MINUTES

HOUSE COMMITTEE ON ENERGY AND NATURAL RESOURCES

November 17-18, 1993
Room 526-S -- Statehouse

Members Present

Representative Carl Holmes, Chairperson
Representative Walker Hendrix, Vice-Chairperson
Representative Ken Grotewiel, Ranking Minority Member
Representative Richard Alldritt
Representative Joann Freeborn
Representative Fred Gatlin
Representative Gary Hayzlett
Representative Joe Kejr
Representative Robert E. Krehbiel
Representative Douglass Lawrence
Representative Steve Lloyd
Representative Eloise Lynch
Representative Laura McClure
Representative Dennis McKinney
Representative Don Myers
Representative Ted Powers
Representative Don Rezac
Representative Eugene Shore
Representative Richard Nichols
Representative Carolyn Weinhold

Member Absent

Representative Jim Long

Staff Present

Raney Gilliland, Kansas Legislative Research Department
Dennis Hodgins, Kansas Legislative Research Department
Mary Ann Torrence, Revisor of Statute's Office
Clarene Wilms, Committee Secretary

Conferees

Charles Jones, Director, Division of Environment, Kansas Department of Health and Environment
Theodore D. Ensley, Secretary, Kansas Department of Wildlife and Parks
Dave Sharp, United States Fish and Wildlife Service
Marvin Kraft, Kansas Department of Wildlife and Parks
William A. Anderson, Jr., Commissioner, Kansas Department of Wildlife and Parks
Jerry Hazlett, Kansas Wildlife Federation
Joyce Wolf, Kansas Audubon Council
Harry Herington, League of Kansas Municipalities
William Craven, Kansas Sierra Club
Bill Ramsey, City of Olathe
Stephen A. Hurst, Director, Kansas Water Office
Dr. David Eklund, Kansas Water Office
David L. Pope, Chief Engineer, Division of Water Resources, Kansas Department of Agriculture
Wayne A. Bossert, Manager, NWKS Groundwater Management District No. 4, written testimony only
Richard Jones, Kansas Association of Conservation Districts
Jim Habiger, Soil Conservation Service, USDA
William R. Byrson, Director of Conservation Division, State Corporation Commission
Sam Baier, Medicine Lodge
Mike Mayberry, City Administrator, City of Kiowa
William Bider, Kansas Department of Health and Environment
Karl W. Mueldener, Kansas Department of Health and Environment
Joseph T. Pajor, Natural Resources Director, City of Wichita, written testimony only
Brian Olson, Bolson Salt, written testimony only

November 17, 1993
Morning Session

The meeting was called to order by Chairperson Carl Holmes at 8:30 a.m., on November 17, 1993, in Room 526-S of the Capitol.

Theodore D. Ensley, Secretary, Kansas Department of Wildlife and Parks, appeared before the Committee concerning the issue of the hunting season for sandhill cranes (Attachment 1). Secretary Ensley told the Committee that in August of this year the Kansas Wildlife and Parks Commission voted to provide for a sandhill crane hunting season, which is to run from November 6 through January 2. He also indicated that the Department expects to issue about 450 special permits at $5 each.

Dave Sharp, United States Fish and Wildlife Service, appeared before the Committee and stated that the United States Fish and Wildlife Service allows the states to decide whether or not to permit the hunting of sandhill cranes (Attachment 2). Mr. Sharp then discussed the history regarding the regulation of hunting of migratory birds. He also discussed the protection for the sandhill crane and the whooping crane. He stated that the recovery of the whooping crane is progressing, albeit slowly.

Mr. Sharp told the Committee that the issue of sandhill cranes and whooping cranes living in close proximity and the issue of the whooping cranes being an endangered species are given lengthy consideration when discussing guidelines for migratory bird hunting seasons. He stated that this was to protect the whooping crane and indicated that other aspects are investigated.

Mr. Sharp told the Committee that Kansas lies in the pathway of the largest American crane populations which is the Mid-Continent range. He said the region spans four nations from north to south, the Soviet Union, Canada, the United States and through Mexico. He also stated that the population has stabilized since the 1980s with about half a million cranes in the present population. The Committee was told that all central flyway states except Kansas and Nebraska allowed sandhill crane hunting in 1992 with a total of 12,391 cranes being shot. Mr. Sharp indicated that the total harvest rate in North America is about 25,000 cranes.

Marvin Kraft, a migratory bird specialist with the Kansas Department of Wildlife and Parks (KDWP), told the Committee that Kansas has adopted more restrictive regulations concerning the hunting of sandhill cranes than that provided by the U.S. Fish and Wildlife Service. He stated that the only exception to this was that 58 days were allowed by the federal agency and that Kansas also permitted a 58-day season. He said the season is timed to allow migration of the whooping cranes sighted in Kansas. He also stated that shooting hours are restricted, providing more light in the opening hours to insure identification between whooping cranes and sandhill cranes. He indicated that the 2:00 p.m. closure eliminates failing light as well as preventing harassment on roost areas which sandhill cranes use.

William A. Anderson, Jr., Commissioner, KDWP, spoke concerning the duties of the Commission in setting regulations for Kansas (Attachment 3). He stated that in the Spring of 1993, a group of farmers and sportsmen concerned about crop depredation approached the Commission and asked for consideration of a sandhill crane hunting season. He indicated that a number of state representatives and state senators also requested such a hunting season. Mr. Anderson explained that during subsequent hearings concern was expressed by some organizations and individuals about sandhill crane hunting and the possible implications to other species. Mr. Anderson stated that in the seven years he has served on the Commission no other subject has had a more extensive evaluation before final action. Speaking on behalf of the entire Commission, Mr. Anderson stated he felt a prudent decision was made and an important hunting opportunity was offered to Kansas sportsmen. A thorough evaluation of the 1993 season will be made before any action is taken in 1994.

Jerry Hazlett, Kansas Wildlife Federation, Inc. presented Resolution No. 1984-6 to Committee members noting it supported an open season on sandhill cranes in Kansas (Attachment 4). He stated that this consensus was reached in 1984 after extensive study of the biology and sociology of sandhill cranes. The Kansas Wildlife Federation, Inc. concluded that presently there was no threat to sandhill crane populations in the United States or to the whooping crane which becomes a major concern when considering the hunting of cranes.

Joyce Wolf, Kansas Audubon Council, presented testimony as well as a full position paper researched and written by David Rintoul, unanimously approved by the chapter delegates of the Kansas Audubon Council and expressed opposition to the hunting of sandhill cranes (Attachment 5).

Ms. Wolf stated that some of the issues which concern Audubon Council members include the provisions of certain management plans regarding sandhill cranes. She expressed concern about the minimal information available on the population stability and the fact that the distinctive breeding characteristics allows the sandhill crane to reach sexual maturity only after five to six years and produces few young each year.

Ms. Wolf also expressed concern about the potential harm to endangered whooping cranes and other nontargeted species during the hunting season. Also, the Council expressed concern about whether KDWP has the necessary staff to effectively monitor the presence of endangered species in Kansas.

A Committee member questioned Secretary Ensley concerning the attendance at hearings held on the issue of a hunting season for sandhill cranes and also requested a report on the costs of the Department to implement the program. The member expressed concern for the whooping cranes noting the times he had viewed them they were always in the company of sandhill cranes. The member questioned what type of hunter education in the area of identification was provided to those obtaining permits. Secretary Ensley stated they had a number of educational meetings for hunters and also pointed out the season was scheduled keeping in mind the migratory schedule of the whooping crane.

Another member questioned the cost of permits. Mr. Sharp told members that federal permits were free and the $5 charge made by Kansas is for the validation of the permit by the State of Kansas and is used to defray administrative costs.

A Committee member questioned Mr. Anderson about the petition by those opposed the sandhill crane hunting season and if it was disregarded. Mr. Anderson stated the season was perceived as a legitimate, additional recreational opportunity for Kansas sportsmen. He explained that the role of the Department and the Commission was to provide outdoor recreation opportunities with well managed use of our resources. Mr. Anderson stated he did not believe the vote of the Commission was a popular vote, also, his vote was one of his own conscience. He stated the Kansas Audubon Society was very helpful in providing extensive information and reference. It was also stated that the outcome was not a foregone conclusion, that the only preconceived conclusion was to look at the issue as thoroughly and as comprehensively as possible and a number of Commission members contacted national authorities on the issue.

A member questioned whether the El Dorado and Pittsburg meetings were published in the *Kansas Register*. Secretary Ensley stated that notice of both meetings was published.

A request was made to Wildlife and Parks for additional information concerning the results of the sandhill crane hunting season. This information will be provided during the 1994 Legislative Session.

The Committee's attention was then turned to the issue of freshwater and wastewater sludge. Staff told Committee members that originally there had been two draft bills regarding sludge. Staff then indicated that the Kansas Department of Health and Environment (KDHE) had suggested the two bills be combined and redrafted. The redrafted bill placed the issue under the Bureau of Water rather than solid waste statutes. Staff stated in substance it was the same as the earlier bills but is now a freestanding act.

Staff indicated that the bill applies to both freshwater and wastewater sludge produced by either water supply systems or sewage treatment systems. The bill would require a permit for any person to transfer sludge more than 30 miles within the state and that a manifest must accompany the sludge to enable KDHE to enforce the requirement. KDHE would be required to develop standards for transporters of sludge. The bill would make it unlawful to dispose of municipal sludge at a solid waste disposal area. Penalties were changed to a class B misdemeanor or a civil administrative penalty fee not to exceed $5,000 per violation to be imposed by KDHE.

Charles F. Jones, Director of Environment, KDHE, presented background concerning the sludge issue in the State of Kansas (Attachment 6). Mr. Jones stated that sludge residues from municipal water plants and sewage treatment plants have high nutrient value when placed on the soil but they also have potential problems such as heavy metals, solvents, and other pollutants. He stated that presently sludge from the eastern states is being shipped to eastern Colorado. He expressed concern about Departmental authority if any sludge should start to be shipped to Kansas. Mr. Jones stated that pathogens such as viruses and bacteria need to be controlled. He noted that some treatment plants eliminant such pathogens. He stated that new regulations could require there be no public access to the sludge where 10 percent of pathogens remain.

Mr. Jones stated that the proposed bill would: deal with transportation; require a manifest; develop standards for the transportation of waste; and require a permit if the sludge was transported outside the 30-mile range. The bill also would establish penalties for violations. Mr. Jones suggested amendments that would include freshwater and wastewater sludge to be defined as sewage thereby falling under the same regulatory purview. In addition, he asked that the bill also address land application in regard to sludge which would simply formalize what is presently being done. He stated that this would allow the Department to require permits of people who haul sludge into the state for disposal. He suggested that a rigorous testing regimen was suggested for sludge coming into the state from a facility not permitted by the State of Kansas. Mr. Jones stated that this would guarantee the sludge had been tested for heavy metals and other potentially harmful contaminants. Mr. Jones told members that language to implement these concepts had been developed and that they could be given to staff.

Harry Herington, League of Kansas Municipalities, presented testimony, copies of letters received from municipalities, and an article from the Texas League of Municipalities publication (Attachment 7). Mr. Herington told Committee members his organization was concerned with the proposed bills which would require local governments to develop an alternative procedure for the disposal of freshwater and wastewater sludge. Such regulation would place an unnecessary financial burden on local governments already struggling to comply with various federal mandates. He stated that these bills would remove one of the sludge disposal options currently approved by federal regulations. He stated that the League recommends the Committee take no action on this proposed legislation.

William Craven, Kansas Chapter, Sierra Club, appeared and presented testimony concerning land treatment of sludge (Attachment 8). Mr. Craven told members his organization was taking no position on these bills but did think there were serious questions about using sludge on farmland since contamination of groundwater may be caused by heavy metals in the sludge. He stated that detoxification of toxic chemicals is not a design objective for most municipal waste treatment facilities.

Mr. Craven suggested the best solution would be to allow local communities or counties to decide for themselves if they want sludge used on their lands. He stated that this would provide some local quality control and citizens would be more knowledgeable about what is being done.

Bill Ramsey, City of Olathe, stated a letter concerning this issue had been submitted in Attachment 6. Mr. Ramsey told members that Olathe operates two water treatment facilities that produce freshwater sludge and two wastewater facilities that produce wastewater sludge. He stated that there is a vast difference between the two. He stated that these bills would make reassessment necessary with future action uncertain. In discussing wastewater sludge, Mr. Ramsey commented that most cities use some form of land application. He stated their older plant uses an older process which removes the water and then it is applied to the landfill as cover material.

Mr. Ramsey expressed concern about the smaller communities and how they could handle requirements set forth in this bill which would cause everyone to totally reevaluate the handling of sludge. Mr. Ramsey suggested further evaluation of this issue and a delay of the bill until such time as further studies can be done.

Byron Johnson, General Manager, Water District No. 1, Johnson County, appeared in opposition to the proposed bill, 3 RS 1377 but did express support for review of the issue (Attachment 9). Mr. Johnson stated the bill assumes incorrect facts since there is no basis for the premise there is need for protection of water treatment residues. Residues from the water treatment process originate as 95 percent water with the balance being primarily calcium carbonate with some magnesium hydroxide. He stated that the residue in the remaining 5 percent contain products of chemical treatments such as aluminum hydroxide, polymer, and activated carbon, all at concentration levels not even remotely approaching levels set by EPA for hazardous waste.

Mr. Johnson stated the provisions of the bill would impose additional administrative burden and regulatory expense relating to these materials and have no relationship to solid waste as contemplated by existing law. It was further suggested that members read the more complete analysis of the bill and recommendations attached to the testimony by Mr. Johnson.

Charles Jones, KDHE, noted the Department did have a bill draft and the Chairperson requested it be made available to members for later discussion purposes.

A member questioned the current authority of KDHE to place restrictions on sludge brought into the state from elsewhere. Mr. Jones stated that the Department presently regulates wastewater sludge. Mr. Jones also stated that out-of-state sludge presents a gray area with the agency having some general authority. He indicated that it would be helpful to articulate where the Department's authority and responsibility were in the area of out-of-state wastewater sludge.

A member asked Charles Jones whether he was aware of any situations where freshwater sludge were being introduced into the river system. Mr. Jones stated that this was a concern in Leavenworth, Lawrence, and Topeka, and that action is being taken to stop this practice. He stated that several years ago Johnson County was prepared to return its freshwater sludge to the river and that issue is presently in litigation. The member questioned what control KDHE has over the freshwater sludge being introduced into any river. Mr. Jones stated the major concern is the water solids and what it does to the water quality. It was also noted that a discharge permit is issued to insure no other liquids go into the river.

Stephen A. Hurst, Director, Kansas Water Office, appeared before the Committee and presented testimony concerning the conservation, efficient and sustainable use, and management of the water resources of the state (Attachment 10).

Mr. Hurst stated that the Kansas Water Office statutorily is charged with the responsibility of being the water resource planning agency in the State of Kansas as well as being charged to coordinate the other water related agencies. Mr. Hurst also explained that the Water Office: has no regulatory authority; basically does planning; and participates in the coordination and development, on an annual basis, for the State Water Plan. He stated that the State Water Plan is revised annually to deal with topical issues and make recommendations to the Legislature and the Governor on the best way to address the issues, using amendatory or new legislation.

Mr. Hurst stated Kansas has one of the best computerized databases on statewide water use in the nation. Irrigation water use accounts for approximately 88 percent of all reported water use in the state. He stated that efficient use of water combined with conservation is necessary for more sustainable use of water.

Dr. David Eklund, Manager, Conservation and Evaluation Unit, Kansas Water Office, spoke to the Committee covering water conservation plan guidelines (Attachment 11). Dr. Eklund stated that it seemed none of the guidelines prepared and put in place prior to 1993 were very effective. He stated the new guidelines will be effective. He indicated that the officials from the Groundwater Management Districts provided strong input. According to Dr. Eklund, public input revealed a need for more on-site technical assistance, a need for metering information, simplified plan preparation, and additional self-monitoring.

David L. Pope, Chief Engineer, Director, Division of Water Resources, State Board of Agriculture, appeared and presented written testimony (Attachment 12). Mr. Pope stated his organization was the primary regulatory agency related to water use and water rights administration. He stated that the Division has significant responsibilities set forth in the Kansas Groundwater Management District Act as well as working with five groundwater management districts in central and western Kansas. Mr. Pope stated there is also a strong partnership between the local water districts and the state.

Mr. Pope explained that conservation of water is an integral part of provisions of the Kansas Water Appropriation Act and outlined the various provisions. He stated that the major components of conservation of water are:

1. requiring new applicants wishing to obtain permits to develop water conservation plans consistent with guidelines developed by the Kansas Water Office;

2. targeting the imposition of conservation plans to areas where they are most needed;

3. influencing water use efficiency and conservation with real incentives or disincentives and setting forth policies to deal with usage or abandonment of water rights;

4. using internal procedures to provide a standard method of determining the amount of an irrigation water right that can be converted to a new use;

5. enhancing the basic water use database maintained by the Division of Water Resources;

6. increasing the use of water metering to refine conservation programs; and

7. implementing the recommendations of the Ogallala Task Force.

A member questioned whether people understood they had some protection when using less water for a period of time. Mr. Pope explained that his office had developed a program whereby water right holders could maintain their water rights without using any water. He said this program was called the Water Rights Conservation Program. Mr. Pope stated that his office needs a stronger educational component and there were some problems due to a lack of understanding and information about water rights.

Mr. Pope explained there would be a need to enroll those coming out of the federal government's Conservation Reserve Program (CRP) plan since some of that land is irrigated. He stated that the Ogallala Task Force recommended these people be allowed to enroll in the Water Rights Conservation Program of the Division of Water Resources.

A member questioned the use of meters, in that some nonmetered users seemed to report higher estimates rather than the more realistic amounts being reported by actual metered wells. Mr. Pope stated that enforcement would be a difficult job to manage.

A member questioned the concept of local enforcement and whether it was realistic. Mr. Pope stated that in some districts there has been strong enforcement, others have not been as aggressive and the balance changes from area to area.

Mr. Wayne A. Bossert, Manager, Northwest Kansas Groundwater, Management District No. 4 sent written testimony to the Committee (Attachment 13). The attachment contained a summary of the district's conservation planning efforts over the past nine years.

A member questioned how water rights were handled in areas where there basically was no water available. Mr. Pope stated that in some areas people are looking for available water rights to buy and some purchases are being made.

A member asked a question relative to the water problems with states north of Kansas who are not in compliance with its legal obligations to the State of Kansas. Mr. Pope noted there is a problem with the states of Nebraska and Colorado, and that Kansas has a much stronger conservation policy in force. He stated the fundamental issue with Nebraska is that they are using more water than is allocated in the Republican River Compact. Mr. Pope explained that they do not regulate the use of groundwater in the state at all and their only requirements are spacing of the wells. Mr. Pope discussed a recent meeting with officials from Nebraska and stated that he thought the meeting in Nebraska was positive with good educational information being exchanged.

During a noon hour briefing, the Department of Health and Environment made a presentation concerning the new Safe Drinking Water Act. A spokesperson for the agency indicated that a total of 75 contaminants are listed with rules and regulations to come. In addition, the spokesperson stated that it was estimated that two-thirds of Kansas wells could possibly exceed the new radon standards. Furthermore, the spokesperson indicated that up to 44 percent of the wells could exceed arsenic standards.

The Committee and officials from the Department discussed legislation on the federal level. It was explained that there have been two bills introduced concerning this law, one a coalition bill which addresses the most controversial issues. The bill would require EPA to consider health risk and regulate only contaminates known to be health hazards.

The Committee was told that the Baucus amendment has no co-sponsors while the Slattery amendment has 25 sponsors with more expected. The Slattery amendment states every Kansan deserves the same quality of water and also speaks to the affordability of clean water. The comment was made that Congress decided on the issue concerning 25 new contaminants being added every three years.

Afternoon Session

In order to set the stage for the next topic, a member of the Committee stated that he had requested hearings concerning the quality of our water supply since Kansas is rated 43rd in the nation in terms of quality of water. He explained that the other side of the equation is prevention, that is, to keep pollutants from migrating to the streams and reservoirs. He stated that traditionally the State Conservation Commission has been involved with land treatment and watershed districts and administered a program entitled "Non-Point Source Pollution Control" which deals directly with prevention and preservation of water quality. The member put forth the following questions:

1. What is the role of the State Conservation Commission?

2. What effect do the traditional things they do have on water quality?

3. Is the State Conservation Commission developing a new strategy to integrate the traditional duties with water quality?

4. Are they balanced or tied together?

The member stated the State Conservation Commission is funded basically from the State Water Plan Fund and since it is, it would appear that one of its responsibilities would be to preserve the quality of water in the State of Kansas.

Kenneth F. Kern, Executive Director, State Conservation Commission, appeared and presented written testimony (Attachment 14).

Mr. Kern stated the focus of the Commission has been placed on implementation and indicated that in the future emphasis will be on information and education. Mr. Kern stated 3.7 percent of his agency's budget goes to administration.

Mr. Kern called attention to the objectives of the Commission in his written testimony. The long-range program developed in 1980, covers 20 years and deals with erosion, water quality, water supply and conservation, fish and wildlife habitat, upstream flood damage, energy conservation, and urban and built-up areas. He indicated that additional information in the attachment provides information from the State Water Plan concerning water resources cost-share program, nonpoint source pollution control, riparian and wetland protection, watershed dam construction program, watershed planning, and multi-purpose small lakes. Mr. Kern stated that water quality is a major component of the first three of the programs listed above with the water supply being a component of two of the remaining three programs.

Tracy D. Streeter, Resource Administrator, gave a slide presentation as well as written testimony concerning the Water Plan subsections and water issues impacted by Commission programs and how the Commission program guidelines address each stated issue (Attachment 15).

Three subsections of the Kansas Water Plan provide guidance and priorities to assist the State Conservation Commission in the implementation of various programs. The subsections are water quality, water supply, and flooding.

The Committee was told that sediment is identified as the most prominent source of nonpoint source pollution in the state. The Committee also was told that federal law contains a conservation compliance provision requiring all producers who participate in federal farm programs to develop and implement a plan to rescue soil erosion on highly erodible acres.

The Committee heard that riparian and wetland areas have proven water quality benefits acting to filter pollutants and that funding is currently spawning streambank stabilization, riparian restoration, and wetland restoration projects in Jefferson, Neosho, and Reno counties.

A Kansas State Conservation Commission report of an FY 1993 program activities using state water plan funds was provided for Committee members (Attachment 16).

Stephen A. Hurst, Director, Kansas Water Office, presented testimony stating his agency is charged with the development of the Kansas Water Plan which blueprints state policy and programs for management and protection of water resources of Kansas. He stated that the Plan has two main components: Policy Subsections which examines policy options and makes recommendations for addressing topical water resource issues, and Basin Plans which reference state programs to issues specific to each of the 12 river basins used for management purposes (Attachment 17).

Mr. Hurst stated that the Kansas Water Office and the State Conservation Commission enjoy a close working relationship, working together on plan development and implementation through participation in technical support committees, basin advisory committee support, area coordination team participation, and water planning process as well as the State Water Plan Fund budgeting process.

Richard G. Jones, Executive Director of the Kansas Association Conservation Districts, provided testimony to the Committee (Attachment 18). Mr. Jones stated the Association represents the 105 county conservation districts in Kansas which provide assistance to Kansas landowners and operators for the protection and improvement of the soil, water, plant, and animal resources. He told the Committee that each district is governed by a five-member board of supervisors who serve without compensation.

Mr. Jones indicated that the conservation districts carry out programs directed at maintaining and improving the state's natural resources. He said these programs are funded with State Water Plan funds that have been dedicated to implementing the state's natural resource needs as shown in the State Water Plan. He also said that each district sets the priority of how the funds will be spent and that each district works closely with the State Conservation Commission in setting priority for the clean lakes program, nonpoint source pollution program, and the riparian and wetlands programs implemented in each district.

Mr. Jones told Committee members that no funds are provided to conservation districts unless counties provide matching funds. He stated that the local conservation districts continue to receive additional mandates without adequate operating funds to carry out their responsibilities.

James N. Habiger, State Conservationist, Soil Conservation Service, USDA, Salina, presented written testimony (Attachment 19). Mr. Habiger stated that when assessing conservation work completed in Kansas it is obvious that Kansas farmers and ranchers have recognized the resource problems they face, and they have asked for his agency's help.

Mr. Habiger estimated that more than 100 million tons of topsoil have been saved over the past seven years as the result of conservation work on cropland, range, and pasturelands. He stated that millions more will be protected as the balance of producers complete their conservation compliance plans.

Mr. Habiger stated that the federal Conservation Reserve Program is used to treat soil erosion and water quality problems on farms by placing 2.9 million acres in this program.

Charles Jones, Secretary, Department of Environment, Kansas Department of Health and Environment, told Committee members his Department was very supportive of the State Water Plan. He further stated three recent happenings compelled him to testify:

1. Kansas was reported by the Council of State Governments to have the worst surface water quality in the nation and Mr. Jones refuted that report;

2. at a recent EPA director's meeting in Washington there was a consensus from the directors that voluntary programs should be used at this point; and

3. there appear to be some philosophical differences between KDHE and the rest of the people involved in the nonpoint source program.

Mr. Jones expressed concern that although the Soil Conservation Commission was proud of what they were doing, it was not clear whether it was working.

Mr. Jones suggested that the Conservation Commission and KDHE get together and look at the land application work completed over the last few years to see if efforts being made to control nonpoint source runoff is having an impact on the surface water quality. He also suggested that, as a part of this report, discussion was needed about strategies for dealing with nonpoint pollution sources. He stated that the goal is no more mandates. Mr. Jones stated that in light of the very poor surface water quality in the state, it seems proper to question whether money is being spent appropriately.

A member asked Ken Kern whether traditional land treatment is really working when it comes to water quality. Mr. Kern stated his program had no data and no appropriate framework to collect such data. He explained that there was difficulty obtaining information from KDHE, and that they appeared reluctant to share information regarding water quality.

A member stated the Legislature needs to look at how they want to spend money that has traditionally gone to land treatment and that guidance is needed on what is the most effective. Mr. Kern stated that the Commission has the same concerns. In looking at the complete State Water Plan picture, Mr. Kern stated that there is a need for protection of our natural resources, particularly water. Mr. Kern stated that the Commission thinks money should be directed to the nonpoint source area, both rural and urban. Mr. Kern stated he did not feel his agency has enough information to direct the funds for efficient use.

A member questioned Mr. Habiger concerning the federal government's Conservation Reserve Program (CRP) and asked when the nearly three million acres in the program will start coming out of contract. Mr Habiger replied that it will start in 1995, with the bulk coming out in 1997. Mr. Habiger stated estimates of 100,000,000 tons of soil had been made on the amount of sediments saved based on CRP as well as compliance. He also confirmed the statement by Mr. Jones that there is a problem with surface water quality. He stated that the total level of treatment of farm land has not been achieved at this time.

A Committee member asked Mr. Habiger about funds spent on waterways and terracing with apparently little money being spent teaching methods of minimum till or no-till farming. Mr. Habiger stated this was part of their duties and that several years ago a crop residue alliance was established to bring a number of agricultural agencies together to discuss better methods of tillage for agricultural production. Mr. Habiger stated that those efforts are continuing and residue levels around the state are

expanding. He explained that the issue goes beyond erosion control, and includes production capabilities, tillage methods, and the control of erosion. Mr. Habiger stated that one of the alliances is working with the Extension Service and a number of demonstrations have been made available. The member questioned whether the Soil Conservation Service was prohibited from suggesting changes such as crop rotation and farm policy to Washington.

A member asked a question regarding the pilot project being conducted in Mitchell County under the Great Plains Conservation program. Mr. Habiger stated the project concerned an area that had a significant impact on the reservoir below. He explained that specific contracts have been identified with a number of producers and assured cost sharing would be made available through the Great Plains Conservation program. It was stated that people are using fewer chemicals than previously thought and therefore there should be significant reduction in sedimentation.

The Chairperson advised Committee members that noncontroversial bills passed out in the interim meetings, would be discussed the first day of the 1994 Legislative Session.

A member reported that, during an Iowa meeting, contact was made with the chairman of the Energy Committee from Nebraska and they decided to have a meeting concerning the river basin issues. Subsequently, a meeting was held in Fairbury, Nebraska, with representation from the Senate Energy Committee, the Kansas Water Office, the Division of Water Resources, and the House Energy Committee. The subject matter discussed was restricted to the Republic River Basin Compact. The member stated that she was hopeful other meetings would be held at a later date. She explained that Nebraska has very few regulations dealing with water, and none dealing with groundwater.

Another member stated Nebraska is far behind in dealing with water rights and that irrigators are virtually untouchable. The member explained that there is no linkage between surface and groundwater in Nebraska.

A member noted there are very few conservation practices in force in Nebraska. Another member commented that since Nebraska does not count groundwater as part of water usage they are still overusing their share under the compact that this issue needs to be pursued. The next meeting would be expanded in scope to include the Blue Rivers, and both the quality and quantity of water used. A member questioned whether we knew they were overusing their portion of water. The answer suggested that Nebraska counts their water usage at the end of the year, after the fact, instead of knowing how much is there.

The Committee then began its discussion for recommendations and conclusions to be included in the Committee report. Staff requested Committee members provide comments they wanted included in the final Committee report.

