion to more highly efficient irrigation methods. States would determine which systems are most efficient in their areas and which types of conversions are cost effective for the amount of irrigation water saved.

c. Provide incentives for removal of end guns, installation of water meters, and innovative programs such as water right banking in which a reduction in actual water usage is required.

d. Provide cost share grants to farmers to try innovative, environmentally friendly, low water use cropping and livestock practices.

C. Environmental Preservation

Federal financial assistance should be provided to each high plains state for an incentive based, binding agreement with a landowner to permanently stop irrigating specific tracts of land for the purpose of reducing consumption in groundwater declines areas of the High Plains Aquifer. This payment may be for a water right purchase, or an agreement to last in perpetuity with the land. Each state would be required to identify areas of priority, determine eligibility and insure that the water saved will not be used elsewhere. States may choose to make partial water rights purchases an option for farmers that have enrolled land into an irrigated lands reserve or into the Conservation Reserve Program.

D. Education

The federal government shall provide financial assistance to each of the eight high plains states to provide educational programs related to this Act. The states may cooperate with educational institutions, the Ogallala Aquifer Institute or other private organizations in the administration of this program. Education activities shall include but not be limited to:

1. Provide farming water conservation workshops to producers, crop consultants, and agricultural groups through the eight states region. Encourage decreases in irrigation levels by educating that maximum yield does not equal maximum profit. Provide guidelines for maximum profit level of irrigation.

2. Provide training and periodic update workshops for field staff responsible for implementing water conservation cost share programs through state

universities in the eight states region and Natural Resources Conservation Service and Bureau of Reclamation on current conservation research and best available knowledge.

3. Provide public education and information on the High Plains Aquifer to pre K-16 and adult learners. The education and public information effort would be targeted to state and local decision makers to allow more informed decisions, and to increase public understanding and input into those decisions.

Section III. Federal Farm Programs for Conservation and Environmental Preservation of the High Plains Aquifer

A. Preservation Reserve for the High Plains Aquifer

Create within the U.S. Department of Agriculture, Natural Resources Conservation Service a federal program to provide assistance to farmers for switching irrigated lands to dryland agriculture. The Natural Resources Conservation Service would formulate and carry out the enrollment of lands in an irrigated lands reserve program through use of multiple year contracts for irrigated lands that would result in significant per acre savings of groundwater resources if converted to dryland agriculture. Target by weighting incentives to enroll lands into the irrigated lands reserve that are within High Plains Aquifer priority areas. The states are to provide delineation of the High Plains Aquifer priority areas for Natural Resources Conservation Service use.

B. Conservation Reserve Enhancement Program (CREP) for High Plains Aquifer

1. Expand eligibility for enrollment in a continuous Conservation Reserve Enhancement Program to allow currently irrigated lands to qualify based on being in a high priority High Plains Aquifer decline area.

2. Lands eligible for the Conservation Reserve Program established under 16 U.S.C. 3831 which would result in significant per acre savings of High Plains Aquifer resources if removed from agricultural production shall be awarded at least 90 Conservation Reserve Program bid points, to be designated as groundwater conservation points, in addition to any other ratings the lands may receive.

3. Designate regions where the High Plains Aquifer is hydraulically connected to wetlands or provides the primary baseflow to high priority streams, as regions of special environmental sensitivity and therefore eligible for enhanced assistance under Conservation Reserve Program (CRP), Wetland Reserve Program (WRP), and Environmental Quality Incentive Programs (EQIP).

4. States are to provide Natural Resources Conservation Service with an identification of priority areas for removal from irrigation; wetlands hydraulically connected to the High Plains Aquifer and high priority streams dependent on baseflow.

C. U.S. Department of Agriculture Commodity Incentive Payments Water Conservation Option for High Plains Aquifer

Create a water conservation option in the U.S. Department of Agriculture federal farm program to provide commodity incentives for irrigators in the High Plains Aquifer groundwater decline areas that switch from a high water intensive crop to a low water intensive crop either through low volume irrigation or dryland production. The payment is to be equivalent to U. S. Department of Agriculture payments they would have been eligible for under the high water intensive crop. Guidelines shall require the average annual water usage for low volume irrigation to remain below a targeted level.

Section IV. Federal Assistance for Economic Stability of High Plains Aquifer Region

A. Provide federal financial assistance to the eight states to conduct research and assessment of economic health for both near term and long-term future of communities within the high plain region. States should administer programs in partnership with universities, regional economic development centers and individual communities where practical.

B. The federal government should provide financial support for regional economic assistance centers and telecommunications infrastructure, and offer community assistance planning programs through such centers to assist individual communities and regional areas within the high plains aquifer for maintaining and stabilizing the economy while preserving the aquifer.

C. The federal government will identify the High Plains Aquifer area as priority for targeting existing federal economic development assistance programs.