A member voiced appreciation in the way the sandhill crane issue was handled. Also, the suggestion was made that the fee could be raised for the hunting permit. It was also suggested a limit on the number of birds taken be investigated due to the long period of time before they reproduced.

A member voiced concern about notification by Wildlife and Parks of the meeting times and places, the cost per bird to establish a hunting program, and the cost of running a hunting program.

Representative Grotewiel made a motion concerning whether the permit fee for sandhill cranes is high enough, also concerning whether public notice procedures were thorough enough to be placed into the Committee report. Representative Lynch seconded the motion. The motion carried.

Representative Powers requested his NO vote be recorded. Representative Weinhold wished to have her feelings against the sandhill crane hunting season included in either the minutes or the Committee report.

There was considerable discussion concerning how to get information concerning such meetings to the public since newspapers often do not publish information sent to them.

The bill draft of KDHE regarding the regulation of freshwater and wastewater sludge was presented to members. The bill draft would replace 3 RS 1377. The Department already was in the process of drafting this bill and they felt it was appropriate to present it in response to the bill draft being considered.

In answer to a member's question, it was stated that 3 RS 1378 would be included in the KDHE draft.

In regard to the conservation plans developed by the Kansas Water Office and those used by the Division of Water Resources, a member stated that it would be a good idea to include in the report that the Kansas Water Office and the Division of Water Resources are working to update conservation guidelines and reached a memorandum of understanding on this issue.

It was suggested that a resolution be prepared supporting the Slattery amendment to the Safe Drinking Water Act and send it to counterparts in the other 49 states.

Representative Krehbiel moved that a subcommittee be appointed to work with staff of the Revisor's Office to draft a resolution supporting the Slattery amendment which could be studied the first week of the session. Representative McClure seconded the motion.

A member questioned Karl Mueldener of KDHE about the results across the state where water monitoring has taken place and the number of cities that are out of compliance on all substances. Mr. Mueldener replied each substance would have to be looked at separately. He stated that it appears there will be numerous cities in noncompliance.

A member urged studying the Slattery bill to examine the costs and this examination should take place as soon as possible.

The motion carried.

The Chairperson appointed Representative Robert Krehbiel, Representative Laura McClure, and Representative Doug Lawrence to the subcommittee to draft a resolution concerning the Slattery bill.

With regard to the issue of the goals of the State Water Plan and the practices of the State Conservation Commission, a member suggested the Committee report include the following: "The Committee commends the State Conservation Commission for its efforts to integrate traditional conservation techniques like terracing and watershed dams with prevention efforts to minimize nonpoint pollution. The Committee encourages the State Conservation Commission to work with KDHE to determine the effectiveness of traditional and preventative measures in decreasing the pollution of surface waters.

Representative Grotewiel moved to place the statement in the Committee report. Representative Freeborn seconded the motion.

A member suggested adding the following language: "In making this determination, the Committee encourages the use of such data to determine if certain areas of the state are in need of greater efforts to decrease nonpoint source pollution." Representative Grotewiel and Representative Freeborn agreed to include this statement as a part of the motion. The motion carried.

A member questioned who was responsible for initiating further meetings with Nebraska regarding the issue of water. The Chairperson said Representative McClure probably would be responsible, but it might have to wait until after the 1994 Legislative Session.

The Chairperson requested that Representative McClure draft a letter expressing appreciation for the meeting and opening the door for additional meetings.

November 18, 1993
Morning Session

Chairperson Holmes called the meeting to order at 8:40 a.m.

The Chairperson told Committee members it was his intention in the afternoon session to look at the drafts for new bills, consider them, and if the Committee so desired, pass them out so they would be ready to be introduced the first week of the 1994 Legislative Session.

Representative Shore expressed concern regarding the tipping fee issue for regional landfills. He stated that he believed that there is a need to change the regulations in this area so that it would take the majority of counties involved to approve any changes. He stated that the county with the landfill site should not be able to mandate an additional tipping fee on people in other counties. He stated that in the event a county wanted to leave the region and go it alone it presently would lose all funds paid as well as having to pay to set up a new operation.

Representative Alldritt told the Committee that he had requested a briefing concerning oil field pollution due to numerous problems in Barber County. He also indicated that several individuals from that county as well as a representative of the State Corporation Commission (SCC) were present to discuss the problems.

William R. Bryson, Director of the Conservation Division of SCC, appeared to discuss aspects of the Commission's oil field contamination site investigation and remediation program (Attachments 20 and 21) Mr. Bryson told members that in 1986, the Kansas Legislature determined that SCC should have exclusive jurisdiction and authority to regulate oil and gas activities. He indicated that prevention and cleanup of pollution from oil and gas activities is within SCC jurisdiction to be exercised cooperatively with KDHE pursuant to a Memorandum of Understanding between the two agencies. This Memorandum of Understanding places lead responsibility with SCC to pursue cleanup on active oil and gas leases and in KDHE to pursue cleanup on abandoned oil and gas leases.

Mr. Bryson stated his agency tries to recover remediation costs from lease owners when possible but some of these sites have had between 40 and 50 owners. He said some Conservation Fee Fund moneys are used for cleanup.

Mr. Bryson explained that when dealing with remediation of chlorides in an identified area where nothing has been done in the past, they are faced with many difficulties. One alternative is to pump huge amounts of water without much change in the level or to pump at a fairly slow rate for long periods of time to prevent pumping the groundwater at the same time. He explained that reducing chloride levels for human consumption is very difficult and often reach a point where expenditures and results conflict.

Mr. Bryson told the Committee his organization is allocated $500,000 each year for contamination remediation and plugging abandoned wells. He indicated that a priority list is maintained with emergency situations receiving attention before longstanding problems. He added that several of the more recent plugging efforts on abandoned wells cost $85,000 and $88,000 respectively and that available funds do not cover the costs of the problems. It also was noted that due to the down-turn of the oil and gas industry there are not a lot of rigs available to work on abandoned wells. Mr. Bryson stated that legal fees for recovery costs of abandoned wells often would be more than funds which can be recovered and in some cases they try to work from within the agency.

In regard to some of the problems in the Barber County area, Mr. Bryson stated they have investigated the problem areas and were of the opinion that there can be some remediation, but how to start has not been decided.

Sam Baier, Medicine Lodge, told the Committee that they have received little or no communication from SCC information concerning the origin of the pollution. An outline of chronological events is shown in Attachment 22. He stated that residents of Barber County do not feel there has been much cooperation or coordination by SCC. He noted the Walnut Creek area needs usable water and needs assistance in remediation of the problem. He also stated that there is major concern that the contamination is shifting toward the Medicine River. He noted the McCollough well is one-quarter mile from the Medicine River and the contamination of this well was responsible for the loss of some livestock in 1990. Mr. Baier asked why there has been no contamination remediation at this site. He further questioned the fact that testing is done "in house" by SCC and expressed the feeling that perhaps an outside firm should be utilized.

Mr. Baier presented a map of the area showing the location of the problem area (Attachment 23). Over 40 holes have been drilled in this area and it is not known how they were closed or plugged. He stated that residents in the area feel the contamination is originating from these wells.

Mike Mayberry, City Administrator, City of Kiowa, told Committee members that the city was having salt water contamination problems and the city's water wells were downstream from the Medicine River. In 1981, an oil drilling rig hit salt water prior to drilling when they were setting surface pipe. He noted that the city lost their water wells and it took about a year and $750,000 to lay 18 miles of pipe and drill new wells to furnish the city with water. Mr. Mayberry stated that in his opinion, when he has to answer to KDHE about the quality of the city's water and the Department has no control except to tell them they cannot use the water, then it did not seem right that SCC was in charge of the remediation. Mr. Mayberry stated that the city is not contacted about any of the drilling activities and if you write to SCC and ask about specific problems you do not receive a response. He noted there have been six salt water incidents within two miles of the new water wells. He stated that the law requires that an operator has to notify a property owner or an operator only if they are within one-half mile of a city water supply.

Mr. Mayberry stated that in his opinion the problems need to be solved and suggested that if it was a matter of money, agencies involved in water could be combined and therefore produce savings for remediation.

A member questioned the size of the area and whether there was need for a rural water district or rural water supply since it is questionable as to whether the water will ever return to a quality that is needed. Mr. Baier stated that several homeowners in the area are hauling drinking water as well as water being needed for livestock. He indicated that the rural water district does not cover the whole area.

Larry Knoche, KDHE, told the Committee his agency dealt with abandoned well sites. Mr. Knoche stated that lack of money to do thorough investigations and the difficulty of establishing ownership from a legal standpoint are major problems. He explained that records are lacking as to which owner might have caused the problem, therefore, collection is questionable. In the event a large salt scar is found or other soil remediation problem occurs, he stated there is no economical method of disposal. Mr. Knoche said that the lack of funds prevents investigation and ranking of sites.

A member questioned whether there was a "responsible party" and Mr. Bryson stated they were already using the Conservation Fee Fund. Mr. Bryson stated that his agency needs to do a better job of communicating with the various entities involved in the area. He also corrected Mr. Mayberry by stating there were 30 injection wells and 100 oil wells, not disposal wells in the area. Mr. Bryson stated that there are only three disposal wells in the whole field, one of which is part of the problem. He also said that a tremendous amount of water was stored under pressure; however, the pollution is no longer triggered by high pressure. He noted that at one time there was a fairly good water supply.

A member asked Mr. Mayberry if he felt the state has adequate measures in force to protect county or municipal water supplies in areas of oil and gas production. He also questioned how the Legislature could help to protect the water supplies. Mr. Mayberry stated that one-half mile distance is too close to public water supplies, although it depends on different factors in different areas. He explained that since the city wells were put down, a new salt water disposal well has been drilled just a few feet beyond the one-half mile limit set by statute. He reiterated his comment that there is a lot of money being wasted in water agencies and that there is no need for 14 water agencies overseeing the water in the State of Kansas.

Mr. Bryson was asked by a member whether his organization had identified the source of contamination in the Walnut Creek area. Mr. Bryson stated the belief that they have identified most sources of the contamination. He told the Committee his agency did not believe it is a well that is causing the problem. He said the agency believes there are a series of reserve pit locations all of which could attribute to the contamination. Mr. Bryson indicated that although they did not believe the well was the source of the problem they would go back and check it once again.

The Committee member stated he understood that the investigation is nearly complete, and a meeting would be scheduled upon completion to report to Harold Cline of the local U.S. Soil Conservation Service. Mr. Bryson was requested to provide information concerning this situation, what the plans for remediation may or may not be, and whether the responsible party has been identified, and whether there are any liabilities or assets to be used to help in the remediation.

A member stated that it appeared that due to the magnitude of this problem, *i.e.* the lack of water and no source for water, that remediation could cost millions of dollars. Mr. Bryson concurred and stated that the investigation should be completed in December and a plan for action developed. The

member asked about the possibility of this pollution moving into the Medicine Lodge River and Mr. Bryson stated he did not think there would be any more pollution going into the river than there is now. A member requested a copy of the report from SCC when it is completed.

A member suggested a protocol be set up to help keep communities advised as to what was taking place.

A member suggested forwarding information to the Barber County Soil Conservation District office and they could disseminate the information. Mr. Bryson stated they had tried to work through the nonpoint source program and KDHE.

A member questioned whether the current MOU addressed the issue of proximity of a municipal well and an injection well. Mr. Bryson and Mr. Jones stated it did not. The member requested this be considered and a report be made to the Legislature.

Charles E. Jones, Director, Division of Environment, introduced William Bider, Director, Solid Waste, who presented Attachment 24 and spoke to the issue of solid waste. Mr. Bider stated that five Kansas landfills accept over 100 tons per day and have been under Subtitle D regulation since October 9, 1993. He stated that all other landfills less than 100 tons per day and not affected by the flood extension have a deadline of April 9, 1994, in order to comply with the federal regulations. He indicated that those landfills falling in the 40-ton range must meet standards by October 9, 1995, and those landfills receiving flood-related waste have until October 9, 1994, to meet the federal standards. Mr. Bider stated there appeared to be confusion as to the difference between extensions and exemptions.

Mr. Bider stated they had requested an alternative well monitoring level for small landfills and that the monitoring levels are the same for all sizes of landfills. He indicated that a Notice of Intent was sent out to the small landfills asking them to demonstrate that they could qualify for the exemption which gives an extra 18 months to conform.

Mr. Bider called attention to grants which have been awarded, regions receiving 90 percent funding and individual counties receiving 50 percent. Most of the grants will be awarded by the end of the year totaling around $2.2 to $2.3 million.

Mr. Bider referred to a letter from EPA announcing partial approval of the Kansas Municipal Solid Waste Landfill Permit Program. Kansas was the first state to gain final approval. Mr. Bider stated that the regulations adopted by Kansas were basically those of EPA with the exception that Kansas reduced the list of analytical parameters for groundwater testing since some items were not found in Kansas groundwater. He stated that this should save several hundred dollars on each sample taken. Mr. Bider pointed out that only the large landfills are approved at this time and that by April, 1994, when the small landfills will be regulated, the Department will have regulations in place.

Charles E. Jones, Director, Division of Environment, KDHE, told the Committee there were a number of areas where Subtitle D was silent and the Department, with the assistance of city and local government personnel as well as some consultants, had developed a draft document. He stated that the discussion covered vertical expansions, groundwater monitoring, final cover design, bottom liner requirements for new landfills, and the appropriate role of authorities, especially counties in the management process. Mr. Jones said that results were not unanimous, but consensus was achieved. He said participants urged timely movement to provide this guidance information to counties.

Mr. Jones stated that KDHE would consider any vertical expansion as a major permit modification and that the technical issues will not be considered until receipt of a letter of support from county government. Mr. Jones stated that the review will take place and permission will be granted in five-year increments with possible extensions.

Mr. Jones told the Committee that the KDHE has sought maximum flexibility in groundwater monitoring. He said with regard to small landfills, the list of analytical parameters was narrowed and approved by EPA but may require continued negotiation.

Mr. Jones stated that Subtitle D does not address the bottom liner of the trench. However, he said the Department felt liners are needed because without them exemption could be jeopardized. He also said the Kansas Association of Counties expressed concern about the liner issue since it was an expensive process.

Mr. Jones suggested a formal briefing of the Committee concerning the regulation package, inviting participating county people contribute to these briefings.

The Chairperson expressed the opinion that although there were myriad of disagreements concerning these issues during the 1993 Session, he felt that the Department has done a good job in meeting national requirements and explaining the necessity of such regulations to county officials.

Mr. Jones stated that regulations should be finalized by the last week in November and would be sent to the Attorney General and to the people who participated in the development process. The Chairperson suggested a briefing the second week of the 1994 Session to update Committee members. It was suggested that briefings for both Senate and House Energy and Natural Resources committees be scheduled the same day to accommodate conferees coming in to testify.

A member questioned whether every region would receive a grant and Mr. Jones stated if the Department received applications they would try and get them a grant. Specific regions were discussed, noting application difficulties and efforts being made to resolve the problems.

Mention was made that grants funded by tipping fees would taper off in the next few years and consideration should be given to further uses for these funds. The feeling was expressed that demand will probably always exceed funds.

In answer to a member's query, Mr. Bider explained that no landfills under 100 tons per day are presently regulated by the Subtitle D regulations. He indicated that they were given a blanket six-month extension.

The Chairperson stated Representative Grotewiel could possibly receive an appointment to EPA, consequently, would not be present for the next legislative session, and he expressed his thanks to him for his years of service.

During the noon hour, Karl Mueldener, KDHE, updated the Committee on the Clean Water Act. A brief history of national standards from 1972 up to the present time was presented covering toxics, loans, and stormwater.

Mr. Mueldener indicated that several bills have been presented to Congress and are presently in Senate subcommittees.

Afternoon Session

The Chairperson opened the afternoon session of the Committee meeting and explained that if there were substantial changes to the bill drafts under discussion during the afternoon session the bills would return to the Committee for full hearings during the 1994 Legislative Session.

The minutes of the September 14-15 Committee meeting were presented for approval. Representative Freeborn moved adoption of the minutes. Representative Myers seconded the motion. The motion carried.

A bill draft presented by KDHE concerning municipal and wastewater sludge was placed before the Committee for discussion. The Chairperson stated that, due to substantial changes from 3 RS 1374 presented during the September meeting, full hearings would be held during the 1994 Legislative Session if the Committee decided to introduce the bill draft by KDHE.

Representative McKinney made a conceptual motion to amend the bill by changing "or threaten to be" page 3 and page 4 to "materials coming from municipal and industrial facilities not already permitted by Kansas Department of Health & Environment." Representative Powers seconded the motion. The motion carried.

Discussion followed that if all facilities were treated in the same manner it would not violate interstate trade. A member questioned whether language included a fee to help cover costs of sampling.

A conceptual motion was made by Representative Freeborn that KDHE be allowed to apply the same fee structure now in place. Representative Grotewiel seconded the motion. The motion carried.

A member questioned Section 2 (b) concerning animals and whether previous amendments would clarify the situation. Also questioned was (c) page 3, "or threaten to be" and "which may be" due to the broad language used. A member asked if there was any way to exempt a farm operation where the waste is kept on the farmer's own land so it would not fall under the definition of sewage. Another member questioned the language in Section 2 (a). Staff stated they would work with KDHE in drafting the conceptual language involved and then send copies out to Committee members for review. Action could be taken the first day of the 1994 Legislative Session.

Representative McKinney made a motion to strike the underlined "potentially or actually" and "which may be" on page 2. Representative Powers seconded the motion. The motion carried.

A member questioned whether inclusion of freshwater sludge would be a hardship on counties. KDHE stated it probably would be a problem. The original intent was the possibility that both types of sludge could come into the state and this would allow control of out of state sludge. Staff questioned whether this would require permitting for land application. Charles Jones said there would be a permitting process. Staff stated they wanted to make it clear that the Committee did not want a permit requirement for application of farm manure. Mr. Jones stated they want to make sure the sludge was being applied properly under current law in wastewater permits.

Representative Grotewiel made a motion to introduce the bill as amended. Representative Lloyd seconded the motion.

Representative Lynch voiced concern to the Committee that an interim committee was taking the action of introducing a bill and requested this concern be noted and recorded.

Regarding the issue of the state's response to the mandates of the federal Energy Policy Act, staff was requested to include in the Committee report a request for a Committee bill covering requirements of the 1993 Energy Policy Act.

Concerning the issue of condemnation of water rights, the Committee decided to wait to introduce a bill until a draft bill by Dr. Peck of the University of Kansas School of Law is completed.

In regard to the issue of creating a revolving loan fund for pollution cleanup, staff explained the change in bill draft 3 RS 1371 which provides in Section 10, page 7, clarification that the state does not have any liability or responsibility for damages arising from or failure to conduct contamination remediation projects.

The Committee discussed the issue of trying to locate the original polluter.

Staff stated there was language included about the priority list developed by KDHE to allocate at least 10 percent to municipalities with populations of 5,000 or less. It was suggested that wording could be added to require the Secretary of KDHE to make the determination that adequate measures had been taken to identify the responsible party and recover damages.

Representative Lloyd made a motion to adopt a conceptual amendment that would require the agency to exhaust their ability to find the polluter before the fund could be accessed. Representative Myers seconded the motion.

Representative Lawrence stated he would like to see a definition include the ability to exhaust efforts to find the polluter by filing suit, then be able to access the fund until such time as litigation has been completed and repayment could be made.

Further discussion noted there could be some language to prevent a city from knowingly accepting property that was contaminated. Staff, in an attempt to clarify, noted their understanding was that Representative Lloyd would like to require the Secretary to conduct a reasonable effort to obtain reimbursement by potential responsible parties other than public entities. The motion carried.

Representative McClure discussed an amendment to 3 RS 1371 stating the amendment would address the priority list mentioned on page 4, line 12 and would set up a committee similar to EPA for comparative analysis to establish a project priority advisory committee. She distributed her amendment.

Representative McClure moved the amendment be approved with Representative Freeborn seconding the motion. The motion carried.

Representatives Hendrix, Lloyd, Myers, Kjer, and Powers requested their NO votes be recorded.

Representative Grotewiel moved introduction of the bill as amended. Representative Lloyd seconded the motion. The motion carried.

Regarding the acquisition of water storage supply capacity in federal reservoirs, bill draft 3 RS 1380 was placed before the Committee. Representative McKinney moved introduction of the bill draft. Representative Freeborn seconded the motion. The motion carried.

The issue concerning the review of the interrelationship between the various programs of the State Conservation Commission and the Goals of the State Water Plan was discussed briefly. It was stated the Committee report should reflect language previously presented by Representatives Grotewiel and McKinney. (This language was quoted verbatim earlier in this set of minutes.)

Bill draft 3 RS 1376 concerning tipping fees dedicated to closure and postclosure cost was discussed. Staff noted revisions, line 11 and following, (1-6), exemptions from the fee authorized by this section and which appeared in the solid waste tipping fee bill that was passed last year. Also, discussed were amendments on page 2, lines 10-15 which stated that money in any such fund could be used for purposes other than closure, postclosure actions, and contamination remediation if the site was released by the Secretary of KDHE.

The other change was in (f) page 2, which would require a majority of all county commissions joining in a regional landfill to impose, modify, discontinue, or reinstate the fee. Staff noted they had looked at the Pratt County Regional Agreement in which the voting is based on population of each county and if an agreement and a tipping fee was considered an individual county would not have the authority to prevent the adoption of the tipping fee. Additionally, it was noted this would be voluntary and when the fund increased in value, the statute would start if the county used a resolution. Currently, the tipping fee could be set aside for closure and postclosure. Five years from now if they needed funds for roads and bridges they could take the money for that through resolution. Staff noted one other change involved was this draft would apply only to solid waste landfills operated by the counties. This would exempt privately-owned solid waste disposal facilities.

Representative Myers made a motion to submit this bill draft for introduction as a Committee bill. Representative Alldritt seconded the motion. The motion carried.

Regarding the issue of oil field pollution, Representative Alldritt made a motion concerning a request for introduction of a bill that would prohibit the drilling of injection, disposal, oil, gas, or additional water wells within five miles of existing municipal water wells used for water supply without the approval of the governing body. The motion also would apply to a pre-existing well being converted for use to dispose of any liquid or solid matter. Representative Weinhold seconded the motion. The motion carried.

In regard to the Committee's review of conservation plans by the Division of Water Resources and the Kansas Water Office, staff noted they had direction on what to include in the Committee report.

In regard to the development of a revolving loan fund for public water supply development, 3 RS 1373 was discussed with staff noting changes from the original hearing. On Page 1, line 6, definition of municipality was expanded by "(2) that two or more subdivisions jointly constructing, operating or maintaining a public water supply system." This change was made to address questions raised by officials from the Water Office since they are encouraging groups to combine their efforts.

Further changes made in draft 3 RS 1373 concerned requirements placed on loans from the fund. One change would allow the Secretary of Health and Environment to exclude from the priority list projects that has not adopted and implemented conservation plans and practices. A second change would

require that the Secretary, when drawing up the priority list, consult with the Kansas Water Office to encourage regional cooperation in public water supply projects in accordance with a regionalization strategy of the State Water Plan.

A member questioned the percentage established on page 4, Section 4, (b) for municipalities having populations of 5,000 or less. Discussion explained the provision provided protection so that one community could not use 100 percent of the funds. In decreasing the 10 percent figure it would decrease availability to larger communities.

Representative Weinhold made a motion to raise the 10 percent figure to 20 percent on line 16, page 4. Representative Freeborn seconded the motion. The motion carried.

Representative Freeborn made a motion to introduce bill draft 3 RS 1373 as amended. Representative Kjer seconded the motion. The motion carried.

The Chairperson told the Committee he had a copy of a New York regulation which goes beyond the regulation of the disposal of incinerator ash and also pertains to the operation of the municipal incinerators. He noted he would like to have this regulation changed to fit the Kansas format and then return to Committee as a bill for full hearings.

Representative Lawrence made a motion to introduce a bill using the framework of the New York concerning the disposal of incinerator ash and pertaining to the operation of municipal incinerators. Representative Grotewiel seconded the motion. The motion carried.

Representative Alldritt requested that SCC, following completion of their investigation concerning the oil field pollution, return to the Committee before the end of the 1994 Session and advise it of any actions taken, plans for remediation, or ideas how, through existing funds, that water might be restored to the area. This request was to be a part of the Committee report relative to oil field pollution.

Representative Freeborn presented a proposed bill draft, 3 RS 1509, for introduction. The proposal would establish a revolving loan fund for lead and asbestos cleanup. She explained the bill was basically a loan fund and it also could be set up to help municipalities for lead and asbestos cleanup. The concept would extend into school districts so they could access the fund. There was discussion concerning lead in water and whether it was broad enough to include lead paint.

Representative Freeborn moved the bill be introduced. Representative Powers seconded the motion. The motion carried.

Attachment 25, a letter received from the City of Wichita supporting the prohibition of the disposal of incinerator ash at solid waste disposal areas in the state, was distributed to Committee members.

Attachment 26 was distributed to Committee members for their information concerning newspaper excerpts regarding the project to use incinerator ash to create an ash to concrete slurry.

In regard to the disposal of municipal solid waste incinerator ash, staff advised Committee members that he had spoken with a counterpart in New York who told him the project was going forward in two phases. The project was asking for permission to implement a pilot phase and then a full-scale project using slurry and injecting it into salt mines. This would permit them to go 60 feet further down to mine more salt. If they are permitted to pursue the project it will not be until January 1, 1997. Due

to the fact that two different court decisions have been handed down as to whether the incinerator ash is hazardous, the issue will be heard by the Supreme Court.

Staff told Committee members they would send out copies of all changed bill drafts.

Staff told Committee members they would send minutes and a copy of the Committee report for their information and correction. Chairperson Holmes told members that if they perceived anything in the minutes or the Committee report that should be corrected, to contact Research staff immediately. The Chairperson stated that after a reasonable time period the minutes and Committee report will be considered approved.

The Chairperson reminded Committee members they would have a 3:30 p.m. meeting the first day of the 1994 Legislative Session.

The meeting adjourned at 3:30 p.m.

Prepared by Raney Gilliland and
Dennis Hodgins

Approved by Committee on:

January 3, 1994
Date

STATE OF KANSAS

Joan Finney
Governor

DEPARTMENT OF WILDLIFE & PARKS
OFFICE OF THE SECRETARY
900 SW Jackson St., Suite 502 / Topeka, Kansas 66612 - 1233
(913) 296-2281 / FAX (913) 296-6953

Theodore D. Ensley
Secretary

MEMORANDUM

To: Representative Carl Holmes, Chairman
House Energy and Natural Resources Committee
Honorable Members, House Energy and Natural Resources Committee
From: Theodore D. Ensley, Secretary TDE
Date: November 17, 1993
Re: Sandhill Crane Hunting Season

This memorandum is in response to recent interest in the first modern Sandhill Crane Hunting season in Kansas. In August of 1993, the Kansas Wildlife and Parks Commission passed, on a 6-1 vote, regulations providing a hunting season on sandhill cranes. The season regulations passed by the commission are the most restrictive in the Great Plains region (please see attached news release). The season runs from November 6 through January 2 and is limited to 14 counties in southwestern Kansas. Shooting hours are from sunrise to 2 p.m. to protect roosting sites. As with all migratory game, steel shot is required. A special $5 permit is required to hunt sandhill cranes. As of this writing, over 450 sandhill crane permits have been sold and 130 sandhill cranes harvested.

Sandhill cranes are tall, stately birds with a wingspan of over six feet. They range over much of the western United States. The sandhill crane has been designated as a game species by the United States Fish and Wildlife Service, with populations large enough to support hunting. Every year, several thousands sportsmen and women actively hunt sandhill cranes. They are considered excellent table fare by those who hunt them.

The issue of hunting sandhill cranes had been considered by the Kansas Fish and Game Commission in the early 1980's . Earlier this year, a group of sportsmen from the Great Bend area petitioned the Department for a season on sandhill cranes. In considering their request, I took the position that the matter deserved to be heard by the Wildlife and Parks Commission to receive a fair public discussion.

H. En+NR
Attachment 1
11-17-93

In bringing Sandhill Crane hunting before the Commission we knew there was a likelihood of conflict between groups and individuals. The Kansas Audubon Council had actively opposed crane hunting in the past. Still, when dealing with controversial issues, I believe this approach - a public forum - helps to produce policies and regulations which better suit the needs of our public and resources.

Both those wanting to establish a sandhill crane hunting season and those opposed presented thoughtful and well researched arguments. This may have been one of the most thoroughly examined issues to come before the Wildlife and Parks Commission. In the end, it was the body of information presented by professional biologists from both the State and Federal level which seemed to carry the issue. Still, in establishing a crane season, Kansas has the most restrictive regulations of the nine states in the Central flyway which have a sandhill crane season. Nebraska is the only state in the flyway without a season.

I continue to believe that public policy must be made in a public forum. We will not make decisions which affect the citizens of Kansas unilaterally. Also, we will not judge the social impacts of an issue until they have been adequately considered in a public forum. This was our approach in dealing with the issue of Sandhill Crane hunting.

NEWS RELEASE

KANSAS WILDLIFE AND PARKS

Rt. 2, Box 54-A, Pratt, KS 67124 (316) 672-5911

VOLUME: 1993: 30

RELEASE DATE: August 12, 1993

NEWS CONTACT: Mark Shoup

IN THIS PACKAGE:

COMMISSION SETS WATERFOWL SEASONS

PRATT -- At an August 11 meeting in El Dorado, the Kansas Wildlife and Parks Commission set dates for the 1993-94 migratory bird hunting seasons, using guidelines provided by the U.S. Fish and Wildlife Service. Dates are as follows:

Species	Season	Bag & Possession Limits
Dove	Sept. 1-Oct. 30	15;30
Rail (Virginia and Sora)	Sept. 1-Nov. 9	25;25
Snipe (Common)	Sept. 1-Dec. 16	8:16
Woodcock	Oct. 9-Dec. 12	5;10
Teal (Early season)	Sept. 11-19	4;8
Duck (Low Plains, east of U.S. 283)	Oct. 23-31 & Nov. 13-Dec. 12	Point System
Duck (High Plains, west of U.S. 283)	Oct. 16-31 & Nov. 13-Dec. 5 & Dec. 22-Jan. 2	Point System

Dark Goose (Canada, white-fronted) Nov. 20-Jan. 30

Bag: One Canada and one white-fronted goose before Dec. 25. On or after Dec. 25, two Canada or one Canada and one white-fronted. Possession limit is twice the daily bag limit.

Light Goose (snow, blue, Ross') Oct. 30-Feb. 13 Bag and possession: 10;20

The point system for ducks allows a 100-point daily bag limit. Redheads, hen mallards, pintails, mottled ducks and hooded mergansers are 100 points. Drake mallards and wood ducks are 50 points. All other species of ducks and mergansers are 35 points. The daily bag is reached when the last duck taken puts the point total at or above 100 points.

For more detailed information, contact the Kansas Department of Wildlife and Parks, RR2, Box 54A, Pratt, KS 67124, (316) 672-5911.

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KANSAS GETS FIRST SANDHILL CRANE SEASON

PRATT -- This fall, Kansas hunters will welcome the opening the first Kansas sandhill crane season in modern times. The 1993 season -- running Nov. 6-Jan. 2 -- will be limited to portions of 14 counties in southwest Kansas. The bag daily limit will be two and the possession limit four. Shooting hours will be sunrise to 2 p.m. Steel shot will be required.

During recent years, eight of the 10 Central Flyway states have held sandhill crane seasons. In addition, Alaska, the provinces of Saskatchewan and Manitoba, and 10 Mexican states have also adopted crane seasons.

The crane season was set by the Kansas Wildlife and Parks Commission at their Aug. 11 meeting in El Dorado. Although some present at the meeting expressed concern that a crane season might be a problem for migrating whooping cranes, there is no evidence that current crane seasons have detrimentally affected whooping cranes or any other protected species. Whooping cranes have usually passed through Kansas by late October. However, if whoopers should be spotted during the sandhill season, spot closures of the season and other protective measures will be implemented.

"Based on the conduct of crane hunters in neighboring states, there is no reason to expect that protected species will be in jeopardy from a crane season," says Wildlife and Parks' migratory bird specialist Marvin Kraft.

"Crane hunters will likely come for the ranks of waterfowl hunters, who are proficient a recognizing shore and wading birds as protected species."

When crane hunters purchase the required $5 crane hunting permit, they will also receive educational materials describing protected species they might encounter.

If hunting pressure in the states of Colorado, Wyoming and South Dakota are any indication of what Kansas will experience, active hunters should eventually stabilize at some level below 500 with an annual harvest of less than 200 cranes. The current population of mid-continent sandhill cranes is estimated to be 500,000 birds.

For more information on the 1993 Kansas sandhill crane season, contact the Kansas Department of Wildlife and Parks.

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1993 HUNTER EDUCATION COURSES

PRATT -- Kansas law requires that anyone born on or after July 1, 1957, must have successfully completed a certified hunter education course before hunting in Kansas. Each fall, thousands of young people enroll in Kansas Department of Wildlife and Parks hunter education courses to meet this requirement. They learn the basics of hunter responsibility and ethics, firearms safety, conservation and wildlife management, first aid, and survival.

Hunter education courses are organized and conducted by volunteers in every region of the state. 1993 marks the 20th anniversary of the Kansas Hunter Education Program and these volunteer efforts. More than 300,000 Kansas students have compeleted the course since 1973.

The following is a list of courses scheduled as of Aug. 11, 1993, broken down by region. New courses will be developing through October. For more information, contact Hunter Education, Kansas Department of Wildlife and Parks, RR2, Box 54A, Pratt, KS 67124, (316) 672-5911.

Northwest (Region 1)

CITY	BEGINS	CONTACT	
ELLSWORTH	AUG/21/93	MARK PARSONS	(913) 472-3861
HAYS	AUG/23/93	KDWP-HAYS OFC.	(913) 628-8614
HAYS	SEP/23/93	KDWP-HAYS OFC.	(913) 628-8614

SANDHILL CRANE HUNTING IN KANSAS

My name is David Sharp. I am employed by the U.S. Fish and Wildlife Service, Office of Migratory Bird Management and serve as the Central Flyway Representative stationed in Golden, Colorado. I would like to provide you with a short background on sandhill crane hunting, describe the schedule for the annual process by which sandhill crane Federal frameworks for hunting are established, summarize some current status information on the Mid-Continent Sandhill Crane Population, and finally point out some aspects of sandhill crane life history and biology that should be considered in the developed in any comprehensive management program for this important game bird.

Background

- The decision to hunt cranes in the state of Kansas is solely a decision that the state of Kansas must make within Federal guidelines. It is the role of the U.S. Fish and Wildlife Service is to consider biological input from various sources and recommend hunting frameworks to the Secretary of Interior, who has the ultimate responsibility for the opening of seasons and establishing annual hunting frameworks. It is from these frameworks that states can then select seasons.

- In 1916 the Convention for the Protection of Migratory Birds between Great Britain for Canada and the United States was signed. In 1918 the Migratory Bird Treaty Act stated that migratory birds were considered within the custody and protection of the Federal Government and gave legal authority for enforcement of the 1916 agreement to the Secretary of Interior.

- At this time, it was stated that full protection with closed seasons for little brown, sandhill, and whooping cranes should be established for 10 years in both countries. Subsequently, little brown cranes were found to be a subspecies of sandhill crane. Hunting seasons were closed for sandhills until 1959 in Canada and until 1961 for the U.S. portion of the Central Flyway. In contrast, the whooping crane population is small, encompasses about 150 individuals, and is currently listed by the Federal Government as endangered. Accordingly, there are two recognized species of cranes native to North America, i.e. the sandhill and the whooping crane.

- Kansas has been allowed to select a sandhill crane hunting season within the Federal frameworks since 1983. The whooping crane receives full protection from hunting throughout its entire North American range.

- The sandhill crane is currently classified into 6 subspecies and 8 recognized populations. Three subspecies are sedentary and three are migratory. Of the five migratory populations, two are large and are hunted. The largest population, the Mid-Continent, contains 3 subspecies and exceeds one-half million individuals.

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Attachment 2

Annual Regulatory Cycle

- Sandhill crane hunting frameworks are established as part of the a cycle for those early seasons that typically begin on or near September 1. A parallel cycle is also completed for those "late" seasons that begin on or near October 1, these include frameworks for most duck and goose species. It is important to remember that on an annual basis, all hunting seasons are closed, until specifically opened by the Secretary of the Interior.

March "Proposed Rulemaking" is published in the Federal Register. This document announces the intent of the Federal Government to open seasons on certain migratory gamebirds and opens the public comment period on proposed regulations.

April The U.S. Fish and Wildlife Service completes a Section 7 Consultation Process required under the Endangered Species Act. This is an internal consultation process that evaluates the potential effects of hunting seasons on non-targeted endangered or threatened species.

May "Supplemental Rulemaking" is published in the Federal Register. This document identifies proposals that were developed during the spring flyway council meetings.

June Service Regulations Committee meets with Flyway Consultants to develop recommendations to the Director/FWS. An early season Public Hearing is conducted to announce recommendations and to receive oral public comment. The Office of Migratory Bird Management staff present sandhill crane status information at this public hearing.

July Public comment period closes.

August "Final Rule" is published in the Federal Register. State selections are generally submitted within a week or so and are then published in a Federal Register in late August. Early seasons can then begin on or near September 1.

Status

- Kansas lies in the pathway of the largest of all North America Crane populations - the "Mid-Continent". In summer, this population is distributed across a vast breeding range that extends from southern Ontario and north-westward into Arctic Canada, Alaska, and into extreme eastern Siberia. They migrate to and from their remote nesting areas mostly through the Central Flyway states and winter in west Texas, eastern New Mexico, western Oklahoma, southeastern Arizona and into Mexico, as far south as Mexico City. The general range of this large population spans 4 nations.

- Spring surveys indicate that the Mid-continent Population has now stabilized following dramatic increases in the early 1980's and in a more general way since the turn of the century and probably since European settlement of North America.

- The current 3-year running average is 386,433, which is within the established population objective of 343-465,000 birds. This is not a population estimate, but rather is an index. The total population size is not accurately assessed on an annual basis, but is believed to exceed 1/2 million and probably in the range of 540,000.

- In 1992, 17,100 crane permits were issued and 5,200 of these permittees hunted 1 or more times. Compared to a year ago, the number of permittees decreased 6% and active hunters declined 10%.

- Crippling loss rates continue to decline from levels near 20% (1975) to about 12% last year.

- The number of recreational days afield per hunter has declined from about 3.5 to 2.4.

- Following increases in the early 1980's, the average annual bag per hunter has stabilized at slightly over 2 cranes per hunter.

- All Central Flyway states except Kansas and Nebraska allowed crane hunting in portions of their states last year. Last year 12,391 cranes were harvested, which was similar to the 13,074 harvested the year before and consistent with the reduced fall flight forecast for last year. This year these birds experienced improved breeding conditions in the Arctic and should have an improved fall flight because of improved recruitment.

- Mid-Continent cranes are also hunted in Alaska, Canada, and Mexico. The estimated retrieved harvest in Canada in 1991 was about 5,700. About 3,000 are also shot in Mexico and Alaska combined.

- Thus, the total estimated North American sport harvest of Mid-Continent Sandhill Cranes was about 25,000, which is similar to harvests recorded during the most recent decade.

- The future looks bright for the Mid-Continent Population of Sandhill Cranes. The population is stable and the use of regulated sport hunting recognized as the primary tool for accomplishing our population objective, continues to offer spectacular recreational opportunities consistent with the goal of protecting this population of great birds for future generations to use and enjoy.

Life History of Sandhill Cranes

- With respect to hunting, the life history of Sandhill Cranes necessitates that agencies use a conservative harvest strategy. Sandhill cranes probably have the lowest recruitment of any migratory game bird in North America. Conversely, they probably also have the highest survival rate. Clutch size is generally 2, with only 1 colt normally surviving to flight stage. Recent research indicates that only years with extremely

favorable weather conditions result in a large number of family groups with 2 young being raised. Cranes that lay eggs have been recorded at 2 years of age in captivity, although in the wild reproduction is generally believed to begin at about 5 years of age.

- As with most species of migratory birds, heavy mortality occurs in the first year after fledgling. Adult survival now is estimated to exceed 95%.

- Productivity information suggests that an average of about 11% of the fall flight will be composed of immature sandhills.

- Mid-Continent crane harvest rates are now less than 5%. This rate has been large enough to control population growth, but small enough to maintain the population of objective levels. Racial composition of the Harvest information also indicates relatively stable proportional harvest of each subspecies.

- The database for Sandhill Cranes is one of the best available for any migratory bird species for which we now manage.

  - ✓ Spring Population survey has undergone extensive refinement and includes aerial photography to correct ocular estimates of flock size.

  - ✓ The Harvest Survey initiated in 1975 serves as a model on which improvements in other migratory bird harvest surveys will be designed.

  - ✓ Breeding Surveys in Alaska form an excellent base on which improvements in other portions of the Arctic will be modeled.

  - ✓ Racial Composition of the Harvest information collected in North Dakota and New Mexico continues and will be the subject of an intensive review and possible additional improvement or expansion in the coming year.

  - ✓ Productivity surveys are conducted in some areas and the utility as a management tool will be discussed in a scientific article that will soon be published in the Journal of Wildlife Management.

  - ✓ Numerous state surveys help delineate important habitat and temporal and spatial distribution of birds during migration.

Thank you for allowing me the opportunity to present this information and I would be happy to answer any questions that you may have regarding sandhill crane hunting programs.

Presented by David E. Sharp
November 17, 1993
Topeka, Kansas

STATE OF KANSAS

Joan Finney
Governor

DEPARTMENT OF WILDLIFE & PARKS

William A. Anderson, Jr.
Commissioner
5733 Reinhardt Drive
Fairway, KS 66205 - 3324
(913) 362-3648

Theodore D. Ensley
Secretary

November 17, 1993

TO: House Committee on Energy and Natural Resources

FROM: William A. Anderson, Jr.

RE: Sandhill Crane Hunting Season

Sandhill cranes are managed by federal guidelines. Prior to 1993, eight of the ten states in the Central Flyway offered a Sandhill Crane hunting season. In the spring of this year, a group of Kansas sportsmen and farmers concerned about crop depredation approached the Wildlife and Parks Commission and asked us to consider options for implementing a Sandhill Crane hunting season in Kansas. This request was subsequently echoed by a number of representatives and senators. Based on requests from Kansans, the commission asked the professional staff of the Department of Wildlife and Parks to examine alternatives available to the commission regarding a Sandhill Crane hunting. During this past summer, public meetings were held to consider alternatives and discuss the pros and cons of establishing a Sandhill Crane hunting season in Kansas. While federal guidelines clearly establish the biological viability of harvesting Sandhill Cranes, there was concern among some organizations and individuals about Sandhill Crane hunting and possible implications to other wildlife species.

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Att. 3

In the nearly seven years I have served on the commission, no other subject has been more extensively evaluated before a final commission action. Information was solicited from all interested parties, including extensive biological data from national authorities on the Sandhill Crane and information from Kansans with both professional and personal interests in the species. Although, there is ample biological data defining the parameters that impact Sandhill Crane hunting, there was very strong sentiment opposed to any form of hunting of this species.

After extensive public review and input, the commission established a Sandhill Crane hunting season for 1993...The commission very deliberately chose conservative implementation of this season. We established a limited hunting area and set a two bird a day bag limit...actions less than federal guidelines. The Sandhill Crane season was established with dates that were selected after the traditional major migration of the whooping crane.

In addition to establishing a restrictive season framework, public meetings have been held in Great Bend, Hutchinson and Dodge City to help sportsmen understand better the challenges and responsibilities associated with Sandhill Crane hunting.

In speaking on behalf of the entire commission, we believe a prudent decision was made and an important hunting opportunity offered to Kansas sportsmen. A thorough evaluation of the results of the 1993 season will be made prior to considering a 1994 season.

Kansas Wildlife Federation, Inc.

P.O. Box 5715
Topeka, Ks. 66605

Affiliate of National Wildlife Federation
913/266-6185

200 S.W. 30th
Suite 106
Topeka, Ks. 66611

Resolution No. 1984-6

WHEREAS, the **Kansas Wildlife Federation** would support an open season on sandhill cranes in Kansas; and

WHEREAS, proper control will be exercised by state and federal laws to protect all whooping cranes during migration periods by closing the waterfowl season during such times when whooping cranes are posing no additional threat to the whooping cranes; and

WHEREAS, a number of the surrounding states have open seasons on sandhill cranes with no threat to whooping cranes; and

WHEREAS, an increase has become apparent in numbers of sandhill cranes during the past several years;

NOW, THEREFORE, BE IT RESOLVED that the **Kansas Wildlife Federation,** in annual meeting assembled October 13-14, 1984, in Lawrence, Kansas, endorses an open season on sandhill cranes in Kansas.

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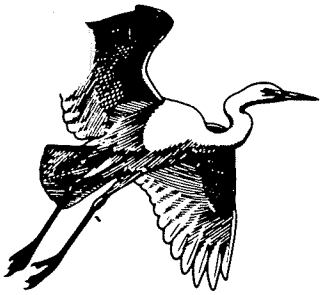
Att. 4



Kansas Audubon Council

November 17, 1993
House Energy and Natural Resources Committee
Re: Sandhill Crane Hunting Season

My name is Joyce Wolf and I am here today on behalf of the Kansas Audubon Council to share some comments and observations about the newly established Sandhill Crane hunting season and the process which established it. The Council appreciates this opportunity to clarify our position on this matter. Attached to this testimony is a copy of the full position paper which was thoroughly researched and written by David Rintoul, and unanimously approved by the chapter delegates of the Kansas Audubon Council. I would like first to draw your attention to pages 5 and 6 of the position paper which lists the many sources of information that Dr. Rintoul studied prior to the formulation of the position paper, and which are referred to in it.

Because this subject is very complex and there are many facets to consider, I have tried to list a few of the more important findings that convinced Council members to support this position. At the outset, I want to say that I hope each of you will take the time to read the entire paper so that you have a fuller understanding of our position on this issue.

I. Provisions of Sandhill Crane Management Plans:

A: 1981 Mid-Continent (M-C) Sandhill Crane Cooperative Management Plan

* hunting mortality set to not exceed 25,000 cranes per year
* based on many assumptions due to the fact that key data were not available
* also based on the assumptions that habitat loss on both the wintering and breeding grounds would remain constant
* actions would be taken to reduce harvest if mortality exceeded this objective
* six research area were identified to "enhance management of M-C Sandhill Cranes" (please see the list near the bottom of page 1 of the position paper)

How did practices measure up under this plan?

Hunting mortality along the Central Flyway has met or exceeded the 25,000 level every year since 1986. Although this level of hunting mortality was supposed to trigger actions designed to decrease the total kill in the flyway, such actions were never taken. Furthermore, of the six research needs stated in the 1981 plan, only the third (analysis of "methods to affect harvest") was fully investigated. These have been replaced in the 1993 cooperative management plan with far less ambitions research needs. (See page 2.)

These findings have led the Council to conclude that there is little, if any, coordination among the states that permit Sandhill Crane hunting. *There is no mechanism, for instance, to offset an extraordinarily high hunting mortality in one state with a concomitant decrease in the number of permits issued elsewhere.* Perhaps recognition of that serious shortcoming was what prompted deletion of the 25,000 harvest objective from the 1993 version of the management plan.

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Att. 5

B. 1993 Mid-Continent (M-C) Sandhill Crane Population Management Plan

* 25,000 harvest objective deleted
* harvest regulated on the basis of population stability as estimated by the spring survey; however, since there are minimal data on age structure, or recruitment (% of juvenile birds in the fall population), no one can predict when or if the excessive hunting pressure since 1986 will begin to manifest itself in a population decrease [a]
* documentation of habitat loss on the wintering grounds which could lead to overcrowding and increased potential for disease outbreaks, and loss of habitat along the Platte River are not taken into consideration as additional risks to the population of Sandhill Cranes

[a] To fully appreciate the concerns the Council has, it is imperative to know that Sandhill Cranes are the only hunted migratory avian species which has its distinctive breeding characteristics. That is, it is the only bird that is hunted that is long-lived, reaches sexual maturity only after 5 or 6 years, and has a relatively low recruitment rate (that is, it produces few young each year). For these characteristics, it would compare with hunting Bald Eagles.

The Council believes there were serious flaws in the 1981 plan. Based on the concerns of the lack of coordination, population data, regulation, and enforcement of that plan, we have asked our parent organization, the National Audubon Society, to investigate how changes to the 1993 management plan can be effected.

II. Potential Harm to an Endangered Species and Other Non-Targeted Species

Clearly, one of the other major concerns is the danger to other species posed by the Sandhill Crane hunting season. The endangered Whooping Cranes migrate through Kansas at the same time, and use the same habitat as Sandhill Cranes. Juvenile Whooping Cranes resemble Sandhill Cranes, and adult Whooping Cranes and other long-legged wading birds can be easily mistaken for Sandhill Cranes under poor lighting conditions. Kevin Kennedy, who volunteers as a wildlife rehabilitator at Operation Wildlife near Linwood, Kansas, reports that facility regularly receives Great-blue Herons that have been shot – and that's before and out of the area for the Sandhill Crane season – accidents do happen.

Given the size of the area where Whooping Cranes occur in the state (See map page 7.), and the requirement to close an area to further hunting until the Whooping Cranes move on, we have real concerns that KDWP has the necessary staff to effectively monitor the presence of these birds in the state.

III. Process for Establishing the Sandhill Crane Hunting Season

When we were first notified that KDWP was considering establishing a season, the Council met in April to discuss the proposal. A subcommittee to gather data was appointed, with Dr. Rintoul

acting as chair. He along with other Council members were present at the KDWP Commission meeting in Emporia in June to present our preliminary information. One of the things that was most disturbing was the apparent assumption of the Commissioners that it was a foregone conclusion that there would be a crane season. None of them ever used the word "if" we give directions to the Department to proceed with formulation of regulations; instead, they used the word "when".

Furthermore, when Secretary Ensley attended the Kansas Audubon Council meeting in July, one of the explanations he gave for bringing forward the proposal was receipt of a petition, containing about 100 signatures, requesting establishment of a Sandhill Crane hunting season. Recently he again cited the number attending a Commission meeting who reacted adversely to the nonresident deer season bill as one of the main reasons for his recommendation to the Governor to veto it.

In light of his comments, one of our Audubon members from Manhattan presented a petition to the Commission with nearly 1000 signatures of persons from all across the state in opposition to the proposed season. Those who attended the El Dorado meeting were left groping to try to explain to other members why the Chairman of the Commission said the Council's petition was irrelevant. If you or your colleagues have received communications from people who are dissatisfied with the Commission's decision on this matter, we believe it is because they feel they did not receive a fair and unbiased hearing.

We believe Dr. Rintoul provided sound biological reasons as well as our other concerns to the Commission. Many other members expressed their concerns as well. It was pointed out that this could be an opportunity for the Commission to acknowledge those concerns by at least delaying implementation, or exploring the possibility of adopting Nebraska's "use" of the cranes for wildlife viewing and as a tourist attraction. Unfortunately, our only conclusion we can make at this time is the Commission and the Department do not represent nor attempt to represent in any balanced way non-game wildlife interests. In light of their ongoing budget problems, we feel it is particularly troubling because there are fewer license buyers each year, while the numbers of persons enjoying non-consumptive recreational use of wildlife are increasing. It remains to be seen if the Department is willing to begin to examine their policies in light of long-term trends and whether they are willing to alter their programs to reflect those changes.

Let me add here that the Council believes regulation of the wildlife of the state should be managed by the professionals hired to do that job. I think you'll remember we also opposed the rattlesnake bill partially on that basis. We do believe, however, that you have the statutory authority to provide guidelines for the composition of the Commission. We would support a mechanism that would ensure non-game enthusiasts a greater opportunity to have their needs served.

Executive Summary - The Kansas Audubon Council recommends against the establishment of a sandhill crane hunting season in Kansas at this time. This position is based on an analysis of available information, and, equally importantly, out of concern for the substantial lack of information about the Central Flyway population. Additionally, the cost/benefit ratio for instituting an additional season does not seem favorable, considering the increased burden of protecting the endangered whooping cranes during any sandhill crane hunting season.

I. Sandhill Crane Populations in the Central Flyway - A cooperative management plan (3) for the mid-continent (M-C) sandhill crane population was implemented in 1981. The limited information available at that time was used to formulate a plan calling for hunting mortality along the entire flyway not to exceed 25,000 cranes per year. This number was based on a population dynamics model (15) which indicated that hunting at this level would eventually result in a crane population that stabilized at approximately 75-80% of current population estimates. It is also important to point out that this model contained many assumptions, due to the fact that key data were not available. For example, there were limited data on recruitment (% of juveniles in the fall population) in this population (2), and no data regarding the age or breeding subpopulation status of cranes that would be taken by hunters. The model also assumed that other deleterious impacts on the crane population (especially habitat loss on both the wintering and breeding grounds) would remain constant. It should be obvious that these assumptions were somewhat simplistic, but since the actual data were not available, assumptions were nonetheless required. This model became the basis for the 1981 cooperative management plan (3). A hunting mortality objective of 5% of the population, or 25,000 cranes per year, was included in this plan. Actions would be taken to reduce harvest if mortality exceeded this objective. In addition, the 1981 cooperative management plan identified six research areas which would "enhance management of Mid-Continent Sandhill Cranes." Listed in order of most importance; these were:

1. Studies on "breeding age, survival rates, harvest rates, and other parameters of identified segments of M-C cranes." It was estimated that these studies would require banding of at least 4000 cranes per year for at least five years, and color- or radio-marking a portion of those.
2. Studies on "breeding, migration and wintering distribution of recognized subspecies of M-C cranes."
3. Analysis of "methods to affect harvests."
4. Studies of the "susceptibility of M-C cranes to disease and other maladies."
5. Studies of the "needs of non-consumptive users and their impacts on M-C cranes."
6. Analysis of the "factors affecting pre-fledging survival of cranes and the energetics of breeding."

Hunting mortality along the Central Flyway has met or exceeded the 25,000 level every year since 1986 (23). In 1990, the last year for which published data are available, hunting mortality was estimated at 31,705. This is approximately 25% over the quota established in the 1981 cooperative management plan (3). Although this level of hunting mortality was supposed to trigger actions designed to decrease the total kill in the flyway, such actions were never taken.

A new management plan has just been completed (4), although very little additional data have been generated since 1981. The never-utilized 25,000 harvest objective was deleted from this new plan. Harvest will now be regulated simply on the basis of population stability, i.e., as long as the population is deemed to be stable (as estimated by the spring survey), hunting regulations will not be modified to affect the harvest. Since the spring survey estimates are not reliable until a three-year running average is calculated (D. Sharp, personal communication), determination of a decline in the population (and concomitant reduction of harvest) may postdate the actual decline by several years. This does not seem to be a prudent wildlife management strategy (T. Tacha, personal communication).

Furthermore, of the six research needs identified in the 1981 plan, only the third (Analysis of "methods to affect harvests.") was fully investigated. The four research needs identified in the 1993 cooperative management plan are much less ambitious. They include:

1. Determination of the proportion of the total M-C crane population that is present in Nebraska at the time of the spring survey.
2. A search for other means to monitor the crane population.
3. Estimation of the subsistence harvest in Alaska and Canada, and sport harvest in Siberia and Mexico.
4. Determination of the stability of annual recruitment.

The 1993 cooperative management plan (4) cited only 11 references (out of a total of 53) dated later than 1981. Seven of these dealt with population estimates and hunting mortality estimates, only four (all by the same author) are pertinent to the research needs identified in 1981 (27-30). Other publications reporting additional demographic data on this population of cranes can be found (23, 26, 31, 25, 12, 13) . However, none of these reports contain the comprehensive data on age structure of the population, recruitment, or breeding subpopulation status of the Central Flyway population which was requested in the 1981 cooperative management plan (3). Interestingly, some of these reports (23, 25, 30, 27) suggest mangement strategies which are contrary to those of the 1993 management plan; other recent reports (18, 17) raise questions about some of the assumptions which underlie the 1993 management strategy.

Estimates of population size, made along the Platte River in March, indicate that the population is approximately equal to that estimated in 1982 (23, 4). Since there are minimal data on age structure, or recruitment, no one can predict when or if the excessive hunting pressure since 1986 will begin to manifest itself in a population decrease. It is obvious that neither the population dynamics model of Johnson (15) nor the dire predictions of Miller (22) are adequate to explain the behavior of this population. The fact that sandhill cranes are a long-lived bird, with limited annual reproductive potential (14, 16), coupled with the fact that very little is known about the Central Flyway population, makes such predictions very difficult. Since the population seems to be stable at this time, and since a stable population is the goal of the 1993 management plan, it does not seem logical to introduce another variable, a crane season in another state, into this black box. The sandhill crane population in the Central Flyway faces many other risks, including habitat loss on the wintering grounds (12, 13), overcrowding on the wintering grounds and increased potential for disease outbreaks (13, 31), and continued migratory habitat loss on the

Platte River (7, 8, 24, 9). Other Central Flyway states are hoping to expand their hunt area or season length in 1993 (D. Sharp. personal communication). Once a population begins to decline, it is often difficult to reverse the trend. It is far easier to avoid the problem than to try to solve it, particularly when dealing with a population where demographic data are limited and where dynamic modeling has proven to be very difficult. Conservative wildlife managment does not usually proceed from incomplete information.

Other concerns also need to be addressed before Kansas (or any other state) is allowed to increase hunting mortality of this species. It is likely that the loss of breeding habitat for this species has resulted in establishment of discrete breeding populations (10, 5). Since the entire flyway empties into common wintering areas (13), the existence of such discrete breeding populations is only speculative at this time. However, given the established philopatric behavior (annual return of juveniles and adults to the sites where they were hatched) in every other crane species, it should be considered likely. The existence of discrete breeding populations might mean that one or more of these isolated populations would be highly at risk from hunting (30). This concern has already been raised for the population that winters on the Gulf Coast of Texas (25). If the majority of a small breeding population blundered into the first day of hunting season (in Kansas or elsewhere), it could easily be wiped out. Since human activities have already resulted in a considerable decrease in the breeding range of this species (21, 5, 14), it seems prudent to try to avoid continuing this process. At the very least, further field work on the breeding populations of these birds (in Canada, Alaska and Siberia) should be instituted so that crane biologists and wildlife managers can work with real data rather than with assumptions or speculations. Although the new management plan ignores the need for data collection of this sort, it is biologically imprudent to initiate an additional hunting season in the absence of such data.