D. Provide cost share grants to agricultural operators to develop cooperatives to process, package and market environmentally friendly, value added agricultural products, especially high value products that can be marketed to a local urban economy or exported out of the region.

E. The federal government will provide economic development incentives to communities in the High Plains Aquifer decline area to stimulate growth and expand beyond irrigated agriculture.

Section V. Impact on the Federal Budget

A. The federal appropriation for carrying out the purposes of this act should, at a minimum, be 250 million dollars a year for 20 years. This amount would be reviewed by the High Plains Coordination Council and revised as appropriate.

B. The Congressional Budget Office shall conduct an analysis to determine if it is feasible for this program to be revenue-neutral over the 20-year life of the program. This analysis should weigh the reduced commodity and economic payment costs as a savings to the federal government, a cost-benefit analysis of economic and environmental benefit to the United States for preservation of the High Plains Aquifer and the opportunity costs of not implementing this program. The results of this analysis should be provided to the High Plains Aquifer Coordination Committee to carry out its recommendations in achieving the High Plains Aquifer conservation and environmental preservation in the most cost effective manner.

Groundwater:
"The Resource of the Future"

Southwest Kansas
Groundwater Management District

* * * * *

(316) 275-7147
409 Campus Drive, Suite 106
Garden City, Kansas 67846

February 6, 2001

Joann Freeborn, Chair
House Environment Committee
Kansas State Legislature

RE: "Federal Actions Necessary for the Conservation and Environmental Preservation of the High Plains Aquifer"

Dear Chair Freeborn and Associate Representatives,

The Board of Directors respectfully request your most serious consideration for support of this concurrent resolution regarding the High Plains Aquifer.

As a hydrologic community of common interest, the Ogallala Aquifer is supporting a sophisticated, vertically integrated, agri-business economy. The High Plains region is an incredible economic engine producing international benefits from a largely non-renewable fuel: groundwater. **We are certain to agree that the physiographic impact of this unique water resource in our nations economy, culture, and environment is not sufficiently recognized and is under-appreciated.**

It is extremely important to educate, plan, and provide for the long-term productivity of the High Plains Aquifer and its associated impacts to local, state, and national economies. The District considers that consistency between federal farm policy and federal environmental programs is absolutely essential to effect a productive, long-term conservation of our non-renewable groundwater resources. Implementation must also occur consistently within the regional interstate, state, and local settings in order to provide a cohesive, systematic approach to maintaining the precarious economies which are currently balanced on the back of the High Plains Aquifer.

The provisions proposed in these federal recommendations are comprehensive and far-sighted - and necessary. **The people of Southwest Kansas strongly advocate their adoption at the state and national level.**

We appreciate your consideration, and as always, we look forward to working with you in the future! Please write or call if you have any questions or if we can be of any assistance.

Sincerely,

Steven K. Frost
Executive Director

pc: Governor Bill Graves

House Environment
2-6-01
Attachment 7

Steering Committee

Dan Baffa
Finnup Center for Conservation Education

Carol Ballantyne
Garden City Community College

Rex Buchannan
Kansas Geological Survey

Diane Coe
Southwest Kansas Groundwater Management District

Laura Downey
Kansas Association for Conservation and Environmental Education

Clark Duffy
Kansas Water Office

Mark Gillen
Finney County Conservation District

Paul Hartman
Kansas State University

Rachael Herpel
The Groundwater Foundation

Steve Irsik, Jr.
Kansas Agriculture Ogallala Task Force

Dennis Mesa
Governor's Vision 21st Century Initiative Water Task Force

Stephen Waite
Great Plains Foundation

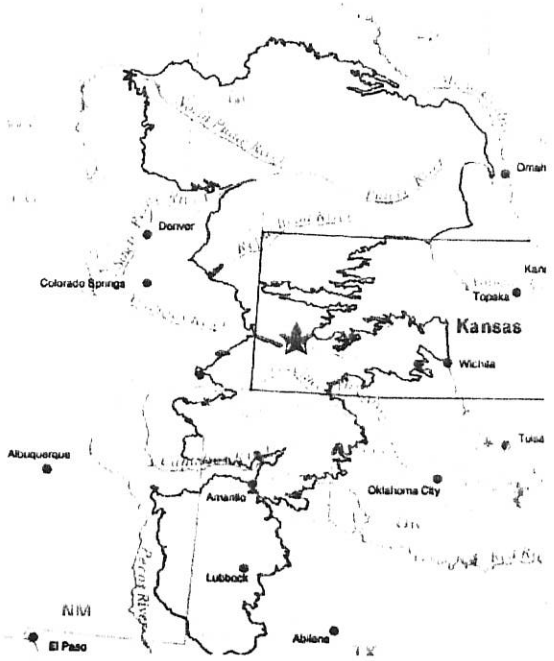
Children and Water:
A Future Worth Protecting!