II. - Potential for harm to an endangered species - Finally, a sandhill crane hunting season will, of necessity, pose a danger to other species, particularly the endangered whooping crane (16, 29, 1). Whooping cranes migrate through Kansas at the same time, and use the same habitat as sandhill cranes. Juvenile whooping cranes resemble sandhill cranes, and adult whooping cranes can be mistaken for sandhill cranes in the dim predawn light. Killing of whooping cranes by hunters in recent times has only been documented three times (19), but migration is certainly the time when these birds are most at risk (20). Since 1964, 158 whooping cranes which left Aransas NWR in April have failed to return in November (19). Only 13 (8%) of these can be accounted for, and most died in collisions with powerlines or other man-made structures. In addition, it is estimated that one quarter of the juvenile whooping cranes fledged at Wood Buffalo Park fail to arrive at Aransas NWR (20). Since 1948, two whooping cranes have arrived at Aransas NWR with wounds believed to have resulted from shooting (19).

Although we would all like to believe that all hunters are conscientous and ethical, history sadly does not support that hypothesis. In fact, before the recent re-introduction of 14 whooping cranes in Florida, the USFWS considered a re-introduction into Louisiana, where this species wintered up until 1940. This idea was rejected because USFWS agents in Louisiana thought that the "conservation ethic of the local residents" was not sufficiently advanced to the point where they thought the birds would survive (19). The point of this argument is not that hunters will necessarily shoot whooping cranes if given the opportunity, but that we cannot afford to

needlessly increase the opportunities for hunting-related mortalities. The spring and fall migration periods are the most dangerous time for whooping cranes, as 60-80% of population mortality occurs during those short time periods (20). The whooping crane contingency plan calls for shutting down an area to hunting if a whooping crane is sighted (19). This becomes a serious logistical problem when one discovers that whooping cranes do not always alight conveniently in Barton or Stafford counties, where trained observers exist and where the populace has had greater exposure to whooping cranes. Although the bulk of the confirmed sightings (58%) are in Stafford or Barton counties, records of confirmed sightings exist for many counties in the western two-thirds of the state since 1961 (Figure 1). Additionally, it is likely that the confirmed sightings database is biased toward sightings in areas where a trained observer could be found (i.e. Stafford and Barton counties). This is substantiated by the fact that 14 **radio-collared** whooping cranes have landed in Kansas, but only once did this occur in Barton or Stafford counties (Figure 2). It is obvious that whooping cranes alight in Kansas far more often and over a far greater area than is apparent from the confirmed sightings database. In addition, in the fall they usually only stay one night (Figure 3). If a whooping crane is sighted, Kansas and federal wildlife agents are required to close the area to further hunting until the whooping cranes move on (11). However, given that fact that the majority of whooping cranes stay only one night in Kansas in the fall, and given the fact that they could theoretically show up anywhere within a 56,000 square mile area in the state, it is unlikely that this plan can be carried out all, or even most of the time. A more prudent course of action might be to avoid the problems altogether and not initiate a season which could further endanger this critically endangered species. If there is no overriding reason to initiate a season, and it seems that this is indeed the case, prudent management practices would argue that Kansas should not seek a season on these grounds alone.

Summary - There appears to be no overwhelming reason for Kansas to establish a sandhill crane hunting season at this time. The petition could be denied simply based on the biological facts of the situation. Mid-continent sandhill crane populations are not increasing. Crane habitat in migration and on the wintering grounds is increasingly at risk (12, 13, 7, 6). The 1981 management plan recognized these deficiencies, and also had a harvest trigger to reduce hunting mortality if it exceeded 5% of the population. Hunting mortality for this species had met or exceeded the prescribed quota every year since 1986. The 1993 cooperative management plan eliminated that trigger, and substituted a new mechanism which can be used to allow increased hunting of mid-continent cranes. Despite many indications that discrete breeding populations of sandhill cranes exist, the 1993 management plan lumps all the mid-continent cranes into one enormous population. The obvious consequence of this controversial assumption is that research needed to justify hunting of the different subspecies will not be performed. Critical data which are needed to generate a biologically sound management plan were unavailable in 1981, and are still largely unavailable in 1993. Plans should be made to start generating these data, in Kansas and elsewhere along the flyway, before this population is subjected to further hunting pressure. Furthermore, it will be a difficult task to ensure that endangered whooping cranes are not harmed by a Kansas sandhill crane season. Our overworked and understaffed wildlife agencies could more profitably spend their time on other projects rather than be forced to prevent a situation in the field which can be much more easily prevented at this meeting.

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Prepared by D. A. Rintoul, Biology Division, KSU 6/11/93
Approved by the Kansas Audubon Council, Manhattan KS 6/13/93

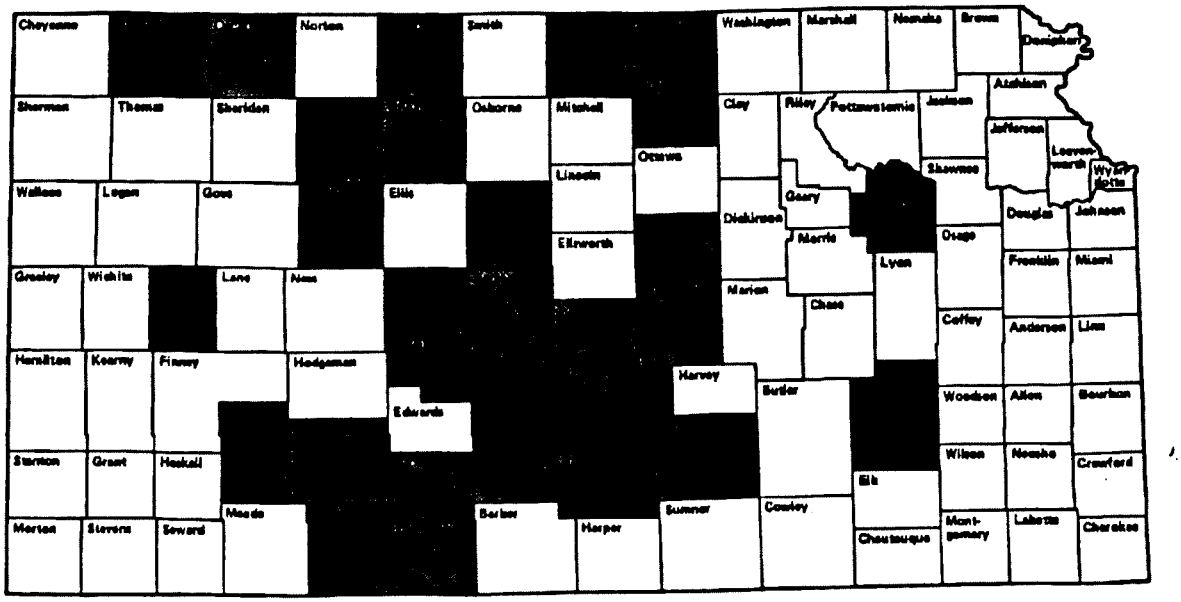

Figure 1 - Confirmed Fall Sightings of Whooping Cranes in Kansas (1961-1992)

The database of confirmed whooping crane sightings in Kansas was obtained from Wally Jobman at the USFWS office in Grand Island NE. Confirmed sightings are defined as those reports that are verified by a competent observer, either a trained ornithologist or a birder with experience in identifying whooping cranes. There were 131 confirmed fall sightings in the state of Kansas during that time period; an additional 66 confirmed spring sightings were not considered in this analysis. Whooping cranes were sighted in the fall in 29 of the 105 Kansas counties between 1961 and 1992; these are shaded in the figure above.

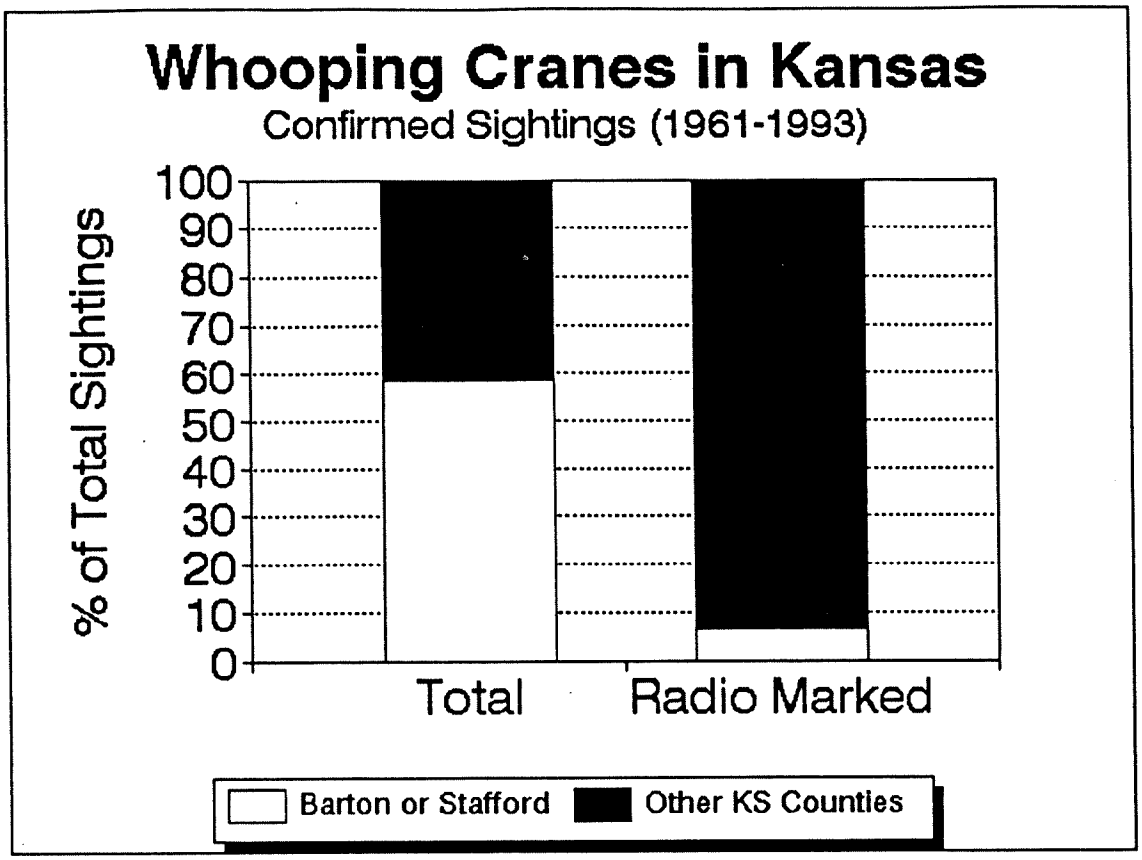

Figure 2 - Comparison of radio-marked sightings and total sightings of whooping cranes in Kansas

The database of confirmed whooping crane sightings in Kansas was obtained from Wally Jobman at the USFWS office in Grand Island NE. Confirmed sightings are defined as those reports that are verified by a competent observer, either a trained ornithologist or a birder with experience in identifying whooping cranes. There were 197 confirmed sightings in the state of Kansas during that time period; 14 of these were radio-marked cranes. On the left is shown the proportion of all sightings in Stafford or Barton counties (open bar); these account for 58% of the total. On the right are shown the proportions of radio-marked birds in Stafford or Barton counties (open bar); these account for 6.6% of the total (at Quivira, 4/16-4/17/83). Other counties visited by radio-marked cranes were Pawnee, Comanche, Greenwood, Sheridan, Barber (2), Mitchell (2), Russell, Lane, Ellis, Graham, and Trego.

5.11

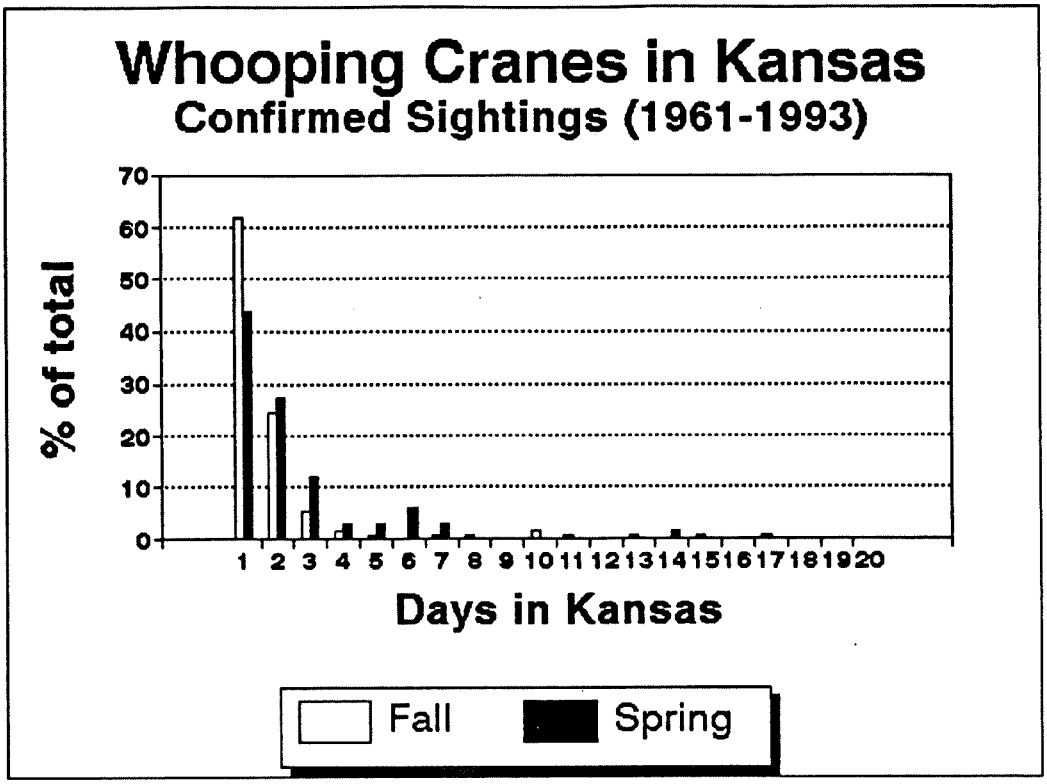

Figure 3 - Duration of stays of Whooping Cranes in Kansas during the fall and spring

The database of confirmed whooping crane sightings in Kansas was obtained from Wally Jobman at the USFWS office in Grand Island NE. Confirmed sightings are defined as those reports that are verified by a competent observer, either a trained ornithologist or a birder with experience in identifying whooping cranes. There were 197 confirmed sightings in the state of Kansas during that time period. In the fall (open bars) 62% of the confirmed whooping cranes or groups stayed for a day or less (usually overnight). In the spring (filled bars) 44% of the confirmed whooping cranes or groups stayed for a day or less. Longer stays were more common in the spring than in the fall.

State of Kansas
Joan Finney, *Governor*

Department of Health and Environment
Robert C. Harder, *Secretary*

TESTIMONY PRESENTED

TO THE

HOUSE ENERGY & NATURAL RESOURCES COMMITTEE

ON 3RS1377

SLUDGES

by
Charles F. Jones
Director of Environment

November 17, 1993

11-17-93
H. En & NR
Att. 6

The Kansas Department of Health and Environment (KDHE) supports the committee's efforts to protect the Kansas environment through better control of water system sludges. We estimate within Kansas alone, roughly 300 tons of wastewater sludge (dry weight) is produced daily from 260 treatment plants. Most plants land apply the sludge. Stricter national regulations on municipal sludge handling combined with phasing out of ocean dumping present a new challenge, control of out of state sludge. The prairie states with relatively low population densities and large agricultural tracts are attractive areas for land application of sludge primarily from the New York, New Jersey, and Philadelphia areas.

KDHE now regulates water system sludges under the wastewater permit system. This system has worked adequately when the sewage treatment plant is in Kansas and the plant is permitted by the state. KDHE would like clarification of Kansas' authority to regulate sludge from a sewage treatment plant located outside Kansas operating under another state's permit. We have identified several statute changes which clarify KDHE's authority to regulate water system sludges, particularly those imported. KDHE's requested changes would not ban out of state sludge from entering the state.

Besides assuring control of out of state sludges, KDHE requests additional statute modifications to make the Kansas program consistent with new federal regulations covering municipal sludges (503 regulations). The 503 regulations have been a long time in development by EPA and were published in February 1993. The 503 regulations set national standards for municipal wastewater sludge quality by the following requirements:

1. Ceiling limits for 10 metals commonly present in domestic sewage sludge. Sludge exceeding the ceiling limits cannot be land applied.

2. Metal accumulation limits to assure the buildup of metal in the soil over years of sludge application does not harm plant or animal life nor pollute ground or surface waters of the state.

3. Pathogen reduction to assure the health of animals and humans. (Pathogens are disease causing virus, bacteria, worms, etc.)

4. Vector attraction reduction (rats, mice, birds, flies, etc.) to assure pathogens do not get transmitted to humans via these vectors.

5. Management requirements to assure the sludge is used in a beneficial manner and beneficial quantities to enhance the productivity of the soil.

6. Testing and reporting requirements.

KDHE requests statute changes which allow state adoption of state regulations comparable with the federal 503 regulations. The state's adoption of regulations similar to the 503 regulations will also allow state implementation of the regulations rather than EPA's.

Beyond the general issues discussed above, KDHE has some technical comments for your consideration. KDHE does not recommend prohibiting sludge disposal at solid waste sites. We believe sludge disposal in a solid waste facility is a viable technical option which will likely be occasionally necessary, perhaps during inclement weather or due to mechanical problems. Conditioned sludge is an excellent soil conditioner and can benefit surface reclamation at a landfill site. We do encourage land application of sludges as it represents a productive use of the sludge. We want to discourage landfilling, but believe a prohibition would eliminate a viable option.

KDHE estimates municipal sludge represents only half of the total sludge generated in the state. The other half comes from industrial treatment systems. We suggest the statute allow regulation to also include industrial sludges.

KDHE is supportive of the fee concept proposed within 3RS1377 and believes the fee could be incorporated into our existing wastewater fee system.

The 30 mile haul limit would provide a barrier to reuse of sludges on land, particularly urban centers and strip mine areas.

We have prepared a draft bill which will accomplish many of the same things as 3RS1377. The department's draft does not limit hauling distances, but clarifies KDHE authority to regulate sludge processing, particularly land application.

THE LEAGUE OF KANSAS MUNICIPALITIES

AN INSTRUMENTALITY OF KANSAS CITIES 112 W. 7TH TOPEKA, KS 66603 (913) 354-9565 FAX (913) 354-4186

Municipal Legislative Testimony

TO: House Committee on Energy and Natural Resources

FROM: Harry Herington, League Attorney

DATE: November 17, 1993

RE: Proposed Freshwater and Wastewater Sludge Legislation

I appreciate the opportunity to appear on behalf of the League of Kansas Municipalities to express our concerns with the proposed bills regulating the disposal of freshwater and wastewater sludge. After speaking with municipal engineers from several cities, it has been brought to our attention that the disposal of freshwater and wastewater sludge through the use of solid waste disposal areas is common in Kansas. A requirement that local governments develop an alternate procedure for the disposal of freshwater and wastewater sludge would place an unnecessary financial burden on them. Additionally, the League is unaware of any environmental risk caused by the depositing of sludge in solid waste disposal areas.

Local governments across the country are currently struggling to comply with various federal mandates such as 503 Sludge Regulations and Subtitle D Regulations. Under the federal 503 Sludge Regulations, wastewater treatment plants have four disposal options for sludge: (1) through the use of solid waste disposal areas; (2) land application; (3) surface disposal; and (4) incineration. It is also our understanding that properly treated sludge may be used as cover material for solid waste disposal areas, thus assisting in compliance with Subtitle D Regulations. By removing one of the sludge disposal options currently approved by federal regulations, the state would place an unnecessary financial burden on local governments as they endeavor to comply with federal mandates.

It is the League's position that the proposed legislation would place an unnecessary mandate on municipalities by making state statutes concerning sludge disposal stricter than federal regulations. Therefore, the League would respectfully recommend that the committee take no action on this proposed legislation.

11-17-93

H. En. & N.R.
Att. 7

MEMO

To: Dave Corliss
Asst. to the City Manager

From: Roger Coffey
Utilities Director

Date: November 9, 1993

Subject: Comments Regarding Proposed Legislation Regulating Municipal Water/Wastewater Sludge

Department of Utilities staff has reviewed the proposed legislation concerning the subject. We are opposed to the legislation in its present form. It appears to prohibit the disposal of plant sludges in solid waste disposal areas. We have in the past and are presently disposing of this material in landfills, to do otherwise would impose a real burden financially as well as physically on our present facilities and ultimately to our customers. We are dealing with substantial quantities of this material on a daily basis and it must be economically/environmentally dealt with on that basis. Often properly treated municipal sludge are used as cover material for landfills and other similar purposes. As you know we are presently underway with a Sludge Management Plan Study which is costing the City $200,000.00 and landfill as well as land application (subsurface injection) is a major consideration. Our focus has been on compliance with Federal Section 503 sludge regulation and we would trust that State legislation not to be in conflict. Additionally, we are not aware of any technical basis for not allowing these materials to be disposed of in a solid waste disposal area.

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 1

To HARRY HEALISTON	From DAVID CORLISS
Co. LEAGUE	Co. LAWRENCE
Dept.	Phone # 832-3403
Fax # Henry, call if have Qs	Fax #

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Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 5

To Richard Porter	From David Warren
Co. City of El Dorado	Co. Director
Dept. Public Utilities	Phone # 268-4504
Fax # 1-316-321-6282	Fax # 268-4514

September 22, 1993

Honorable Carl D. Holmes, Chair
House Energy & Natural Resources Committee
House of Representatives
Capitol Building
300 SW 10th Street
Topeka, KS 66612-1591

Re: RS 1377 and 1378

Dear Mr. Holmes:

I am writing on behalf of the City of Wichita to express our opposition to the referenced legislation which would, among other things, prohibit the disposal of municipal water treatment plant and wastewater treatment plant sludges in a solid waste disposal area.

The City believes this restriction is unreasonable and does not promote economical disposal methods to the detriment of the utility ratepayer. The City believes that the use of properly treated municipal sludges as daily or final cover material in sanitary landfills represent an environmentally sound and economical method of disposal. Further, the use of these materials for cover offer an economic advantage to the landfill operator which also benefits the citizens who must pay for the cost of solid waste disposal.

The City has expended $160,000 to develop a sludge disposal plan in compliance with Federal Section 503 sludge disposal regulations. The use of sludges as cover material in the landfill are a significant part of the City's plan. The City estimates that the inability to use this disposal method would increase the City's and the citizen ratepayers annual treatment and disposal costs by $750,000.

I am not aware of any science which would support imposing the disposal prohibition that these bills would create. In fact, both the sludge disposal regulations and the solid waste disposal regulations look favorably on the use of treated sludges as cover material.

The City asks that the HENR Committee drop further consideration of RS 1377 and 1378 in their present form. Thank you for the opportunity to comment on this proposed legislation and your consideration of the City's opinion.

Sincerely,

CITY OF WICHITA, KANSAS

David R. Warren, Director
Water & Sewer Department

c: City Council
Wichita Legislative Delegation
City Manager
Cathy Holdeman

RS1377 Establishes authorization for regulation of residuals from water treatment plants. The bill will allow permit fees to fund the state program.

With the "freshwater sludge" being classified as a solid waste, there would probably be an additional permit required as called out in the existing solid waste act. (See KSA 65-3407) This is a operational permit for the processing and/or disposal of solid waste. Again, the State funds this program through an initial fee not to exceed $5,000 and annual renewal fees not to exceed $2,000. With the NPDES permit under the Clean Water Act, this may be a duplication. This may cause problems by having to deal with two sets of regulations as well as possibly paying two sets of fees.

This legislation would appear to prohibit disposal of freshwater sludges at a solid waste disposal area. With the potential additional limitation on transporting freshwater sludge over 30 miles, the only alternate disposal for utilities would apparently be monofills. The 30 miles limitation may also limit a utilities options in pursuing beneficial reuse.

Referring again to KSA 65-3407 (k)(1) - "No permit to construct or operate a solid waste disposal area shall be issued on or after the effective date of this act if such area is located within 1/2 mile of a navigable stream used for interstate commerce or within one mile of an intake point for any public surface water supply system." The locations of the monofills for freshwater sludges may be severely limited.

Johnson County
Kansas

OCT - 1 1993

October 19, 1993

Mr. Chris McKenzie
Executive Director
League of Kansas Municipalities
112 W. 7th Street
Topeka, KS 66603-3896

RE: Proposed Bill by Committee on Energy and Natural Resources: 3 RS 1378

Dear Mr. McKenzie:

I have received a copy of a letter dated October 8, 1993, to your office from Mr. Douglas W. Cochran with the City of Olathe regarding the referenced legislation.

As you may recall, this legislation prohibits the disposal of municipal wastewater sludges at a solid waste disposal area (landfill). Current federal law permits such disposal, with certain important restrictions, and the landfill option remains an important and viable option for many municipalities. As Mr. Cochran points out, landfills are the only appropriate place for certain by-products of the wastewater treatment process, grit and screenings, which fortunately constitute a relatively small percentage compared to the quantities of sludge which are generated.

We concur with the concerns expressed in Mr. Cochran's letter, and we would appreciate anything that you could do to persuade the committee to revise this language to make it less onerous for municipalities. If there is anything that I can do, please let me know.

Thank you for your time and attention to this issue.

Sincerely yours,

John A. Metzler, P. E.
Chief Engineer

JAM/ksm
7393P730

cc: William A. Ramsey, City of Olathe
Douglas Cochran, City of Olathe
Gerry Ray, Legislative Consultant
Douglas L. Smith, Wastewater Administrator
Phil Wittek, Environmental Director
Chris Burns, Senior Engineer
John O'Neil, Director of Operations and Maintenance

7-6

Wastewater Offices
Phone (913) 338-1300

10881 Lowell
Suite 100

Overland Park, Ks 66210
FAX (913) 338-1228

City of Olathe

October 8, 1993

Chris McKenzie
Executive Director
League of Kansas Municipalities
112 S.W. 7th Street
Topeka, Kansas 66603-3896

Re: Proposed Bill By Committee on Energy and Natural Resources: 3 RS 1378

Dear Mr. McKenzie:

This letter is written to bring attention to the League of Kansas Municipalities of concerns by the city of Olathe with proposed state legislation. The legislation is a proposed bill by the Committee on Energy and Natural Resources. It proposes an act amending K.S.A. 1993 Supp. 65-3402 and 65-3409 and repealing the existing sections.

The concern of the city is in regard to Section 3 of the legislation, which in part reads as follows:

(a) It shall be unlawful for any person to:
.....

(8) Dispose of municipal wastewater sludge, cause disposal of such sludge or accept such sludge for disposal at a solid waste disposal area.

With the recent advent of sludge regulations under 40 CFR 503, wastewater treatment plants (WWTPs) have four (4) disposal options for sludge. The proposed legislation would eliminate one (1), leaving only three (3) options. It should be noted that the three (3) remaining options (land application, surface disposal, and incineration) take considerable time to develop. It is believed that many WWTPs use landfills in contingency plans for sludge disposal.

Another concern is an issue regarding wastewater grit and screenings. These materials are not suitable for land application and as such, in general, are disposed of into landfills.

7-7

Please notify the city if there are other municipalities which share the concern presented. Your time and attention to this matter are appreciated.

If you require additional information, or have questions or comments, please do not hesitate to call me at (913) 829-0221.

Sincerely,

Douglas W. Cochran
Pretreatment Coordinator

DWC:saf
PRETREAT\LEGBILL

xc: William A. Ramsey, Municipal Services Director
Don Seifert, Assistant Director

A User-Friendly Guide to the New Federal *SLUDGE* Regulations

by
Bill Davis and Kenyon Hunt
Black & Veatch

On February 19, 1993, the United States Environmental Protection Agency (EPA) published the long-awaited 40 CFR Part 503 regulations, imposing national standards for the use or disposal of sludge produced by municipal wastewater treatment facilities. The regulations, "Standards for the Use or Disposal of Sewage Sludge; Final Rules" and sometimes referred to as the National Sewage Sludge Rule, took effect on March 22, 1993.

The new regulations were 15 years in the making. Originally called for in the 1977 Clean Water Act, the regulations were not published in draft form for public comment until February 1989. The draft regulations were the first attempt to develop a set of federal, risk-based standards that incorporate multi-media considerations. They were heavily criticized because they would have had the effect of largely curtailing the then-burgeoning beneficial reuse practices employed by many Publicly Owned Treatment Works (POTWs) – practices in keeping with beneficial reuse goals long espoused by EPA.

Although there are still some technical questions surrounding the final 503 regulations, they have come a long way from the draft version published in 1989. Experience gained by EPA, the states, and the POTWs in implementing the 503 regulations will be useful in fine-tuning them in future rounds of rulemaking.

Certain provisions of some existing state standards are more restrictive than those established in the final 503 regulations. In those cases, the more restrictive state standards will still apply unless they are changed. Furthermore, states may choose to adopt and enforce more stringent requirements or limitations than those imposed by the 503 regulations. Based on the Texas Water Commission's proposed rule, published in the April 9, 1993 *Texas Register,* it appears that Texas may be one of those states.

Here's a brief look at the new federal regulations, including some eleventh-hour changes made during final promulgation. Because of its complexity and evolution over many years, the National Sewage Sludge Rule does not yet reflect the new terminology promoted by the Water Environment Federation and others: that "biosolids" be used in lieu of "sludge" for all wastewater solids that have been processed into a form suitable for beneficial reuse.

The National Sewage Sludge Rule applies to sludge that is generated from the treatment of domestic sewage and municipal wastewater at publicly and privately owned treatment works. It does not apply to sludges generated from the treatment of industrial wastes at industrial sites, even if there is a domestic sewage component to the industrial waste flow being treated. The rule also applies to domestic septage. Sludges determined to be a hazardous waste under federal criteria are governed by hazardous waste regulations.

The rule includes standards for the final use or disposal of sludge or sludge products that are:

- Land applied (including those sold or given away, or distributed and marketed).
- Placed in or on surface disposal sites (including monofills, disposal lagoons, and dedicated land disposal sites).
- Incinerated in a sludge-only incinerator.

The rule does not cover sludge disposal in a municipal solid waste (MSW) landfill, a practice that continues to be governed by the Part 258 regulations; nor does it cover the disposal of incinerator ash.

The National Sewage Sludge Rule applies not only to publicly and privately owned facilities that generate or process sewage sludge, but also to any individual who uses or disposes of sludge, sludge products, or septage.

How the Rule Is Structured

The sludge management practices covered by the final rule have been consolidated into three general categories: land application (including distribution and marketing programs); surface disposal (lagoons, dedicated land disposal sites, and monofills); and incineration.

Each practice is covered by a subpart of the rule. For each practice, the rule establishes minimum federal standards for pollutant limits and prescribes management practices; operational standards; and monitoring, recordkeeping, and reporting requirements.

The numerical criteria for pollutant limits established in the rule are listed in the table on page 20. The rule establishes ten pollutant limits for land application, three for surface disposal, and eight for incineration. These limits are based on the best scientific information available about the risks to human health and the environment from the use or disposal of sludge through land application, surface disposal, and incineration. The anticipated impacts of these pollutant limits on current sludge management programs are briefly discussed in subsequent sections of this article.

The prescribed management practices are designed to ensure that sludge is used on the land or disposed of in ways that protect human health and the environment. The operational standards establish requirements for pathogen reduction and vector attraction reduction in sludges destined for land application or surface disposal, and for hydrocarbon emissions from the incineration of sludge. A separate subpart of the rule is

7-9

devoted to pathogens and vector attraction reduction.

Pathogens and Vector Attraction Reduction

Sludge that is land applied or disposed of at a surface disposal site must meet the requirements for one of the alternatives for vector attraction reduction contained in the rule. There are up to 11 such alternatives, depending on the specific method of land application or disposal practiced. Separate vector attraction reduction requirements are applicable to land application or monofilling of domestic septage. In general, the requirements for vector attraction reduction in the final rule are not expected to cause a significant departure from current practices.

The rule establishes two levels of sludge quality with respect to pathogens: Class A and Class B. Sludge that is sold or given away, or applied to a lawn or home garden, must meet the more stringent Class A pathogen requirements. Class B pathogen requirements must be met for bulk land application and for monofilling if daily cover is not applied. Alternative criteria are offered in the rule for meeting both the Class A and Class B pathogen requirements.

Although confirming data are generally lacking, the Class B pathogen requirements may pose problems for some POTWs using aerobic digestion. However, a national survey by Black & Veatch in early 1992 found that most POTWs using anaerobic digestion will be able to meet these new requirements.

Land Application

The rule contains several regulatory schemes for land application, depending on the quality of the sludge. Sludges that meet the high-quality sludge criteria listed in the table and the Class A pathogen requirements become exempt from further regulatory controls and can be used just as freely as other fertilizers or soil amendments. High-quality sludge meeting Class B pathogen requirements can be land applied at agronomic rates if the site restrictions in the rule are observed. Sludges that cannot meet the high-quality sludge criteria but are within the ceiling limits listed in the table can still be land applied; in that case, however, compliance with annual and cumulative pollutant (metals) loading rates is required, site restrictions may apply, and more extensive recordkeeping requirements are imposed.

Based on the National Sewage Sludge Survey conducted in 1988 and 1989, EPA estimates that most POTW sludges will meet the high-quality sludge criteria. However, the criterion of 18 mg/kg for molybdenum, which was sharply reduced in a last-minute change in the final rule, may prevent a number of otherwise superior-quality sludges from meeting the high-quality requirements. By way of fewer restrictions and reduced recordkeeping, the final rule creates incentives for POTWs to meet the high-quality sludge criteria and possibly even the Class A pathogen requirements. However, the additional cost of complying with the latter requirements would have to be carefully weighed.

Surface Disposal

As expected, the thrust of the regulatory requirements for surface disposal is protection of the underlying groundwater aquifer. The rule requires the operator of a surface

Continued on page 20

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ludge Regulations continued from page 13

disposal site to submit annually to EPA the results of a groundwater monitoring program, developed by a qualified groundwater scientist or, alternatively, certification by a qualified groundwater scientist demonstrating that sludge disposal does not contaminate the aquifer.

As noted in the table, limits are imposed on the concentration of three metals in sludge disposed of at surface disposal sites without liners and leachate collection systems. Sludge disposed of at surface disposal sites with liners and leachate collection systems is not subject to metal concentration limits.

Incineration

Promulgation of the National Sewage Sludge Rule represents the first major revision of sludge incineration regulation in more than 15 years. Unlike previous regulatory changes, the new regulations do not allow existing units to be "grandfathered." As a result, compliance is required of every sludge incineration facility in the United States. In fact, incineration is the sludge management practice most affected by the new rule.

The allowable concentrations of metals in the sludge to be burned will be determined for each incineration facility on a site-specific basis, which will entail stack testing and dispersion modeling. For many of these facilities (especially the largest ones), compliance with the metals limits will probably require a reduction in sludge throughput or an upgrade in emissions control equipment, because limits will be imposed on a per site rather than per unit basis. In addition, total hydrocarbons (THC) emissions are limited to 100 ppm under the final rule, which may require multiple hearth incinerators to be retrofitted with afterburners.

The owners of sludge incineration facilities are required to submit permit applications listing their site-specific pollutant limits (based on guidelines provided by EPA) by August 19, 1993.

Implementation of the Rule

EPA considers the rule to be "self-implementing," which means that entities and individuals who use or dispose of sludge must comply with all provisions of the regulations regardless of their current permit status. Monitoring and recordkeeping must begin by July 20, 1993.

Sludge producers have one year from the date the rule was published – until February 19, 1994 – to achieve full regulatory compliance; however, this one-year compliance deadline will be extended to two years if new construction is required. The requirements of the National Sewage Sludge Rule will actually be incorporated in permits issued over the next several years even though, for some entities, compliance will be required before this occurs because of the self-implementing nature of the rule. Sludge incinerators and other facilities seeking site-specific limits (e.g., facilities proposing surface disposal) are required to submit site-specific permit applications by August 19, 1993.

Facilities with existing NPDES permits must include sludge disposal information with their next application for permit renewal; NPDES permits must be renewed every five years.

"Sludge-only" facilities – those not subject to NPDES permitting requirements – must file residuals management operations information with EPA by February 19, 1994.

A future article about the Texas sludge regulations is planned once those regulations are finalized.

TABLE 1

NUMERICAL CRITERIA FOR PART 503 RULE

	Land Application				Surface Disposal		Incineration
	Alternate Pollutant Limit (high quality) (mg/kg)	Ceiling (mg/kg)	Cumulative Loading Rate (lb/ac)	Annual Pollutant Loading Rate (lb/ac/yr)	Criterion+ Unlined (mg/kg)	Criterion Lined (mg/kg)	
Arsenic	41	75	36	1.8	73	--	*
Beryllium	--	--	--	--	--	--	10 g/24 hrs
Cadmium	39	85	35	1.7	--	--	*
Chromium	1,200	3,000	2,676	134	600	--	*
Copper	1,500	4,300	1,339	67	--	--	--
Lead	300	840	267	13	--	--	*
Mercury	17	57	15	0.75	--	--	3,200 g/24 hrs
Molybdenum	18	75	16	0.80	--	--	--
Nickel	420	420	374	19	420	--	*
Selenium	36	100	89	4.4	--	--	--
Zinc	2,800	7,500	2,500	125	--	--	--
Total Hydrocarbons	--	--	--	--	--	--	100 ppm

* Allowable concentration in wastewater sludge is determined site-specifically for each incinerator through incinerator testing and emissions dispersion modeling.

+ These values apply in Texas assuming a 150-meter buffer zone to the property line (as proposed April 9, 1993 by TWC).

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SIERRA CLUB

Kansas Chapter

Testimony of William Craven
Legislative Coordinator
Kansas Sierra Club
House Energy and Natural Resources Interim Committee
Nov. 17, 1993

Land Treatment of Sludge

Thank you for an opportunity to testify on this proposal. Under the Clean Water Act, the EPA has issued regulations as to when and how sludge can be applied as a land treatment. Those regulations address heavy metals and PCB's, and they address the ability of crops to absorb chemicals when sludge is used as a nutrient or fertilizer. They do not address sludge as a disposal alternative and the potential health impacts of groundwater contamination, air pollution, or the ingestion of contaminated soil by cattle or other grazing animals.

The question is, are those regulations acceptable in Kansas, given a questionable enforcement record by KDHE in terms of monitoring the pretreatment of wastewater in this state?

If you know what goes into sludge, then you can answer the question whether it is safe to use as a land treatment. If you don't know what is in it, the best policy is not to allow it to be used in the food chain.

As a general rule, most metals and many complex synthetic chemicals pass through municipal wastewater treatment systems unaffected by treatment. EPA has estimated that about 15 percent of the 126 toxic chemicals designated as priority pollutants concentrate in sludge.

The detoxification of toxic chemicals was not, and still is not, a design objective for municipal wastewater treatment facilities. Chemicals enter the wastewater treatment process basically two ways: industry flushes them down the sewer, and households flush consumer goods down the toilet. These substances include solvents, cleansers, paints, and other products. Households are responsible for about 7.5 percent of the priority organics dumped into sewers, and about 19 percent of the metals. Industry is responsible for the remainder in both categories, according to EPA estimates.

Many industries are completely legal when they do this. In some cases, they are exempt from the law. Another possibility is that the categorical standards don't apply to the discharge. For priority pollutants, limits are set only if (a) the pollutant is present in high concentrations, (b) the technology exists to control the release of the pollutant, and (c) the control technology is "economically feasible." One consequence of this rule, according to a report by the Office of Technology Assessment, is that there are no limits on the release of priority pollutants by petroleum refineries, which account for about 15

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percent of the discharge of priority organic pollutants to publicly-owned wastewater treatment works (POTWs). Of course, about 2.5 pounds of non-priority pollutants are discharged for every pound of priority pollutant, from manufacturers of organic chemicals, plastics, and synthetic fibers.

If the sludge is clean, it can be safely incinerated or land-farmed. But heavy metals and chemicals make this too risky a proposition to make it a general rule. Every study that has tested for organic chemicals in sludge has found them, lots of them. Typically found are PCB's, pesticides, and many chlorinated compounds.

The greatest risk of land-farming sludge is contamination of groundwater by heavy metals pulled into the groundwater. Another risk is air pollution, because when the sludge dries, volatile chemicals evaporate.

There are success stories, and there are horror stories about land-farming sludge. Del Monte and Heinz have banned sludge from their croplands. Other places, where they control what goes into the sludge, are pleased to make sludge available as a land treatment.

There are options for industrial discharges other than creating sludges. It is common for many industries to convert their wastes to virtually insoluble forms. One example is FMC in Lawrence which converts its arsenic wastes to a solid, and then ships it to a hazardous waste landfill. It is also possible to dispose of these materials in isolated cells of a Subtitle D landfill. These are both fairly credible responses from many industries for their heavy metal wastes. For chemical wastes, a safer practice is to ship them to a hazardous waste landfill.

Perhaps the best solution is to allow local communities or counties to decide for themselves if they want sludge used on their lands. This would provide a way for some local quality control to be imposed, and citizens would have better knowledge about what is being spread on the land near them. I would also recommend that citizen suit provisions be added to any legislation so that citizens are not left without a legal remedy if land-farmed sludge turns out to be toxic.

Thank you for providing an opportunity to testify.

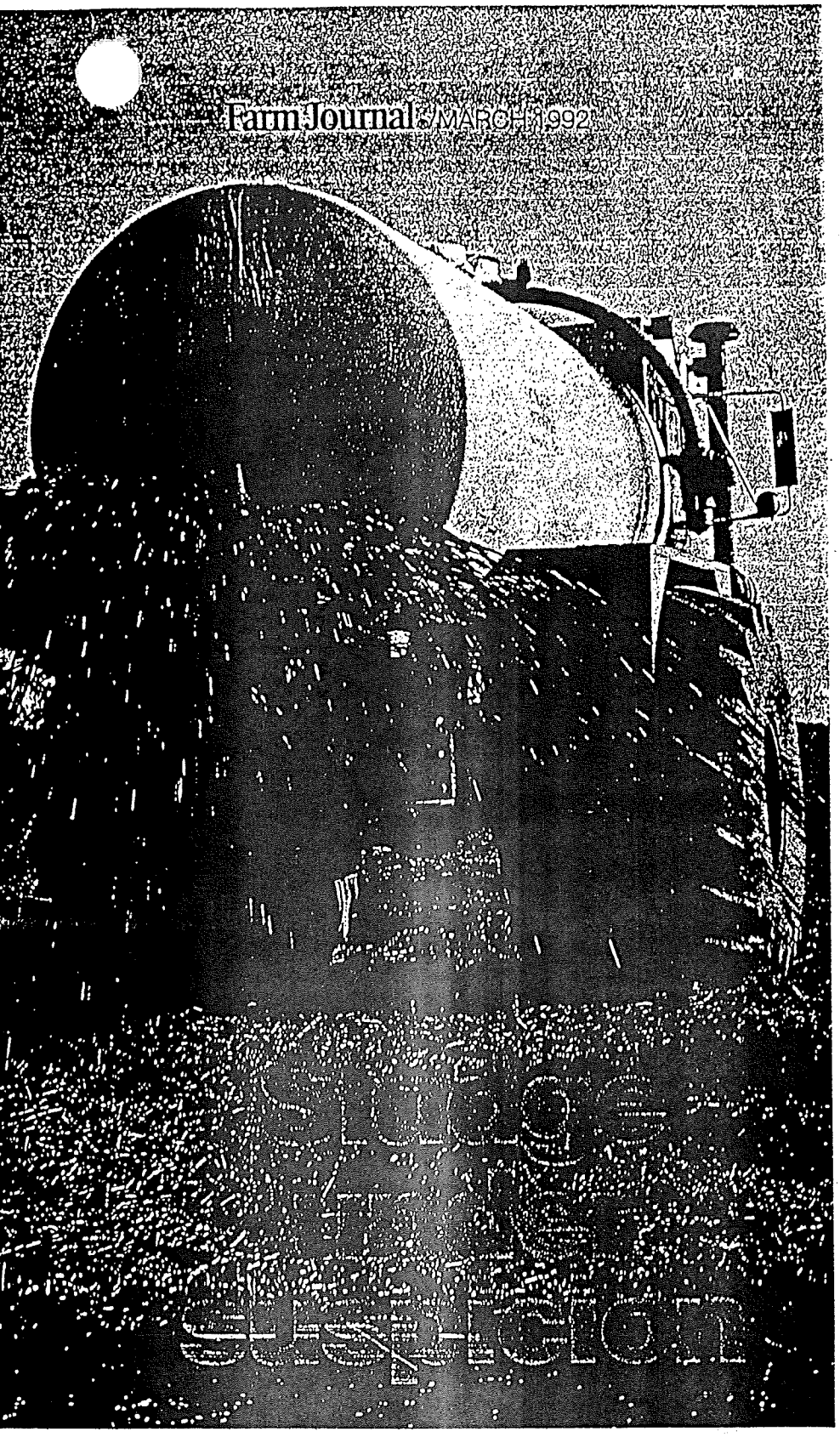

PHOTO: DENNIS BARNES

By ED HAAG

If experts can't agree whether sludge is safe, should you?

Nearly half of all the municipal sludge produced in this country each year—up to four million metric tons—is spread on farmland. Once considered a safe, cheap form of fertilizer, this by-product of sewage treatment plants may instead turn out to be a land bomb.

"It's not that the material [sludge] itself is bad if it's properly handled," says Darrell Turner, Washington State Farm Bureau president and an authority on sludge application to farmland. "But I have no confidence in the current system of policing the stuff."

Turner isn't the only one who thinks this. Several farm and food organizations, including the American Frozen Food Institute (AFFI), are calling for a halt to the practice of applying sludge to farmland. "We're advising our membership to make very sure that the people who are trying to get rid of this stuff are within compliance of Environmental Protection Agency regulations," says AFFI's Howard Weatherspoon, assistant vice president of research and technical services.

That isn't so easy. While the Environmental Protection Agency (EPA) does provide recommendations on acceptable levels of certain contaminants in sludge that is applied to farmland, it normally defers enforcement to local or state agencies. The danger to farmers lies in how poorly application guidelines are interpreted and enforced.

Current enforcement regulations allow permits for sludge application on agricultural land to be issued by any one of a half-dozen federal, state or municipal agencies. In many cases, no single agency holds individual accountability or even knows what the others are doing.

"There are too many opportunities for things to fall through the cracks because you don't have a clear line of authority all the way through," charges Turner. "I don't think we've got a workable system."

Linda and Raymond Zander believe they became victims of just such an ineffective enforcement system when a permit was granted three years ago to Western Services Waste Management. Contracted by 12 local municipalities, the company began spreading sludge on a 70-acre site adjacent to the Zander farm near Lynden, Wash.

Within a year, changes occurred to their normally healthy dairy cows. Whatcom Community College Farm Management records show the Zanders' milk average dropped from 19,892 lb. in 1988 to 16,575 lb. in 1990.

Floyd Sandell, the Zanders' consulting herd manager for 15 years, was perplexed by the sudden downturn in

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production. "In 1988 things were going along very nicely and then all of a sudden it started going the other way," he says. By the end of the next year the situation had worsened dramatically. "We noticed herd health was down considerably, and the turnover percentages were higher due to sickness, lameness and other malfunctions."

Sandell could not identify any change in the Zanders' operation that would have precipitated such a slide. "The Zanders have always been very conscious of staying with the recommendations of nutritionists and other experts," he says. "They were constantly checking and analyzing feeds."

By 1989 several of their prime producers developed severe arthritis in their hind quarters. The animals also failed to breed back as quickly.

The Zanders' veterinarian, Greg Iverson, tells of problems with calves born with "strange tendon abnormalities. It happened in a big group so it made us wonder," he says.

Alarmed by the worsening condition of their herd, the Zanders asked Susan Cook, an independent water-quality specialist, to analyze their well water.

She also analyzed control samples from other wells in the area that shared a similar soil profile. The results showed that the Zanders' water contained metals such as nickel and tin that normally are not found in rural wells.

"We found the other wells had much lower levels of metals," says Cook. "And they didn't have the nickel and tin found in the Zanders' wells."

Sludge analysis reports obtained by the Zanders on five of the 12 municipalities involved in the spreading indicated that metals found in the well were present in the sludge.

Encouraged by their discovery, the Zanders next looked into the procedure for granting sludge-application permits. Clearly outlined in both state and federal regulations is the requirement that deposit sites for sludge containing heavy metals have a pH of 6.5 or higher. Soil samples taken from the site adjacent to the Zanders' property showed a pH between 4.8 to 5.5.

"No way should that sludge have been put on that acidic soil," says Turner, who, as a soil scientist at Washington State University prior to returning to full-time farming, co-authored a Washington Department of Ecology (DOE) publication in which guidelines for sludge application are outlined. "The original permit should not have been granted."

A half-dozen agencies can okay sludge application to farmland. Often, no single agency holds accountability or even knows what the others are doing

Soil with a low pH allows heavy metals to mobilize and move into plant tissue and groundwater, states the DOE document, "Best Management Practices for Use of Municipal Sewage Sludge."

Armed with the results of their investigations, the Zanders went before Whatcom County Hearing Examiner Edward Good demanding that the permit be revoked. Their request was granted.

Good says the site's soil characteristics, drainage systems and characteristics of sludge applied to the site enabled heavy metals to enter groundwater and move from the site.

For the Zanders it was a bitter victory. Although the spreading of sludge stopped, Linda Zander believes the damage has already been done.

Blood and tissue samples taken from sick animals and analyzed at a local hospital showed extensive liver damage. To Cook, such results were consistent with her prognosis. Because the liver's main function is to filter toxins, any metals picked up in the water would eventually be deposited in that organ. Test samples taken by Cook in July and August 1990 showed levels of lead, copper and zinc far exceeded the maximum contamination level set by the Federal Safe Drinking Water Act. Lead surpassed the federal guidelines of 25 parts per billion (ppb) by 40-fold.

Not everyone concurs with Cook's tests. Water samples drawn in June 1990 by both the DOE and County Health Department showed no abnormally high levels of zinc, copper and lead. "We found no contamination in the well," says DOE's water quality hydrologist, Dave Garland. "I have insisted that the flow direction is wrong for the Zanders to be affected at all by the sludge."

To anyone concerned with the safety of applying sludge, this disparity in expert opinion is, at the very least, unsettling. When experts cannot agree on the composition of water taken from the same well, how can the well owner know for certain that the tests that are supposed to help monitor water quality are accurate?

Likewise, when experts disagree on the impact a specific sludge application has on water quality, how can a farmer with little or no training in waste ➤

The tangled web of enforcement

■ The Environmental Protection Agency (EPA) is writing a new set of technical standards for sludge application on farmland. Referred to as "503" regulations, they are due out in July.

Mark Charles, EPA's section chief for pretreatment enforcement, believes that the new 503 regulations are far more specific and comprehensive than the ones they will replace. Currently, outside of some basic siting requirements, the EPA regulates only pathogens (disease-producing organisms) and maximum contamination levels for two toxic substances: cadmium and PCBs. The new regulations for applying sludge on farmland will increase the number of regulated substances.

EPA efforts have focused on writing guidelines and not on introducing new enforcement strategies, says Charles. "At this point, the agency is more concerned with putting the rules into place than it is with what it might do in 1994," when EPA will start enforcing the new regulations, he says.

EPA has authority to regulate sewage treatment plants and the sludge they generate. Many states also have programs governing what can and cannot be in sludge that is applied to farmland. All states are required to follow EPA's guidelines as a minimum, but states may write more stringent ones.

For Darrell Turner, Washington State Farm Bureau president and co-author of a widely used manual on sludge application to farmland, adding new regulations on the federal level will not address the issue of what local agency can issue sludge application permits. Nor do they shift existing liability from the farmer who spreads the sludge to the municipality that supplies it. "Writing new regulations isn't going to make any difference," says Turner. "What we need is accountability from our [local] agencies."

WATER DISTRICT NO. 1 OF JOHNSON COUNTY

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TESTIMONY TO HOUSE ENERGY & NATURAL RESOURCES COMMITTEE
Rep. Carl D. Holmes, Chairperson
Fifth Floor, State Capitol

by
WATER DISTRICT NO. 1 OF JOHNSON COUNTY
3 RS 1377

Mr. Chairman and Members of the Committee:

I am Byron Johnson, General Manager of Water District No. 1 of Johnson County, appearing here today in opposition to 3 RS 1377. Water District No. 1 of Johnson County is a publicly owned urban water utility which serves approximately 290,000 people throughout Johnson County as well as small portions of Wyandotte and Miami Counties.

The bill assumes incorrect facts. The bill undertakes to bring water treatment residues into the same category as "solid waste" as if this material had common characteristics with solid waste as currently defined. The stated objective is to "protect health and environment from the release of such sludge". We, as one of the largest water utilities in the State and with intimate knowledge of the content of water treatment residues, are thoroughly puzzled by this statement of objectives. There is no basis for the premise that there is a need for protection. If the treatment residues are harmful, then the Bill should also prevent its agricultural use and any transportation within as well as beyond 30 miles.

The composition of water treatment residues. Residues from the water treatment process originate as 95% water, with the balance being primarily calcium carbonate with some

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magnesium hydroxide. Only 7% of the remaining 5% solids is composed of sand-like grit, silt, and clay which are removed from the river. Also included within the 7% of the 5% are products of chemical treatments such as aluminum hydroxide, polymer and activated carbon. All of these are at concentration levels that do not even remotely approach those levels set by the Environmental Protection Agency for hazardous waste. There is nothing in this material that poses a danger to health or the environment. Among its beneficial uses is the application to agricultural fields as a soil conditioner.

Projected impact of the Bill. The provisions of the Bill impose an additional administrative burden and regulatory expense relating to these materials and having no relationship to solid waste as contemplated by existing law.

The Water District has been in communication with KDHE which may have a different approach to its regulation of both wastewater and freshwater sludges. An agreed approach to the problem is possible. Water District No. 1 will work with KDHE to attempt to submit a reconciled version of KDHE proposed amendments for the 1994 Session.

We have attached to this oral statement a more complete analysis of the bill and recommendations, which I will not read in the interest of time. I will be glad to entertain any questions.

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November 17, 1993

STATEMENT IN OPPOSITION TO PROPOSED BILL NO. 3RS1377

1. **The Bill assumes incorrect facts.** The Bill undertakes to bring water treatment residues into the same category as "solid waste" as if this inert material had common characteristics with solid waste as currently defined. The stated objective is to "protect health and environment from the release of such sludge." We, as one of the largest water utilities in the State and with intimate knowledge of the content of water treatment residues, are thoroughly puzzled by this statement of objective. There is no basis for the premise that there is a need for protection from the standpoint of the composition of the material itself when generated within the State.

2. **The composition of water treatment residues.** Residues from the water treatment process originate as 95% water, with the balance being primarily calcium carbonate with some magnesium hydroxide. Only 7% of the 5% solids consists of inert materials composed of sand-like grit, silt, and clay which are removed from the river. Also included within the 7% of the 5% are products of chemical treatments such as aluminum hydroxide, polymer and activated carbon, all of which are at concentrations at levels that do not even remotely approach those levels set by the Environmental Protection Agency for hazardous waste. There is nothing in this material that poses a danger to health or the environment. Among its beneficial uses is the application to agricultural fields as a soil conditioner.

3. **Projected Impact of the Bill.** The provisions of the Bill impose an additional administrative burden and regulatory expense relating to inert material having no relationship to the solid waste as contemplated by existing law.

4. **Adequacy of current regulation.** Water treatment systems are regulated under existing law by K.S.A. 65-163, and "systems" are comprehensively defined by K.S.A. 65-162(a). KDHE interprets "systems" to include residue disposal facilities and regulates disposal basins through its permit process. It is appropriate to maintain exclusive and pre-emptive control in the KDHE so that it continues to be included in its water treatment regulations and authority to issue permits. By designating water treatment residues as "municipal freshwater sludge" and including it as a form of "solid waste," state pre-emption is defeated and subjects water treatment residues to the many variations in local municipal ordinances.

5. **Elimination of disposal possibilities.** By classifying water treatment residues as a form of solid waste and expressly barring disposal at a solid waste disposal area, the statute effectively eliminates residue basins and landfills as disposal alternatives. Since the KDHE is also eliminating the

rivers as a means of disposal, all of the practical means of disposal have been effectively eliminated. See Section 3409(a), new subsection (8).

6. **Recommendations**. State pre-emption could be more explicitly established by:

   (a) Changing the definition of "solid waste" in Section 1(a) of the Bill by providing that solid waste does not include . . . . . water treatment residues.

   (b) By amending K.S.A. 65-162(a)(b) by more clearly defining "public water supply system" to include water treatment disposal basins, and expressly stating that the KDHE shall be the exclusive regulating and permitting authority.

   (c) By maintaining the prohibition in Section 3(a)(8) so that solid waste disposal areas, which are becoming more scarce, are reserved for problem materials constituting solid waste as originally defined, except where beneficial as cover material and as suggested by the letter of David R. Warren, Director of the Wichita Water and Sewer Department, dated September 22, 1993. Such amendments would preserve water treatment disposal basins as the appropriate method of disposal with exclusive regulation by the KDHE.

7. **Future Disposition**. The Water District has been in communication with KDHE which may have a different approach to its regulation of both wastewater and freshwater sludges. Since there are both differences and similarities in the disposition of both materials, some common regulation may be possible provided there is no confusion in classification of the two. A common and agreed approach to the combined problem is possible, and the Water District will work with KDHE to attempt to devise a reconciled version of KDHE proposed amendments for the 1994 Session.

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3RS1377

Testimony of
Stephen A. Hurst, Director
Kansas Water Office
Before the House Energy and Natural Resources Committee
November 17, 1993

Re: Water Conservation Plans

Mr. Chairman, members of the Committee: I appreciate the opportunity to visit with you here today on an issue of extreme importance to the State of Kansas. The conservation and efficient and sustainable use and management of the water resources of the state.