For additional information contact:

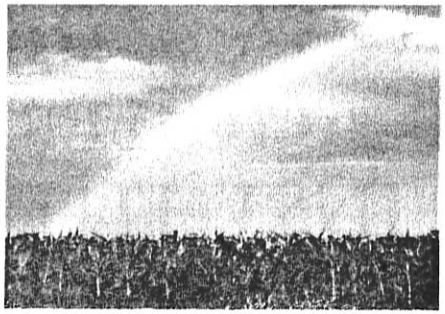
Dan Baffa, Director
Finnup Center for Conservation Education
316-276-1250

Steve Frost, Executive Director
Southwest Kansas Groundwater Management District
316-275-7147

OGALLALA AQUIFER INSTITUTE



A Conservation Education Program for the High Plains Aquifer Region



MISSION STATEMENT

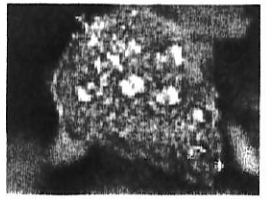
The mission of the Ogallala Aquifer Institute is to provide a regional water resource learning center that promotes a holistic and multidisciplinary educational perspective on the importance of the High Plains Aquifer in our nation's history, culture, economy and environment.

A Conservation Education Program for the High Plains Aquifer Region

The eight state High Plains Aquifer region (Nebraska, Colorado, Kansas, New Mexico, Oklahoma, Texas, South Dakota, and Wyoming) has enjoyed a tremendous economic benefit from the world's largest fresh water aquifer. The aquifer has a limited economic life and is currently under intense management by groundwater districts and the respective state governments. A conservation education program for the High Plains Aquifer is needed to explain the history, hydrology, and geology of the aquifer, and to describe the overwhelming economic, political and cultural impacts of the aquifer on the region, our nation and the world.

Finnup Center for Conservation Education

The Ogallala Aquifer Institute would be located at the highly successful Finnup Center for Conservation Education in Garden City, Kansas. Designed as a natural complement to the Finnup Center, the Institute is envisioned to be a unique, one-of-a kind facility of an outstanding caliber. It's purpose is to provide education support activities for schools and adult education opportunities throughout the eight state region. The program would include a variety of on-site visual displays, an interactive learning center with outreach to educators in the eight state region, and would incorporate the potential for integration with other environmental and energy education programs. Additional conference facilities will be a distinct complement to the assets of the Institute and the Finnup Center.



Potential partners in Kansas include the State of Kansas, the Finnup Center for Conservation Education, Groundwater Management Districts, Conservation Districts, and the Kansas Association for Conservation and Environmental Education (KACEE), and other water management organizations. Similar partnerships with all of the other High Plains Aquifer states would be sincerely invited, highly sought after, especially encouraged and gratefully welcomed!

To: House Environment Committee
Re: HCR 5009

From: Kirsten Hanna, Volunteer
Kansas Chapter of the Sierra Club

Madam Chair and committee members,

I am Kirsten Hanna, and a volunteer representing the Kansas Chapter of the Sierra Club.

Thank you for giving us the opportunity to appear before you today. The Sierra Club would like to go on record in support of House Concurrent Resolution 5009.

We recognize the potential dangers of the depletion of our aquifers and are concerned with their preservation. We applaud the Kansas legislature and the administration for investigating this situation and generating potential remedies.

The Sierra Club also supports this committee and the legislature in coordinating with other high plains states and the federal government to spur action on this matter.

Thank you again for giving us a voice

House Environment
2-6-01
Attachment 8

Kansas Grain Sorghum Producers Association

Kansas Corn Growers Association

Testimony Regarding House Concurrent Resolution No. 5009
Before the House Environment Committee
February 6, 2001

Good afternoon Chairman Freeborn and members of the House Environment Committee, my name is Greg Krissek. I am Director of Operations for the Kansas Corn Growers Association. I appreciate the opportunity to make brief comments about HCR 5009. My comments also reflect the position of the Kansas Grain Sorghum Producers Association.

These organizations currently are neutral concerning HCR 5009. Information about new efforts to discuss and plan for the future of the Ogallala portion of the High Plains Aquifer is just unfolding. We are concerned that legislative action prior to all stakeholders having an opportunity to study and review these new proposals may be premature.

We are aware that state agencies are planning meetings with stakeholder groups during February and March of this year to discuss their current proposals about the future of the Ogallala groundwater resource. We look forward to these opportunities.

Due to other events involving agencies of the federal government in the past year, our organizations will proceed very cautiously in supporting requests for federal participation in state natural resource issues. Our membership has questions and concerns about new proposals governing use of groundwater in the Ogallala region. Thus, we question the need to move forward until local and stakeholders' input can be gathered during the next several months.

Thank you for the opportunity to make these comments and I will try to answer any questions concerning this testimony.

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