Last session, as most of you will recall, there was much discussion in this committee during the water transfers debate about the effectiveness, or lack of effectiveness, of the conservation guidelines promulgated by the Kansas Water Office to be utilized by those water users required by the Chief Engineer of the Division of Water Resources or by statute to develop water conservation plans.

The Kansas Water Office recognized early on in the state water planning process the need for conservation of the water of the state and drafted three sub-sections of the State Water Plan back in 1985 as an early attempt to give guidance to water users. These sub-sections set out basic guidance for the development of municipal, irrigation and industrial conservation plans. These sub-sections were developed into guidelines that were approved by the Kansas Water Authority in 1986. To date, over 160 municipal, 850 irrigation and 10 industrial water conservation plans have been approved by the Kansas Water Office and Division of Water Resources.

There have been some very major shifts in water resources management philosophy since 1986. Most of these shifts have been away from the "development" philosophy of the 50's and

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60's which envisioned endless supplies of surface and ground waters to be used and developed with no need for serious management plans, to a philosophy which encourages movement toward sustainable and efficient use and management of the resource.

These changes have been reflected in the policies and actions of the regulatory agencies such as the Division of Water Resources in its closing of many of the aquifer areas in western and northwest Kansas to new ground water development or appropriations for all users including municipal and industrial as well as irrigation.

I want to note that the State of Kansas has one of the best, if not the best, computerized databases on statewide water use in the nation. With the increased use of metering by water users being encouraged and required in some instances, we will soon have even more accurate data. Due to the fact that irrigation water use accounts for approximately 88 percent of all reported water use in the state, I will address it first. Irrigators themselves have seen the need to sustain the depleting aquifers in order to maintain and prolong the agricultural economic base in western Kansas. Many farmers have been alarmed to see the rate of aquifer depletion and can see that continued use of the resource at the rate that modern technology allows it to be pumped could make irrigation economically prohibitive in very short order and could cut their irrigated farming careers short.

We must differentiate between use efficiency and conservation. With modern technology, one could much more efficiently apply less water to more acres and continue to deplete the aquifer. Conversely, one could "efficiently" apply much more water by converting from a flood irrigation system to a center pivot system and going from a low water use crop to a high water use crop to pay for the system, thus, depleting the aquifer at an even faster rate.

The key is use efficiency combined with conservation for more sustainable use provides the best management of the resource. The Ogallala Task Force formed by the State Board of Agriculture last year to look at aquifer management explored many of these issues and came up with several recommendations in their final report, some of which were incorporated into a Comprehensive Water Conservation Program for the State of Kansas which was recently approved by the Kansas Water Authority.

The Kansas Water Office, Kansas Water Authority and Division of Water Resources were listening carefully last year to the concerns expressed both by you in the legislature and by the public that our conservation guidelines for water conservation plan development needed to be more stringent and designed to result in the most effective conservation plans possible. Through the state water planning process, we coordinated with the five ground water management districts in the state, the Division of Water Resources and Soil Conservation Service, and developed revised irrigation conservation guidelines and a conservation program that has a broad base of grass roots support. These new guidelines are based on the use of a state and local partnership approach in the development of effective irrigation conservation plans, tailored to the specific needs of the users and conditions that exist at the place of use. Effectiveness and accountability is assured by a program of monitoring and enforcement that was cooperatively agreed upon by the Kansas Water Office and Division of Water Resources of the State Board of Agriculture, in a recently signed Memorandum of Understanding between the agencies. Effectiveness of the program is to be annually evaluated and reported to the Kansas Water Authority. A copy of the conservation program and Memorandum of Understanding has been provided to you.

We see this new comprehensive irrigation water conservation program as a major step toward much more effective management of the resource. We also intend to revise the municipal guidelines in a similar manner in 1994 with monitoring and enforcement provisions to ensure effectiveness.

At this time, I would like to call on Dr. Darrel Eklund, of my staff, to fill you in with a few of the details and some interesting facts about the state's current conservation efforts. Dr. Eklund is the Manager of our Conservation and Evaluation unit and has background in both statistics and agronomy having been a professor at the University of Missouri in the Agronomy Department, with a PhD from Kansas State University.

November 15, 1993

MEMORANDUM OF UNDERSTANDING BETWEEN THE KANSAS WATER OFFICE AND THE KANSAS STATE BOARD OF AGRICULTURE DIVISION OF WATER RESOURCES TO IMPLEMENT THE ADMINISTRATION OF A JOINT IRRIGATION WATER CONSERVATION PROGRAM

I. SUBJECT OF MEMORANDUM

This agreement between the Kansas Water Office (KWO) and the Kansas State Board of Agriculture, Division of Water Resources (DWR), jointly implements and administers the Irrigation Water Conservation Program, which was approved by the Kansas Water Authority (KWA) on November 4, 1993.

II. AGENCY STATUTORY RESPONSIBILITIES

A. Kansas Water Office

The Kansas Water Office is charged under K.S.A. 74-2608(c) to: "Develop and maintain guidelines for water conservation plans and practices." These guidelines are subject to approval by the Kansas Water Authority (K.S.A. 74-2622). Under K.S.A. 82a-733, the Kansas Water Office is charged to "provide, or arrange to provide, technical assistance for water users required to adopt and implement water conservation plans and practices pursuant to this section." The Kansas Water Office will also periodically evaluate and revise, as necessary, the water conservation planning guidelines.

B. Kansas State Board of Agriculture

The Chief Engineer of the Division of Water Resources, Kansas State Board of Agriculture, is responsible for the administration of the Kansas Water Appropriation Act K.S.A. 82a-701 *et seq.*, as amended. Under K.S.A. 82a-733 is the charge that: "The chief engineer may require an applicant for a permit to appropriate water for beneficial use to adopt and implement water conservation plans and practices" and "the chief engineer shall give priority to: (1) Water users that share a common source of supply that could be insufficient during times of drought; (2) water users whose use is significantly higher than their peers from the same geographic area with comparable circumstances; and (3) water users who apply for any state administered grant, loan or cost-share moneys for water-related projects."

III. COORDINATION OF ACTIVITIES AND RESPONSIBILITIES

A. Triggering Irrigation Water Conservation Plans

The Chief Engineer is responsible for determining which water users must prepare irrigation water conservation plans and the Kansas Water Office is responsible for providing technical assistance to each irrigation water user who must prepare a water conservation plan. Consequently, the maximum number of irrigation water conservation plans required by the Chief Engineer for the balance of FY 1994 and each successive fiscal year thereafter, shall be subject to mutual agreement with the Director of the Kansas Water Office.

Provided that sufficient technical assistance funds are available to the Kansas Water Office, the Chief Engineer shall: (1) Require irrigation water right file numbers to have water conservation plans if at least 40 acres of land were irrigated and if they ranked in the top 100 (or such other number agreed to by mutual consent) in terms of the percent deviation of their AF/A water use from their respective Groundwater Management District or local regional AF/A water use (plans triggered during FY 1994 would be based on calendar year 1991 data, plans triggered during FY 1995 would be based on calendar year 1992 data, etc.) and (2) select such additional water right file numbers for requiring water conservation plans as deemed desirable and consistent with this memorandum of understanding, after considering recommendations from the Groundwater Management Districts and any other relevant parties.

B. Preparation of Irrigation Water Conservation Plans

Water users who are required by the Chief Engineer to prepare a water conservation plan are responsible for preparing their own plans. However, the Kansas Water Office is responsible for providing technical assistance to irrigation water users who must prepare a water conservation plan pursuant to K.S.A. 82a-733. The capability to provide this technical assistance is dependent upon funding for the provision of contractual services in the form of seminars or workshops, on-site technical assistance and the services may include direct assistance to irrigators in preparing irrigation water conservation plans.

C. Approval of Irrigation Water Conservation Plans

Approval of an irrigation water conservation plan means a determination that the proposed irrigation water conservation plan fully satisfies all components of the current Irrigation Water Conservation Plan Guidelines that were in effect at the time that the irrigation water conservation plan was required.

The Division of Water Resources shall have the primary responsibility to review and approve all irrigation water conservation plans. However, the Kansas Water Office will be responsible for conducting a preliminary review of all irrigation water conservation plans that are prepared as a result of a contractual agreement with another party for the purpose of providing technical assistance to irrigation water users who must prepare a water conservation plan pursuant to K.S.A. 82a-733.

D. Irrigation Water Conservation Plan Repository and Database Maintenance

All irrigation water conservation plans approved by the Division of Water Resources shall be microfilmed with respect to the appropriate water right file number. The original water conservation plan shall be filed at the appropriate field office of the Division of Water Resources. The files will be updated as future revisions are made.

The Division of Water Resources shall update the irrigation water conservation plan portion of their Water Use Database, based on Kansas Water Office documentation of water right file numbers that have approved irrigation water conservation plans as of October 31, 1993. The Division of Water Resources shall update the irrigation water conservation plan portion of their Water Use Database on an ongoing basis.

E. Monitoring and Enforcement of Irrigation Water Conservation Plans

The procedures for monitoring and enforcement of irrigation water conservation plan guidelines are described in the "Guidelines For Monitoring Water Conservation Plans" Section of the "Irrigation Water Conservation Program For the State of Kansas."

F. Annual Progress Report to Kansas Water Authority

The Kansas Water Office shall brief the Kansas Water Authority annually on the status and accomplishments of the Irrigation Water Conservation Program.

IV. CONTACT PERSONS

Each agency shall designate a contact person or persons for the purpose of carrying out the provisions of the memorandum of understanding.

V. **TERM**

This agreement shall be in effect from the date of execution by both parties and remain in full force until such time as it may be rescinded by either party upon 90 days written notice to the other party or may be amended by mutual consent of the parties.

David L. Pope
Chief Engineer - Director
Division of Water Resources
Kansas State Board of Agriculture

Date: 11/16/93

Stephen L. Hurst
Director
Kansas Water Office

Date: 11/15/93

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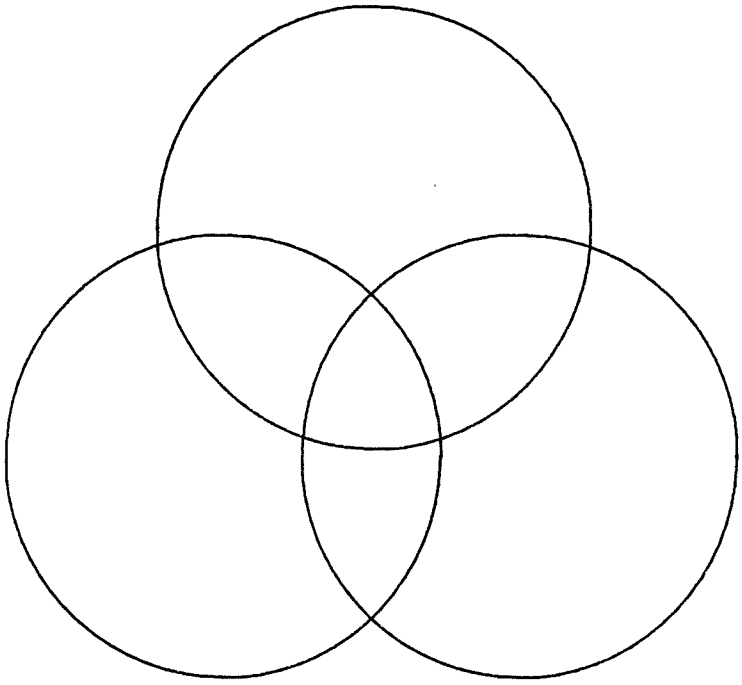
State of Kansas

Irrigation Water Conservation Program For the State of Kansas

November 1993



"The Right to Use Water Bears the Responsibility to Use it Wisely"

Kansas Water Office
109 S.W. 9th St., Suite 300
Topeka, Kansas 66612-1249
(913) 296-3187
An Equal Opportunity Employer

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IRRIGATION WATER CONSERVATION PROGRAM FOR THE STATE OF KANSAS

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IRRIGATION WATER CONSERVATION PROGRAM FOR THE STATE OF KANSAS

INTRODUCTION

The irrigation water conservation plan guidelines were prepared for use by irrigators to assist them in preparing a water conservation plan. **The guidelines do <u>not</u> designate certain water users or categories of water users who must prepare water conservation plans.** The Kansas Statutes and the *Kansas Water Plan* provide direction in regard to which water users should be required to prepare water conservation plans.

Review of Statutes

K.S.A. 74-2608 outlines the mandatory duties of the Kansas Water Office. Subsection (c) of K.S.A. 74-2608 states one of the Kansas Water Office's three mandatory duties: "The Kansas water office shall develop and maintain guidelines for water conservation plans and practices. Such guidelines shall:

(1) Not prejudicially or unreasonably affect the public interest;
(2) be technologically and economically feasible for each water user to implement;
(3) be designed to curtail the waste of water;
(4) consider the use of other water if the use of freshwater is not necessary;
(5) not require curtailment in water use which will not benefit other water users or the public interest;
(6) not result in the unreasonable deterioration of the quality of the waters of the state;
(7) consider the reasonable needs of the water user at the time;
(8) not conflict with the provisions of the Kansas water appropriation act and the state water planning act;
(9) be limited to practices of water use efficiency except for drought contingency plans for municipal users; and
(10) take into consideration drought contingency plans for municipal and industrial users."

The statute also states that: "When developing such guidelines, the Kansas water office shall consider existing guidelines of groundwater management districts and the cost to benefit ratio effect of any plan."

Subsection (c) of K.S.A. 74-2622 outlines the mandatory duties of the Kansas Water Authority. Paragraph 11 of subsection (c) states that the "Kansas water authority shall approve, prior to adoption by the director of the Kansas water office, guidelines for conservation plans and practices developed pursuant to subsection (c) of K.S.A. 74-2608, and amendments thereto."

K.S.A. 82a-733, passed by the 1991 Kansas Legislature, focuses on water conservation plans and practices. Contained within Subsection (a) of K.S.A. 82a-733 is the statement that "The chief engineer may require an applicant for a permit to appropriate water for beneficial use or the owner of a water right or permit to appropriate water for beneficial use to adopt and implement water conservation plans and practices." Also, within subsection (a) of K.S.A. 82a-733 is the following statement: "In selecting the applications, water rights or permits for which conservation

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plans and practices are required to be adopted and implemented, **the chief engineer shall give priority to: (1) Water users that share a common source of supply that could be insufficient during times of drought; (2) water users whose use is significantly higher than their peers from the same geographical area with comparable circumstances; and (3) water users who apply for any state administered grant, loan or cost-share moneys for water-related projects."**

Contained within Subsection (c) of K.S.A. 82a-733 is the statement: "Plans and practices required pursuant to this section shall be consistent with the guidelines for conservation plans and practices developed and maintained by the Kansas water office pursuant to subsection (c) of K.S.A. 74-2608 and amendments thereto." Subsection (c) of K.S.A. 82a-733 also contains the statement that: **"The Kansas water office shall provide, or arrange to provide, technical assistance for water users required to adopt and implement conservation plans and practices pursuant to this section."**

Subsection (f) of K.S.A. 82a-733 contains the statement: "The implementation of the conservation plans and practices as approved or any subsequent approved modification shall constitute a condition of the water right or permit to appropriate water for beneficial use.

K.S.A. 82a-1311a authorizes the Kansas Water Authority to require an applicant for a contract for the sale of water from the State's conservation water supply capacity to adopt and implement water conservation plans and practices that are consistent with the guidelines.

K.S.A. 82a-1348 states that: "Each member of a water assurance district shall adopt conservation plans and practices for such member. Such plans and practices shall be consistent with the guidelines for conservation plans and practices developed and maintained by the Kansas water office pursuant to K.S.A. 74-2608, and amendments thereto.

K.S.A. 82a-1502, which is part of the Water Transfers Act, was amended by the 1993 Legislature. Subsection (b) of K.S.A. 82a-1502 contains the statement: "No water transfer shall be approved under the provisions of this act: (1) If such transfer would impair water reservation rights or prior applications for permits to appropriate water; and (2) unless the hearing officer determines that the applicant has adopted and implemented conservation plans and practices that (A) are consistent with the guidelines developed and maintained by the Kansas water office pursuant to K.S.A. 74-2608 and amendments thereto, (B) have been in effect for not less than 12 consecutive months immediately prior to the filing of the application on which the hearing is being held."

Subsection (c) of K.S.A. 82a-1502 contains the statement: "To determine whether the benefits to the state for approving the transfer outweigh the benefits to the state for not approving the transfer, the hearing officer shall consider all matters pertaining thereto, including specifically:...(7) the effectiveness of conservation plans and practices adopted and implemented by the applicant and any other entities to be supplied water by the applicant; (8) the conservation plans and practices adopted and implemented by any persons protesting or potentially affected by the proposed transfer, which plans and practices shall be consistent with the guidelines for conservation plans and practices developed and maintained by the Kansas water office pursuant to K.S.A. 74-2608 and amendments thereto."

K.S.A. 82a-1608 relates to the Multipurpose Small Lakes Program and includes the statement: "If public water supply storage is included in such a project, the sponsor shall have a water conservation plan which has been submitted to and approved by the chief engineer."

Definition of Water Conservation

It is important that the State's Water Conservation Plan Guidelines provide a definition of water conservation that is consistent with the intent of the guidelines and is appropriate for use by all irrigators and agencies/entities that are responsible for monitoring the effectiveness of water conservation plans. The following definition has been selected. Water conservation is the utilization of cost-effective water use efficiency practices to curtail the waste of water and to ensure that water use does not exceed reasonable needs.

Goals for the Revised Guidelines

This revision of the Irrigation Water Conservation Plan Guidelines is designed to achieve the following goals:

1. Simplify plan preparation, so that the majority of Kansas irrigators will not have to rely upon an engineer or consultant to prepare their water conservation plan,

2. reduce the time required for writing, reviewing and approving a water conservation plan,

3. curtail waste of water and ensure that water use does not exceed reasonable needs,

4. give considerable flexibility to groundwater management districts and the Division of Water Resources to develop and monitor water conservation plans based on local desires and initiatives,

5. support the provision of financial assistance to entities for the delivery of education/technical assistance to water users for the preparation and monitoring of water conservation plans,

6. support the provision of financial assistance to entities for the purpose of developing a State Water Use Incentive Program to provide state grant or loan awards to be used by irrigators for the purpose of encouraging and assisting them to curtail waste of water and to ensure that water use does not exceed reasonable needs, and

7. support the provision of financial assistance in a manner that will provide extra incentives to entities that assist in developing water conservation plans that are successful in curtailing waste of water and in ensuring that water use in excess of reasonable need does not occur.

GUIDELINES FOR PREPARING A WATER CONSERVATION PLAN AS PER K.S.A. 74-2608 *ET SEQ*

Introduction Section

Each Irrigation Water Conservation Plan shall contain the following five sections: (1) Introduction, (2) Education/Technical Assistance, (3) Metering, (4) Water Use Efficiency Practices and (5) Self-Monitoring. An "Example Irrigation Water Conservation Plan" is presented in Appendix A to assist irrigators in preparing their plans. It should be noted that some portions of the example plan in Appendix A go beyond the guidelines, i.e. represents a more conservative approach than is required.

The Introduction Section of each plan shall include the name of the irrigator responsible for preparing and implementing the plan, the water right file number assigned by the Division of Water Resources, the legal description of the point(s) of diversion, the number of acre-feet authorized and the authorized rate of diversion. For each field to be irrigated, the number of acres authorized for irrigation and the number of acres planned for irrigation should be provided and the legal description of the field. The irrigator should also describe the type of irrigation system to be used and how he or she will determine when to irrigate.

Education/Technical Assistance Section

In this section of the plan, an irrigator should list all seminars, workshops, etc. that he or she has attended in the past three years, relative to water use efficiency practices. Include the name of each seminar/workshop, approximate date of attendance and location (city, state) of the seminar and /or workshop.

Use Table 1 to determine if an irrigator should be placed in Level A (low or moderate AF/A use) or Level B (high AF/A use) categories and if it is recommended or required that the irrigator attend a seminar/workshop on irrigation water use efficiency practices. If so, or if an irrigator desires to attend a seminar/workshop on irrigation water use efficiency practices, then the irrigator should contact the local Groundwater Management District or local Division of Water Resources Field Office to determine what seminars/workshops are available and select at least one seminar/workshop to attend. The anticipated date of attendance, name of the seminar/workshop and the location of the seminar and/or workshop should be listed in this portion of the plan.

The irrigator should also review Table 1 to see if an on-site visit should be requested. If it is recommended or required that an on-site visit be conducted, then the irrigator should contact the local Groundwater Management District or local Division of Water Resources Field Office to get the name and phone number of the entity(s) that are responsible for providing technical assistance in their region of the state and the irrigator should proceed to schedule the visit. The date of the visit and the name of the person and agency/entity who provided the technical assistance on-site should be listed in this portion of the plan.

For irrigators located outside of a Groundwater Management District, the Division of Water Resources may change an irrigator from Level B to Level A, if the irrigator uses water efficiently. If an irrigator is located within a Groundwater Management District, the Groundwater Management District may recommend to the Division of Water Resources that an irrigator can be changed from Level B to Level A if the irrigator is using water efficiently.

Table 1

SELECTION OF EDUCATION/TECHNICAL ASSISTANCE OPTIONS FOR A WATER CONSERVATION PLAN BY IRRIGATOR'S REGIONAL LOCATION AND WATER USE CLASSIFICATION LEVEL

Regional Location[a/]	Attend Seminar/Workshop on Water Use Efficiency Practices		Receive On-Site Visit Regarding Water Use Efficiency Practices	
	Level A[b/] (Low or Moderate AF/A Use)	Level B[c/] (High AF/A Use)	Level A[b/] (Low or Moderate AF/A Use)	Level B[c/] (High AF/A Use)
Western Kansas GMD No. 1	Optional	Optional	Recommended	Required
Southwest Kansas GMD No. 3	Optional	Optional	Recommended	Required
Northwest Kansas GMD No. 4	Recommended	Required	Recommended	Required
Balance of Western Kansas	Optional	Recommended	Recommended	Required
Equus Beds GMD No. 2	Optional	Optional	Recommended	Required
Big Bend GMD No. 5	Optional	Optional	Optional	Recommended
Balance of Central Kansas	Optional	Recommended	Recommended	Recommended
Eastern Kansas	Optional	Optional	Optional	Recommended

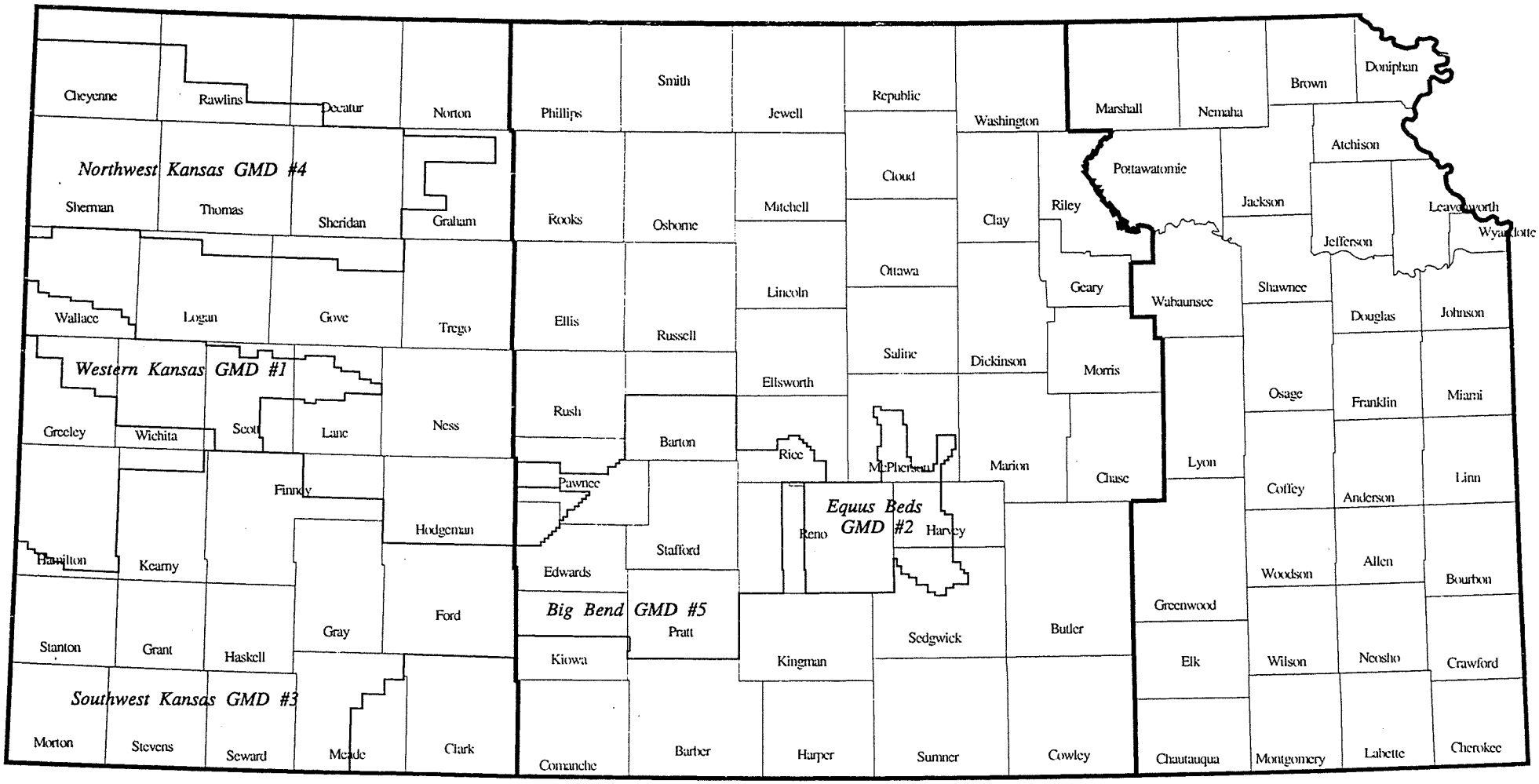
a/ See Figure 1 to determine the regional location of the water right file number that is required to have an irrigation water conservation plan.

b/ An irrigator will be classified in Level A if: 1) the irrigator did not irrigate during any of the three previous years; or 2) if the irrigator must prepare a water conservation plan for an existing water right and the average of the last three annual AF/A water use figures for this specific water right file number does not exceed, by more than 50 percent, the average of the last three annual AF/A water use figures for the respective smallest geographic unit (township, county or region) for which at least 640 acres were irrigated per year for the three-year period; or 3) if the irrigator must prepare a water conservation plan for a new appropriation of water permit and the irrigator's average AF/A water use figures for the past three years, based on all of the irrigator's points of diversion, does not exceed by more than 50 percent, the average of the last three annual AF/A water use figures for the region where the new appropriation of water permit is located.

c/ An irrigator will be classified in Level B, if the irrigator can not, based on the above criteria, be classified in Level A.

Figure 1

Groundwater Management Districts and Irrigation Regions in Kansas



Region 1 Region 2 Region 3

Kansas Water Office

Water Use Education/Technical Assistance Program

A Water Use Education/Technical Assistance Program will be developed by the Kansas Water Office, pursuant to the Conservation Section of the State Water Plan. Initial funding will begin in FY 1994 for the special seminar/workshop sessions on cost-effective water use efficiency practices, for the on-site field visits related to cost-effective water use efficiency practices that are listed in Table 1 and for the on-site field visits required for monitoring and evaluation.

As noted in the Review of Statutes Section, K.S.A. 82a-733 **mandates** that the Kansas Water Office provide, or arrange to provide, technical assistance for water users required to adopt and implement water conservation plans. The entity(s) providing the education/technical assistance will be motivated to assist the irrigator to ensure that water is not wasted and to ensure that water use does not exceed reasonable needs by linking a significant portion of the funds to the actual results achieved by the irrigators to whom the assistance was provided. Also, the irrigator will be encouraged to curtail wastage of water and ensure that water use does not exceed reasonable needs via the annual monitoring of water use of irrigators with water conservation plans; which is described in the Guidelines For Monitoring Water Conservation Plan Section of the Irrigation Water Conservation Program.

Some Groundwater Management Districts may be actively involved in providing education/technical assistance to irrigators who are preparing water conservation plans; however, the Kansas Water Office will ensure that all Groundwater Management Districts, the Division of Water Resources and Division of Water Resources Field Offices are informed about the opportunities that exist for irrigators to receive this type of assistance.

For any year in which the Kansas Water Office does not have access to sufficient funds for education/technical assistance, the Division of Water Resources and the Groundwater Management Districts may elect to omit preparation of the Education/Technical Assistance Section of the irrigation water conservation plan and omit the annual monitoring of water conservation plans.

Metering Section

Metering of water use is an important management tool for irrigators. It is also necessary to meter water use in order to adequately monitor and evaluate the effectiveness of individual water conservation plans, unless an alternative method of accurately measuring water use is approved. Consequently, the installation, maintenance and reporting of information on water meters is a requirement for most water conservation plans and is recommended for all water conservation plans.

A water meter or other measuring device approved for the irrigator's specific area and situation must be properly installed and maintained in accordance with specifications and standards established by the Division of Water Resources in conjunction with the appropriate Groundwater Management District. The water user must comply with any applicable meter standards, regulations and other requirements established by an appropriate regulatory agency.

If the water conservation plan is being prepared for an existing Division of Water Resources water right file number that already has a water meter then in this section of the plan, information should be provided in regard to when the water meter was installed, its brand name, unit of measurement (acre-feet, gallons, etc.), multiplication factor (if any), is it still in operation, when was the most recent date that the meter was tested for accuracy and what were the results of the test.

If the water conservation plan is being developed for a new or existing Division of Water Resources water right file number that does **not** have a water meter, then in this section of the plan the irrigator should state:

a) that a water meter will be purchased and installed (in accordance with Groundwater Management District or Division of Water Resources procedures) as of a certain date and appropriate information about the meter will be provided to the Groundwater Management District or the Division of Water Resources, whichever is the appropriate entity,
b) water meters will be repaired or replaced within ten days (or some other specified time if required by the Division of Water Resources or the Groundwater Management District) when malfunctions occur.
c) The water meter will be tested for accuracy at least once every five years. Each water meter will be repaired or replaced if its test measurements are not within five percent of the actual volume of water passing through the meter. Information on water meter testing and the results will be provided to the Groundwater Management District or the Division of Water Resources, whichever is the appropriate entity, and
d) information on water meter repair or replacement (in accordance with Groundwater Management District or Division of Water Resources procedures) will be provided to the Groundwater Management District or the Division of Water Resources, whichever is the appropriate entity within one month of when the water meter is repaired or replaced.

Irrigators in Western Kansas Groundwater Management District No. 1 and Northwest Kansas Groundwater Management District No. 4 may be allowed to install an hour meter and meet rate test requirements. If this option is allowed, then in this section of the plan the irrigator should state:

a) that an hour meter will be purchased and installed as of a certain date,
b) the pump rate of the well will be tested as of a certain date and the tested pump rate, date of the test and name of the entity that did the test, will be provided to the Groundwater Management District (in accordance with Groundwater Management District procedures), and
c) the pump rate will be tested at least once every three years if the point of diversion is located in Northwest Kansas Groundwater Management District No. 4 or at least once every four years if the point of diversion is located in Western Kansas Groundwater Management District No. 1.

Water Use Efficiency Practices Section

This section of the water conservation plan should include provisions to address the following two issues: 1) runoff control and how the irrigator proposes to ensure that irrigation water does not leave the proposed place of use and 2) provisions that demonstrate that the physical irrigation system(s) and practices are appropriate for the place of use.

Appendix B contains a listing of water use efficiency practices that are grouped under the categories of management, system modification and field practices. Definitions for many of the water use efficiency practices shown in Appendix B are provided in Appendix C. With assistance from the entity providing technical assistance, the irrigator should develop an effective plan by selecting and implementing the appropriate water use efficiency practice(s) from Appendix B. The practice(s) should be described in the conservation plan.

If the irrigator is preparing a water conservation plan for an existing water right file number, then the irrigator should list each of the water use efficiency practices shown in Appendix B that he or she has used during the past 12 months on the field(s) that were watered from point(s) of diversion covered by this specific water right file number.

If the irrigator is classified as Level A, as described in the Education/Technical Assistance Section, then the irrigator is not required to choose any additional water use efficiency practices from Appendix B. However, if one or more additional practices are selected from Appendix B, then the irrigator should list each additional practices chosen and indicate a target date for implementation of each practice.

If the irrigator is classified as Level B, as described in the Education/Technical Assistance Section, then the irrigator shall choose at least one water use efficiency practice from Appendix B. The chosen water use efficiency practice(s) would represent the only practice(s) chosen for use by the irrigator, if the irrigator's water conservation plan is not based on an existing water right file number. Otherwise, the newly selected water use efficiency practice(s) shall represent additional practice(s) beyond those that the irrigator is currently doing.

If the irrigator's water right file number is for point(s) of diversion located in Northwest Kansas Groundwater Management District No. 4, then the water use efficiency practices chosen by the irrigator must also have the approval of the Groundwater Management District.

If the irrigator's water right file number is for point(s) of division located in Groundwater Management District No. 4 or in a region of the State outside of a Groundwater Management District, then the Division of Water Resources or Groundwater Management District No. 4 may require that the "Water Use Efficiency Practices Section" of the irrigator's water conservation plan contain irrigation system design and water management practices that conform to the procedures and criteria outlined in the most recent edition of the Kansas Irrigation Guide. However, an irrigation water conservation plan shall not be approved, if it contains a recommendation for crop irrigation water use that exceeds the Division of Water Resources authorized allocation for the respective water right file number.

Water Use Efficiency Incentive Program

A State Water Use Incentive Program will be developed by the Kansas Water Office, pursuant to the Conservation Section of the State Water Plan, to provide state grant or loan awards to be used by irrigators for the purpose of encouraging and assisting them in curtailing waste of water and to ensure that water use does not exceed reasonable needs. The funding shall be used to provide support to irrigators who face a significant financial investment for irrigation system modifications due to the preparation and implementation of a water conservation plan. The entities who directly provide the funds to the irrigators will be motivated to assist the irrigators in curtailing waste of water and to ensure that water use does not exceed reasonable needs by linking a significant portion of the funds to the actual results achieved by the irrigators to whom the assistance was provided.

Self-Monitoring Section

In this section of the plan, the irrigator should describe how he or she will manage each year's irrigation water use to be sure that water is not wasted and is not used in excess of reasonable need or in excess of authorized quantities.

The irrigator should describe how frequently the water and/or hour meter will be read (daily or weekly readings are recommended and, if possible, the amount of water applied per field or per crop should be recorded). For each regular water and /or hour meter reading, the irrigator should record: (a) the amount of water pumped since the last meter reading, (b) the total amount of water pumped for the current year, and (c) the amount of the annual water allocation that has not been used.

GUIDELINES FOR MONITORING WATER CONSERVATION PLANS

The ultimate goal of an effective water conservation plan is to implement cost effective water use efficiency practices to curtail waste of water and to ensure that water use does not exceed reasonable needs. In order to achieve this result, it is essential that such plans be monitored and enforced as necessary to achieve the effectiveness that is desired. As a related matter, it is important that conditions of the water rights related to the authorized amounts of water be enforced. In order to achieve these results, a cooperative effort between state and local agencies is essential and appropriate. The framework of such a monitoring program is outlined herein. It is recognized that the monitoring guidelines may need to be revised by mutual agreement based upon the respective roles of the agencies, implementation experience and resources available.

Each approved irrigation water conservation plan corresponds to a specific water right file number that is assigned by the Division of Water Resources. Upon the close of formal irrigation data editing procedures each year, a comprehensive list of water right file numbers that have had water conservation plans approved prior to the year for which editing has just been completed, will be prepared by the Kansas Water Office.

Table 2 describes two monitoring categories for each of eight regional locations across the state. The Kansas Water Office, in conjunction with the Division of Water Resources, will contact each Groundwater Management District annually to initiate the process of determining what changes, if any, to make in Table 2. Changes in Table 2 will be subject to the mutual agreement of the Kansas Water Office and the Division of Water Resources, with input from the Groundwater Management Districts in their respective regions.

The Kansas Water Office will analyze the Division of Water Resources Water Use Database with respect to the information in Table 2 each year. Water conservation plans for water right file numbers, that fall in Monitoring Category No. 1, based on the criteria set forth in Table 2 for the current monitoring year, will not be selected for review during the current year. Conversely, water conservation plans with water right file numbers that fall in Monitoring Category 2 will be reviewed to determine if they are in compliance with the water conservation plan guidelines. A list of those water rights falling into Monitoring Category 2 will be provided by the Kansas Water Office to the appropriate Division of Water Resources Field Office and the Groundwater Management District or other appropriate entity for further review. Actions to be taken in the course of this review procedure are outlined in Table 3.

If a water right file number is classified in Monitoring Category No. 2, based on its AF/A water use exceeding the area average by a specified percentage, then the Groundwater Management District or the Division of Water Resources, whichever is the appropriate entity, may change the classification to Monitoring Category No. 1 if irrigation water use did not exceed reasonable needs.

Table 2

ANNUAL MONITORING CATEGORIES FOR WATER RIGHT FILE NUMBERS WITH WATER CONSERVATION PLANS BY REGIONAL LOCATION
(November 4, 1993 - June 30, 1994)

Regional Location	Monitoring Category	
	1 (Plan Is Not Selected For Review)	2 (Plan Is Selected For Review)
Western Kansas GMD 1	There are no waste of water violation(s) and water use did not exceed authorized quantity.	There is at least one waste of water violation or water use exceeded authorized quantity.
Southwest Kansas GMD 3	There are no waste of water violation(s) and water use did not exceed authorized quantity.	There is at least one waste of water violation or water use exceeded authorized quantity.
Northwest Kansas GMD 4	Water right AF/A use is less than or equal to 20% above area average. There are no waste of water violation(s) and water use did not exceed authorized quantity.	Water right AF/A use is greater than 20% above area average or there is at least one waste of water violation or water use exceeded authorized quantity.
Balance of Western Kansas	There are no waste of water violation(s) and water use did not exceed authorized quantity.	There is at least one waste of water violation or water use exceeded authorized quantity.
Equus Beds GMD 2	There is no more than one waste of water violation and water use did not exceed authorized quantity.	There are at least two waste of water violations or water use exceeded authorized quantity.
Big Bend GMD 5	Groundwater Management District No. 5 monitors water use through their metered well program.	Water right receives at least three violations of waste of water policy in a two-year period.

Table 2

ANNUAL MONITORING CATEGORIES FOR WATER RIGHT FILE NUMBERS WITH WATER CONSERVATION PLANS BY REGIONAL LOCATION
(November 4, 1993 - June 30, 1994)

Regional Location	Monitoring Category	
	1 (Plan Is Not Selected For Review)	2 (Plan Is Selected For Review)
Balance of Central Kansas	There are no waste of water violation(s) and water use did not exceed authorized quantity.	There is at least one waste of water violation or water use exceeded authorized quantity.
Eastern Kansas	There are no waste of water violation(s) and water use did not exceed authorized quantity.	There is at least one waste of water violation or water use exceeded authorized quantity.

NOTE: Area is defined as the smallest geographical unit (township, county or region) for which at least 640 acres were irrigated during the year of interest.

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Table 3

DESCRIPTION OF ACTIONS TO BE TAKEN BY MONITORING CATEGORY (November 4, 1993 - June 30, 1994)

Monitoring Category	Actions to be Taken
1	No additional action is required.
2	a. If the water conservation plan was not prepared using the current water conservation guidelines, then it must be revised to include the metering requirements listed under the current water conservation plan guidelines. (Also the Groundwater Management District or the Division of Water Resources may require any additional changes that they desire for the purpose of updating the entire water conservation plan to meet the current guidelines.) b. If the water right file number was placed in Monitoring Category No. 2 because of a high reported AF/A water use figure, then the Division of Water Resources, the appropriate Groundwater Management District or some other appropriate entity will conduct an on-site field visit, which will include a test of the water meter or pump rate. If as a result of the test, it is concluded that the reported AF/A is not accurate and the revised AF/A figure would result in the irrigator being placed in Monitoring Category No. 1, then no additional action would be required beyond that listed in item "a" above. c. If the water right file number was placed in Monitoring Category No. 2 because of a high reported AF/A water use figure and if the reported water use was accurate and if, as a result of the on-site visit, it is determined that the water conservation plan has not been implemented in a satisfactory manner; then the Division of Water Resources will take appropriate action, or delegate authority to the Groundwater Management District, to enforce implementation of the water conservation plan. d. If the irrigator was correctly classified in Monitoring Category No. 2 and if, as a result of the on-site visit, it is determined that the water conservation plan has been implemented in a satisfactory manner; then the irrigator must participate in both Education/Technical Assistance options and must make one or more selections from Water Use Efficiency Practices 1-32, in addition to any current efficiency practices that have already been implemented. Also, the water use efficiency practices chosen will be subject to the approval of the Groundwater Management District in conjunction with the Division of Water Resources or the Division of Water Resources alone if the irrigator is not in a District.

APPENDIX A
EXAMPLE IRRIGATION WATER CONSERVATION PLAN

INTRODUCTION

A. Provide information for each of the 10 items listed below:

1.	Name of irrigator:	John Q. Public
2.	DWR Water Right File No.:	MT0009
3.	Legal description of point of div.:	SW NW NE, Section 24, T34S, R41W
4.	Acre-feet authorized:	320
5.	Acres authorized for irrigation:	160
6.	Authorized rate of diversion	600 gpm
7.	Acres to be irrigated:	120
8.	Legal descrip. of field to be irrig.:	NE Quarter, Section 24, T34S, R41W
9.	Type of irrigation system:	Center pivot with low pressure drop nozzles.

10. How will I determine when to irrigate?
Corn is the only crop that I plan to grow. I will irrigate at the tasseling and silking stages and using a tensiometer I will also irrigate whenever the soil moisture level in the top two feet of the soil profile has dropped to 40 percent of a full profile.

EDUCATION/TECHNICAL ASSISTANCE

A. Provide the following information for seminars/workshops that you have attended in the past three years that covered one or more water use efficiency practices:

Name of Seminar/Workshop	Date of Attendance	Location	Sponsor of Seminar/Workshop
Managing LEPA Bubblers and Flat Sprays on Corn	November 1992	Hugoton, KS	Kansas State University Extension

B. Provide the following information on each seminar/workshop on water use efficiency practices that you are planning to attend:

Name of Seminar/Workshop	Date	Location	Sponsor of Seminar/Workshop
Using Irrigation Measurement as a Management Tool	March 15, 1994	Ulysses, KS	Kansas State University Extension

C. Provide information on each on-site technical assistance visit as shown below:

Name of Person Providing Technical Assistance	Name of Agency/Entity Providing Technical Assistance	Date of On-Site Visit
Kent Shaw	SW Kansas GMD No. 3	April 18, 1994

METERING

A. Provide information for each of the eight items listed below:

1.	My contact to learn about water meter requirements.	GMD No. 3
2.	Installation date planned for new water meter.	April 10, 1994
3.	Target date for providing information about the meter and installation to GMD or DWR.	April 17, 1994
4.	Time period needed to repair or replace a water meter that is not working properly (must be 10 days or less).	10 days
5.	After the water meter is repaired or replaced, how much time is needed to report relevant information to the GMD or DWR?	Seven days
6.	How often will the water meter be tested? (must be every five years or less.)	Every three years
7.	The water meter will be replaced or repaired if its test measurements are different from the actual volume of water passing through the meter by what percent? (Must not exceed five percent.)	Five percent
8.	Information on the results of each test and any action that I took will be provided to:	GMD No. 3

WATER USE EFFICIENCY PRACTICES

A. My choices of water use efficiency practices and target dates for implementation are shown below:

Water Use Efficiency Practice	Target Date for Implementation
Irrigation Scheduling	1994 growing season
Limited irrigation practice	1994 growing season
Conversion to center pivot system	April 1, 1994
Drop nozzles with low pressure heads	April 1, 1994

SELF-MONITORING

A.	**What action will be taken to ensure that water is not wasted?**	I will make a visual inspection of the irrigation system each day that it is in operation to check for water runoff, leaks in the system, system malfunctions and I will check the tensiometer on a regular basis.
B.	**How frequently will the water meter and/or hour meter be read?**	Daily
C.	**What information will be written down for each water meter or hour meter reading, the following information will be written down.**	a. Date and time of the reading b. The amount of water pumped since the last reading c. The total amount of water pumped during the current year. d. The amount of the annual water allocation that has not been used.

I will operate and maintain my irrigation system as described in the above water conservation plan.

_____ _____

Signature of Irrigator Date

APPENDIX B
WATER USE EFFICIENCY PRACTICES

Classification of Practices	Listing of Practices
A. Management Practices	1. Infrared canopy monitor use. 2. Irrigation scheduling. 3. Irrigation system evaluation and design sheet. 4. Less water-intensive crops grown. 5. Limited irrigation practice. 6. Multi-function irrigation system use. 7. Private consulting firm use. 8. Other[a/]
B. System Modification Practices	1. Cablegation. 2. Center pivot irrigation system (conversion from flood irrigation). 3. Drip irrigation. 4. Drop tubes or nozzles with low pressure heads. 5. Low energy precision application (LEPA). 6. Playa. 7. Replace old or leaking underground pipe. 8. Replace open ditch with underground pipe. 9. Retrofit well with smaller pump. 10. Surge flow irrigation. 11. Tailwater recovery system. 12. Other[a/]
C. Field Practices	1. Alternate furrow irrigation. 2. Chisel compacted soils. 3. Compacted furrows. 4. Conservation bench terracing. 5. Furrow diking. 6. Inter-furrow ripping. 7. Level land. 8. Minimum tillage. 9. No-tillage. 10. Plant growth regulators. 11. Ridge tillage. 12. Skip row planting. 13. Stubble mulch. 14. Other[a/]

[a/] Any other water use efficiency practice that is approved by the Groundwater Management District or the Division of Water Resources.

APPENDIX C

DEFINITION OF SELECTED WATER USE EFFICIENCY PRACTICES

Alternate furrow irrigation: Introduction of irrigation water into every other furrow between rows of a planted crop. Irrigation can remain in the same furrow, or furrows can be switched on subsequent irrigation. Alternate furrow irrigation can improve irrigation efficiency.

Cablegation: An irrigation method designed to save water that utilizes a plug pushed through gated pipe by water pressure that regulates the flow of water from the gates. Water is distributed to the field sequentially, several gates at a time, with watering time controlled by the rate at which the plug moves through the pipeline. Cablegation requires uniform side slope in the field.

Center pivot irrigation system: A sprinkler irrigation lateral that is mounted on wheeled structures (towers), anchored at one end (pivot point), and which automatically rotates in a circle when irrigating. The lateral can be equipped with any of a variety of sprinkler and spray nozzle configurations. Tower movement can be driven by water pressure, hydraulic pressure, or electricity. A typical center pivot has a one-quarter mile radius.

Compacted furrows: Soil compaction in furrows from tractor wheels or compacting implement attachments that smooth and firm furrows resulting in increased water stream advance rates, reduced infiltration, and improved irrigation application efficiency for furrow irrigation.

Conservation bench terracing: A series of earthen embankments spaced across the downhill slope of a field to contain runoff from the field and designed to spread water from natural slopes over levelled field areas behind the terraces.

Drip irrigation: A method of irrigation in which water is allowed to drip or trickle from perforations in a low pressure pipe (usually plastic and double-walled) placed alongside the base of a row of plants. The spacing of the perforations is designed to produce a wetted strip along the crop row or a wetted area at the base of each plant.

Drop tubes or nozzles: Flexible or rigid hoses or pipe that lower the discharge point of a nozzle below the main lateral of a center pivot to distribute water usually at low pressure between crop rows in order to reduce evaporation.

Furrow diking: Installation of mounds of soil (dikes) in a furrow or installation of small depressions in the furrows to retain precipitation or irrigation water for crop use.

Infrared canopy monitor: A sensor used to determine plant stress by measuring crop canopy temperatures.

Inter-furrow ripping: a method of deep tilling in furrows using a chisel. The purpose is to break up the soil to allow better infiltration of water.

Irrigation scheduling: Procedure used in determining when to irrigate and how much water to apply to meet specific management objectives. There are several methods used to determine water needs, including: (1) water balance method, (2) stress-day index, (3) optimal sequencing of evapotranspiration deficits, and (4) measurements of leaf temperatures.

Limited irrigation: Irrigation scheduling method in which plant water deficits are allowed to occur generally on crops that are drought tolerant or with stages of growth that are less sensitive to water deficits. One example is fully irrigating only the upper half of a field. The next 25 percent is a tailwater runoff section that receives limited irrigation, and the lower one-fourth is a dryland section which may receive runoff from the upstream sections.

Low energy precision application (LEPA): Center pivot irrigation system that distributes water from an overhead lateral pipeline directly into furrows at very low pressure through drop tubes and orifice-controlled emitters. The purpose of this system is to apply water directly onto or near the soil to improve irrigation efficiency for systems with limited irrigation capacity.

Minimum tillage: Cultural practice that minimizes soil water loss, retains crop residuals to minimize soil erosion, and reduces tillage energy and labor requirements.

Multi-function irrigation system: Application of water-conserving chemicals such as antitranspirants, growth regulators, and soil surface evaporation suppressants. It is also used to apply fertilizer and pesticides and saves energy by requiring less tractor use.

No-tillage: Farming practice in which the soil is not tilled as a means of reducing soil water loss and soil erosion.

Plant growth regulators: Chemicals used to alter plant growth characteristics.

Playa: A depression in the soil surface without an outlet for runoff. It is covered with relatively impervious surface layers that inhibit water infiltration. A Playa can be used to store runoff water for irrigation purposes.

Ridge tillage: Cultural practice of permanent ridge formation by tillage implements on which crops are grown. The purpose of ridge tillage is to maximize moisture retention while minimizing soil erosion.

Skip row planting: One or more unplanted strips remain between planted rows in order to reduce crop water requirements.

Stubble mulch: Residue left on the surface in order to control erosion and increase precipitation storage.

Surge flow irrigation: The intermittent application of irrigation water to irrigation pathways, creating a series of on and off periods of constant or variable duration in an attempt to improve irrigation efficiency. A microprocessor control unit temporarily opens and closes valves in gated pipe in order to discharge water in surges that achieve relatively even watering along entire length of row.

Tailwater recovery system: System to collect, store, and reuse irrigation and surface runoff. Water is collected in a tailwater pit where it can be stored and used to irrigate crops.

WATER CONSERVATION PLAN GUIDELINES
KWO
November 16, 1993

* IRRIGATION GUIDELINES

** Prepared Dec. 1986
** Revised Nov. 1993

* MUNICIPAL GUIDELINES

** Prepared Dec. 1986
** Revised Nov. 1990
** Scheduled for Second Revision in 1994

* INDUSTRIAL GUIDELINES

** Prepared Dec. 1986
** No Revision Scheduled (Insufficient Resources)

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APPROXIMATE NUMBER OF WATER CONSERVATION PLANS APPROVED KWO/DWR November 16, 1993

* **Irrigation 850**

* **Municipal 160**

* **Industry 10**

IRRIGATION WATER CONSERVATION PROGRAM

KWO/DWR
November 16, 1993

* 1993 GUIDELINE COMPONENT

  ** Local Input from GMDs
  ** Seminars/Workshops
  ** On-Site Technical Assistance
  ** Metering
  ** Plan Preparation Simplified
  ** Self Monitoring

* 1993 MONITORING COMPONENT

  ** Annual Monitoring Criteria Recommended by GMDs
  ** Annual Enforcement Effort

DWR IRRIGATION WATER USE DATABASE
November 16, 1993

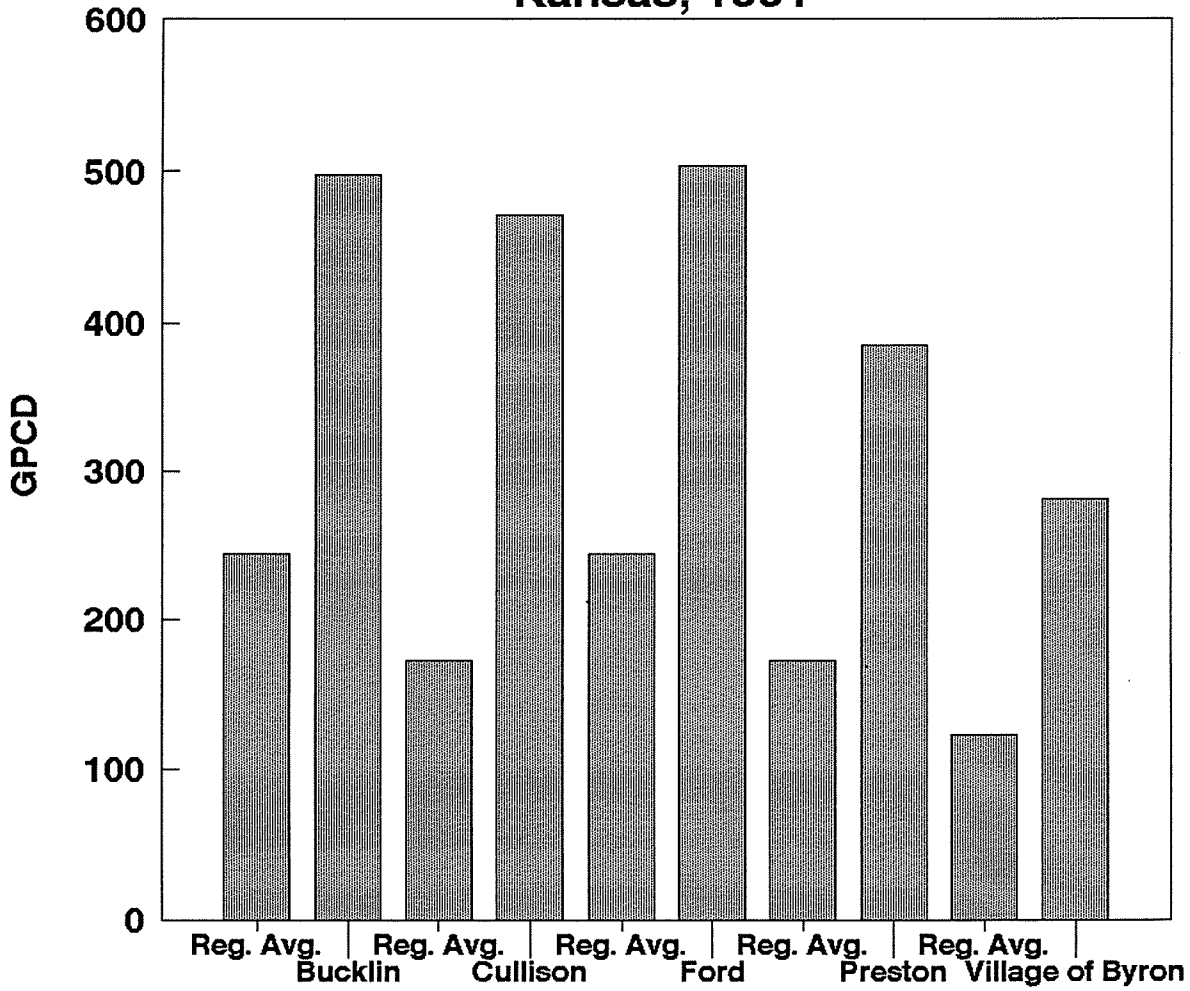
* **BEST STATEWIDE IRRIGATION WATER USE DATABASE IN THE U.S.**

  ** **Comprehensive Reporting Required**
  ** **Comprehensive Follow-up**

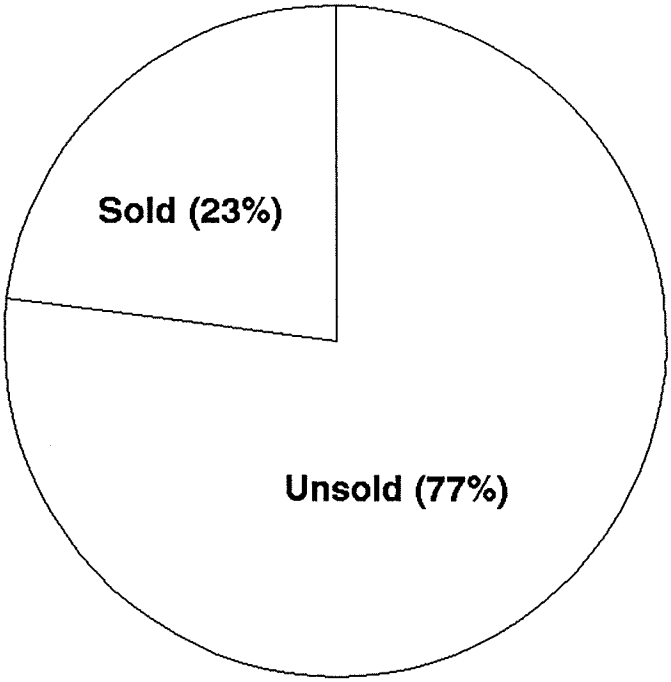
* **MAJOR IMPROVEMENTS PLANNED/ONGOING**

  ** **Metering Mandates**
  ** **Targeting High Users for Water Conservation Plans**

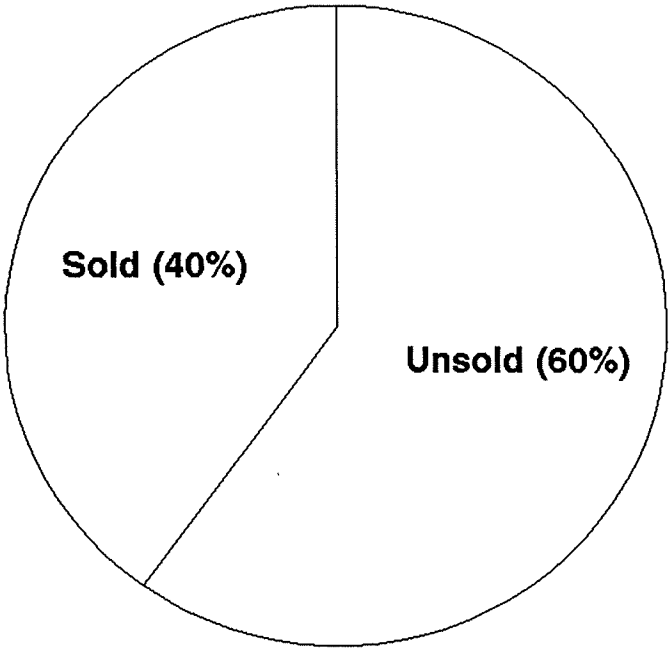
GALLONS PER CAPITA PER DAY (GPCD)
WATER USE BY SELECTED PUBLIC WATER SUPPLIERS WITH FLAT RATES
Kansas, 1991



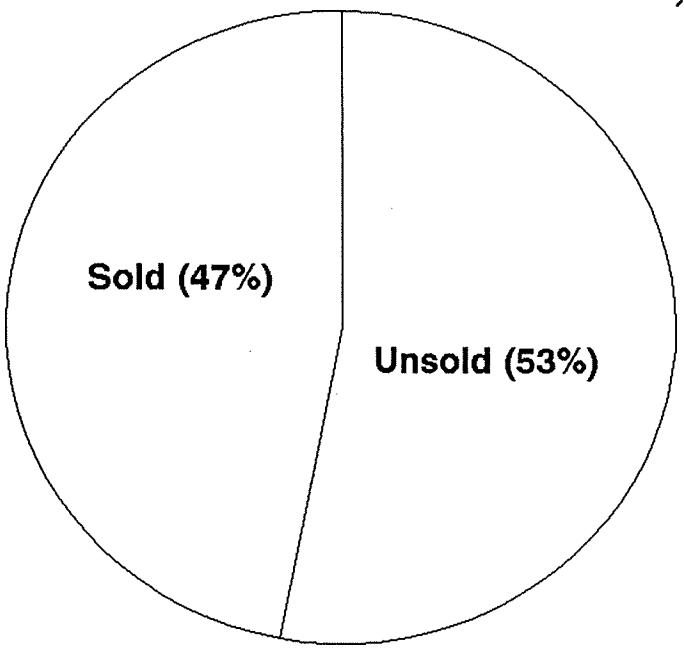
WATER USE BY PERCENT
CITY OF CLAYTON, 1991



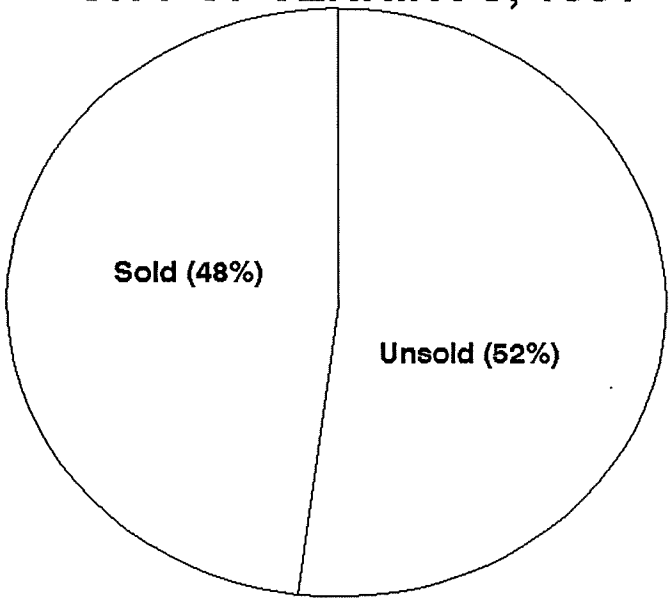
WATER USE BY PERCENT
CITY OF HOLLENBERG, 1991



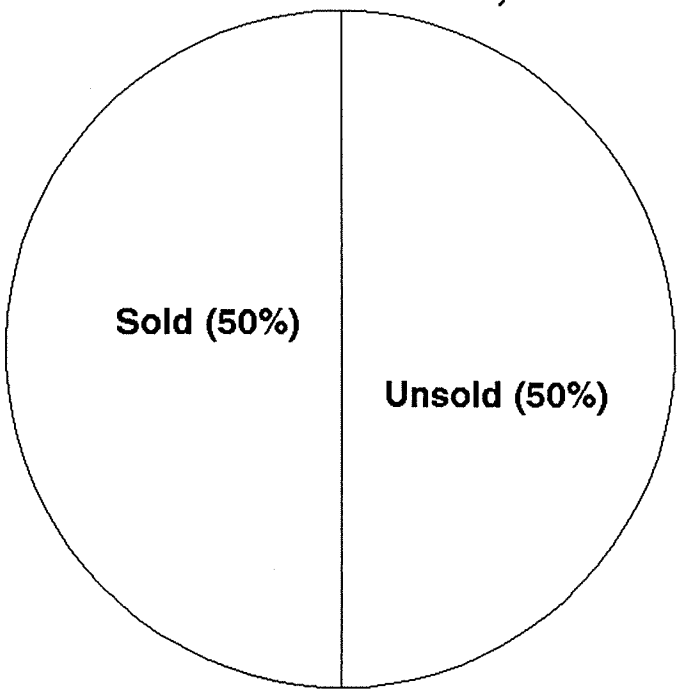
WATER USE BY PERCENT
CRAWFORD COUNTY RWD NO. 6, 1991



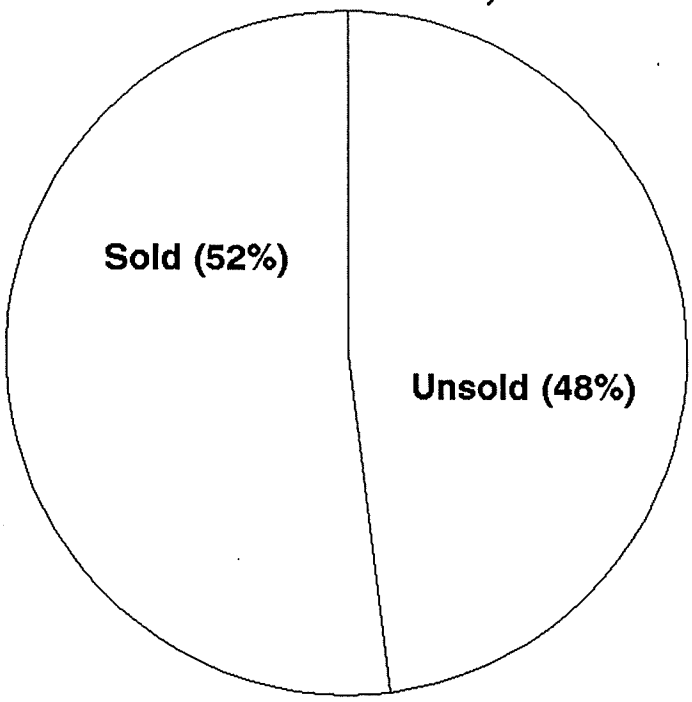
WATER USE BY PERCENT
CITY OF JENNINGS, 1991



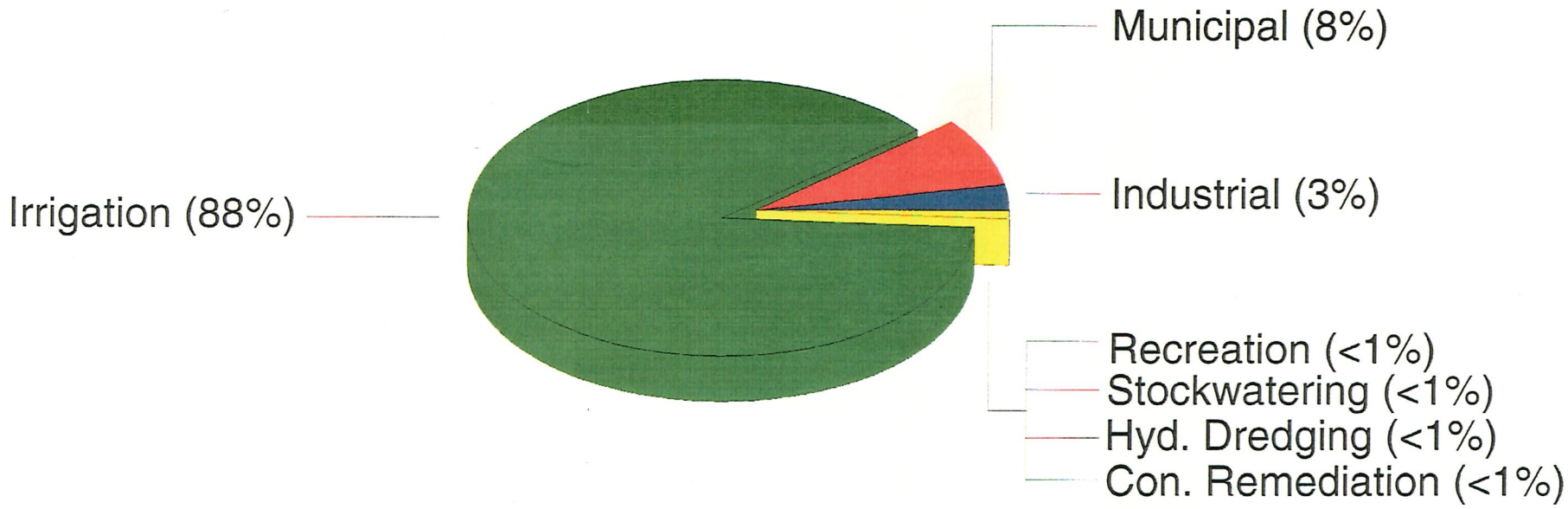
WATER USE BY PERCENT
CITY OF MELVERN, 1991



WATER USE BY PERCENT
CITY OF LENORA, 1991



1991 WATER USE REPORTED BY TYPE



PRESENTATION BY
DAVID L. POPE
CHIEF ENGINEER-DIRECTOR
DIVISION OF WATER RESOURCES
KANSAS STATE BOARD OF AGRICULTURE

TO THE HOUSE ENERGY AND NATURAL RESOURCES COMMITTEE
November 17, 1993

Hearing on Water Rights and Changes of Use Permits-Conservation Plans

Chairman Holmes and Members of the Committee, I appreciate the opportunity to appear before you this morning to discuss the activities of the Division of Water Resources pertaining to the conservation of water as related to our administration of water rights in Kansas.

As you know, the Division of Water Resources has the statutory responsibility to administer the provisions of the Kansas Water Appropriation Act which is the primary law dealing with the acquisition and administration of water rights in Kansas.

The Division also has significant responsibilities set forth in the Kansas Groundwater Management District Act and actively works with the five organized groundwater management districts in the central and western part of the state that have been established for the purpose of conservation and management of groundwater in those major irrigated areas of the state. These responsibilities include the review and approval of management programs developed by the districts, review and adoption of proposed rules and regulations recommended by the districts to implement policies of the district and responsibilities related to the establishment of intensive groundwater use control areas when the request to initiate such proceedings is made by a groundwater management district.

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Conservation is an important aspect of a total water management program and is something both the districts and the Division have actively worked toward for a number of years. The conservation section of the State Water Plan has provided recommendations related to water conservation, which in turn, resulted in changes to the Kansas Water Appropriation Act in 1986 and 1991. Consequently, conservation and water use efficiency have become a much more prevalent part of our water management programs during these last several years. Given the limited nature of water in Kansas, emphasis has shifted away from new development of our water toward the conservation and management of this limited, valuable resource.

The conservation of water is an integral part of a number of actions taken pursuant to the provisions of the Kansas Water Appropriation Act. Briefly, these include the following:

1. The Kansas Water Appropriation Act was amended in 1986 to authorize the Chief Engineer to require applicants for NEW permits to appropriate water to develop water conservation plans consistent with the guidelines developed by the Kansas Water Office. Guidelines were developed by the Kansas Water Office for irrigation, municipal and industrial uses shortly thereafter.

The Division also began the development of a coordinated program between the groundwater management districts and the Division in order to implement these new statutory changes.

On January 1, 1989, the Division began requiring conservation plans for most new applicants for irrigation, municipal and industrial users and for certain types of changes to existing water rights, primarily changes in the type of use or expansions in the place of use. Since that time, the Division has required approximately 850 conservation plans for irrigators. A number of municipal and industrial users have also been required to develop plans, either by us as a result of water appropriations or by the Kansas Water Office if they are members of a water assurance district.

2. The 1991 amendments to the Kansas Water Appropriation Act, which resulted in the passage of K.S.A. 82a-733, were the result of changes in the Water Conservation Section of the State Water Plan, the recognition that many areas of the State of Kansas were closed to new appropriations of water, and realizing that requiring water conservation plans just for NEW water users would not allow our office to require water conservation plans in the worst problem areas of the state. It was concluded that the limited resources available (including the Division staff) could best be utilized by "targeting" the imposition of conservation plans to areas where they were most needed. Generally speaking, the high priority areas included: (a) sources of water that were likely to be inadequate during periods of drought, (b) situations where a water user was using more water than their peers, and (c) water users applying for state financial assistance.

One of the primary examples thus far targeted has been the Walnut Creek Intensive Groundwater Use Control Area located in parts of Barton, Rush and Ness Counties that was

established pursuant to the order of the Chief Engineer in January 1992. Among other things, that order required a large number of water right holders to develop water conservation plans and, perhaps more significantly, based water use allocations in the area on the long term sustainable yield of the stream aquifer system. These two requirements resulted in the imposition of a high water use efficiency standard.

Consistent with the concept outlined with the new water conservation plan program and guidelines developed by the Kansas Water Office and recently approved by the Kansas Water Authority, the Division will now target water right holders that are apparently using larger amounts of water than may be deemed reasonable as compared to their peers and in excess of the amount authorized by their water rights. The criteria for selection of rights and monitoring has been developed in conjunction with the Kansas Water Office and the groundwater management districts.

3. Water use efficiency and conservation can also be indirectly influenced by perceived or real incentives or disincentives of other administrative actions related to water rights. For example, the Division has been aware for some time that many water users believe that the provisions of the law related to the abandonment or forfeiture of water rights (the so called "use it or lose it" provisions of the law) acted as a disincentive towards the conservation of water. While the Division has not believed over the years that the way it has administered the law supported this contention, we have actively attempted to take steps this year to deal with this perceived problem.

First, K.S.A. 82a-718 provides that a water right may be deemed abandoned only if there is no use of water for three successive years without due and sufficient cause.

Second, we have tried to make clear in administrative policies and actions that we have identified many of the good reasons that constitute "due and sufficient cause" for nonuse of water. While our rules and regulations have provided for many years that due and sufficient cause for nonuse includes several reasons related to water conservation, we have been attempting to put more emphasis in this area. Current reasons for "due and sufficient cause" spelled out by our regulations include:

a. Adequate moisture provided by natural precipitation, for production of crops normally requiring full or partial irrigation within the region of the state in which the place of use is located;

b. A right has been established or is in the process of being perfected for use of water from one or more preferred sources in which a supply is available currently but is likely to be depleted during periods of drought;

c. Water is not available from the source for the authorized use at times needed;

d. Purpose for which water is used is temporarily discontinued for a definite period of time to permit soil, moisture and water conservation;

e. Management and conservation practices are being applied which require the use of less water than authorized; and

f. Any other reason constituting due and sufficient cause as determined by the chief engineer. (Authorized by K.S.A. 82a-706a; implementing K.S.A. 82a-718, modified, L. 1978, ch. 460, May 1, 1978; amended May 1, 1986.)

Our recent administrative policies have spelled out in more detail and provided examples of how the reasons for nonuse of water are viewed by the Division. We have also indicated that the use of less water which results from: (a) installation and use of more efficient irrigation or other water use systems, (b) implementation of more efficient techniques or practices of using water, (c) planting of crops which require less water, or (d) implementation of a conservation plan, shall not be considered to be a partial abandonment.

Finally and perhaps most significantly, the Division established what is known as the Water Rights Conservation Program (WRCP) in August of 1992. In essence, this program allows the holder of an existing water right that is in good standing to enroll their right in the WRCP in areas of the state where additional water is not available for appropriation. By

enrolling in this program for a period of between five and ten years in a written agreement with the Division of Water Resources. This allows the water right holder to be guaranteed that that type of nonuse will be considered due and sufficient cause for nonuse of water by this office. Consequently, the Division knows that that water is not going to be used and can be conserved while the water right holder can go about their business without fear of loss of their water right as a result of nonuse. Thus far, 45 water rights have been enrolled in the program representing almost 12,000 acre-feet of water. We are very pleased with the program so far and think it has substantial potential for removing the perceived need to use water when the user does not need it. Ultimately, we do not want water pumped that will contribute to the depletion of our limited resources just to maintain a water right. However, we also have to be cognizant that there is a valid purpose for the abandonment and forfeiture provisions of our statutes. If these provisions were not present, individuals could claim and maintain large appropriations of water which would ultimately prevent the use of water by others or could make it very difficult for us to administer rights during periods of shortage not knowing who could use water and who could not. It also would not provide any degree of certainty for other active water users as to the dependability of their supply. In a long term sense, attrition in the amount of water appropriated is helpful in dealing with areas that are over-appropriated.

4. Procedures related to the review of applications for changes to existing water rights can also have conservation implications. When someone acquires an existing water right and wishes to change the type of use and/or the place of use, it is essential that the approval of the change does not allow more water to be consumed than was historically the case in order to

prevent impairment of existing water rights in the area through additional stress on the aquifer system and/or stream.

Historically, most western states have used the actual historical use of the water right in question, and the extent to which that water use was consumptive to determine how much of the right could be "changed" to the new use. This allowed the historic amount and pattern of return flows to be maintained in the local area to protect the holders of existing water rights by keeping their source of water "whole." Up until recent times, the Division used procedures somewhat similar to this. However, it became apparent that those users with the largest historic use were able to convert a larger portion of their water right to the new purpose and those users that had conserved the resource seemed to be penalized.

Consequently, we have amended our internal procedures to provide a standard method of determining the amount of an irrigation water right that can be converted to the new use. These procedures rely on scientific information related to the net irrigation requirements for crops in various areas of the state. Allowing this amount of water to be transferred to the new use: (a) removes the incentives for additional use and (b) removes disincentives for conservation. These new procedures allow a reasonable amount of the water right to be changed in any given case while still protecting the local source of supply from additional use after the change has been accomplished.

While we are now using these procedures, we are also developing formal rules and regulations which will allow additional public input into the process and any refinements that may be needed in these procedures.

5. During the last several years the Division has spent a significant amount of time and resources enhancing the basic water use data base maintained by our office.

As you may recall, K.S.A. 82a-732 was enacted in 1988. That statute requires the holders of all water rights to file a complete and accurate report of water use to the Chief Engineer by March 1 of each year indicating the use of water for the past calendar year. Our office has actively enforced this requirement and, with the assistance of the Kansas Water Office staff, has conducted considerable follow-up with water users to increase the accuracy of the data and to provide statistical analysis of the information for various purposes. We now have almost 100% compliance each year with the filing of these reports and the quality of the data has improved greatly. This data base has been extremely helpful and will be invaluable in the future as various programs related to the conservation and management of water are implemented.

For example, this information helps us determine which users are reporting or using more water than is deemed reasonable for their area of the state compared to their peers and compared to the amounts authorized so that they can be targeted for additional follow-up. Many people have called for stronger enforcement of the limits of water rights and this will provide one of the tools that can be used for that purpose.

6. Water Metering - While we have much better data than ever before, it has become readily apparent over the years that more sophisticated and effective water management and conservation programs can only be effective if accurate information is available on how much water is being diverted and if tools are available to enforce the limits of existing water rights. Consequently, more and more water meters have been required in various areas of the state over the last several years.

For example, beginning on September 1, 1987, the Division began requiring all new applicants for permits and most applicants for a change to an existing water right to install and maintain a water meter. Likewise, water meters were mandated in a number of intensive groundwater use control areas and for water users along many streams and rivers where active surface water rights administration historically has occurred.

We have also been actively working with the groundwater management districts to encourage enhanced water measurement as a part of their overall management program for the district. At this time, four of the five groundwater management districts have adopted strong water metering programs that are now in place or will result in total metering of all large capacity wells in their districts within the next few years. Given the large number of wells in these districts, most of them have provided for a phased in program of four to five years, several of them half complete at this time. In total, these state and local efforts will result in most of the approximately 20,000 large capacity wells located in central and western Kansas to be metered.

I mention this because it is an important part of efforts to better manage and conserve water, by both the users and state and local agencies.

7. Finally, I would also note that the recently released report of the Ogallala Task Force established by the Kansas State Board of Agriculture last year contains a number of significant recommendations directly or indirectly related to water conservation. Many of these are consistent with the water rights administration matters already underway, some of which I have previously mentioned, while others need further examination and work to implement by the various entities involved.

Mr. Chairman and Members of the Committee, that completes my comments. I would be happy to answer any additional questions you may have.

NORTHWEST KANSAS GROUNDWATER MANAGEMENT DISTRICT NO. 4

1175 South Range Avenue
P.O. Box 905
Colby, Kansas 67701-0905
Phone: (913) 462-3915

November 4, 1993

Raney Gilliland
Legislative Research
Statehouse
Topeka, KS 66612

RE: Conservation Planning

Dear Mr. Gilliland:

Thank you for your recent notice regarding the upcoming hearing on conservation planning in Kansas. Since I will be in Mississippi on November 17th and the remainder of my staff involved in conservation planning will be conducting an irrigation efficiency seminar in Goodland that day, we cannot possibly attend. Rest assured our non-attendance is not a result of a lack of interest.

Ray Luhman of my staff has prepared the enclosed summary of our conservation planning efforts over the past 9 years. I would appreciate it if you could see that the hearing panel members receive a copy if you think it will help them properly deliberate the issues.

As always, additional information is available upon request.

Thank you for your time and consideration in this matter.

Sincerely,

Wayne A. Bossert

Wayne A. Bossert
Manager
Northwest Kansas Groundwater
Management District No. 4

cc: GMD4 file;

11-17-93
H. En. & NR
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CONSERVATION PLANNING IN NORTHWEST KANSAS GROUNDWATER MANAGEMENT DISTRICT NO. 4

In the summer of 1984, the Board of Directors of GMD 4 began the process of formulation of a local policy to require resource development plans (conservation plans) on new applications and change place of use applications filed within the district. The policy became effective as part of the May 1, 1985, revised management program.

A major reason for the initiation of these requirements was that GMD 4 had seen a significant increase in run-off problems associated with low pressure center pivot systems. These systems were relatively new technology at that time and the problems noted seemed to be caused by a lack of design analysis which was resulting in mis-matching the systems with field slopes and cropping and tillage practices. It was felt that the GMD requirement for design work in advance of system installation would decrease run-off problems, would make any other problems more easily solvable, and would also increase irrigation efficiency to the benefit of both the operator and the aquifer.

The policy (copy attached) requires that plans be forwarded to the appropriate county conservation district in order for the district to evaluate the plan and forward their comments to the GMD 4 board. This is necessary since the best, if not only, irrigation design criteria available is in the SCS Kansas Irrigation Guide. By involving the local conservation districts, it was then possible to avail ourselves of SCS expertise. For this reason, nearly all of the plans were developed by local and area SCS personnel. As the work load increased due to an acceleration in pivot installations it became difficult to get the plans completed in a timely manner. In response to this, GMD 4 entered into a cooperative agreement with SCS which resulted in the creation of a special position. In early 1992 SCS stationed a soil conservationist with design authority and experience in the GMD 4 office. With this arrangement, plans are now developed and approved at the local level with a minimum of time delay.

Sometime after the initiation of the local policies on conservation planning, the State of Kansas became involved with the formulation of state-wide conservation guidelines in the State Water Plan. The GMD 4 program was studied by the Kansas Water Office (KWO) during this process, and several of our philosophies and methodologies were incorporated into the water plan. After finalization of the conservation section of the water plan the Division of Water Resources (DWR) began to also require plans on many new applications and changes. With very few exceptions, DWR requirements exactly mirrored those of GMD 4.

The primary use of plans by DWR and GMD 4 for the evaluation of proposed water rights and changes does differ to some extent. GMD 4 places its main emphasis on the system design portion of the plans in order to assure that a highly efficient system is installed thereby insuring that the operator is capable of avoiding the waste of water. The primary focus of DWR is on the cropping and net irrigation requirement portion of a plan, especially on changes. They use this information to determine whether or not the proposed system can operate within the limits of the water right being evaluated. Although our main uses of a plan differ it is evident that all components of the plans are necessary for our joint efforts. It should also be stated that the technical portions of the plans are the most important for our evaluation purposes.

While it has been alleged that the conservation planning process in Kansas is looked upon by many as a "paper work exercise", nothing could be further from the truth in GMD

4. Individuals who are required to develop and implement plans are in close contact with the GMD and SCS. The local planners give each plan personal attention, which nearly always includes field visits and meetings to insure that the plan represents the aim of the irrigator. The irrigator is informed up front that the plan must be implemented and that the implementation will be verified. Even if the goals of the irrigator change after the process is complete, plan modification can be accomplished with a minimum of delay.

GMD 4 does check for compliance, and in the case of discovery of non-compliance the GMD does use its enforcement capabilities. Since the local requirement is in the form of an administrative policy, as opposed to a rule and regulation, the GMD can enforce it locally through the courts, and no extra burden is placed on the DWR for enforcement. It should be pointed out that a recent evaluation program of 40 conservation plans in GMD 4 revealed an extremely high level of field compliance with plan requirements.

While it is impossible to speak for the rest of the state, it is a fact that the conservation planning effort in GMD 4 is working well. The Board of Directors of GMD 4 is now in the process of discussing the possibility of expanding the program to all water users within the district with the express purpose of eliminating inefficient and wasteful use of water. The program has sufficient significance to be specifically cited in the latest version of the KWO revised irrigation water conservation guidelines now before the Kansas Water Authority.

In closing, we feel that our local policies and programs have made GMD 4 the leader in the area of wise and efficient use of the groundwater resource, and we would hope that any legislative action regarding conservation plans does not compromise our local efforts.

If you need any additional information please feel free to contact our office. Thank you for the opportunity to provide our views and insight on this important issue.

a. Management Policy

(1) It shall be the policy of GMD No. 4 to use resource development planning as deemed necessary to bring about a higher level of groundwater use efficiency for all use type withdrawing water from within the district. To achieve this goal, the district may cooperate or otherwise coordinate activities with other state and local entities as appropriate. The following cases shall require the development and implementation of such a plan:

(a) All applications for new irrigation groundwater rights where the allowable withdrawal and well spacing policies are met or waived; and

(b) All non-emergency irrigation groundwater applications for change in place of use or use made of water from another use type to irrigation, where the allowable withdrawal and well spacing are met or waived as long as the proposed change represents an actual change in operation, and not simply an administrative change; and

(c) All non-irrigation groundwater right applications where the allowable withdrawal well spacing and other appropriate policies are met or waived, and where the board determines that the amount of water requested or the anticipated efficiency of the proposed water use is such that the potential for inefficient or wasteful use exists.

(d) All other systems requiring resource development plans as a result of violations of other district policies contained herein.

(2) A resource development plan shall basically consist of the following:

(a) Irrigation - A description of the proposed system including irrigation system design, tailwater control methods, well yield(s), cropping patterns and other pertinent information deemed necessary by the board.

(b) Municipal - A description of the proposed system including distribution lines, wastewater collection and handling, drought contingency plan, conservation plans, monitoring methods, projected needs, and other pertinent information deemed necessary by the board.

(c) Industrial, Stockwatering, Recreation and Water Power and other use types - A description of the proposed system including distribution lines, wastewater collection and handling, monitoring methods, equipment specifications and efficiency, and other pertinent information deemed necessary by the board.

b. Administrative Policy Concerning Resource Development Plans

(1) New applications for irrigation groundwater rights requiring a resource development plan; applications to change the place of use or use made of water from any other use type to irrigation, under an existing irrigation system which requires a resource development plan:

(a) The district shall notify the applicant of his or her requirement under policy 12 a. to submit a resource development plan to the district. The notification shall also include any requests for additional information the board deems important and relevant to the decision-making process.

(b) The plan shall consist of either a description of a specific irrigation development project, or a listing and description of any number of potential irrigation development projects which in the opinion of the applicant may be within his or her options. The plan can be developed independently or in cooperation with any private, public or governmental entity.

(c) All completed plans shall be filed with the groundwater management district who will then forward it to the conservation district of the county wherein the point of diversion and proposed place of use lies. In the case where the point(s) of diversion or the proposed place of use is located in 2 or more counties, said plan shall be forwarded to all counties involved.

(d) The county conservation district may review any required plan and offer an evaluation of said project(s) to the groundwater management district board of directors. Comments or suggestions concerning improved efficiency techniques may also be included in the conservation district evaluation and report to the board.

(e) The board-approved resource development plan shall be forwarded to the Division of Water Resources as a part of the proposed application for permit to appropriate water and shall be fully implemented prior to the operation of the system.

(f) A board-denied resource development plan shall result in a district recommendation for denial of the pending water right application.

(2) All new non-irrigation applications requiring a resource development plan:

(a) The district shall notify the applicant of his or her requirement under policy 12 a. to submit a resource development plan to the district. The notification shall also include any requests for additional information the board deems important and relevant to the decision-making process.

(b) The plan shall be filed with the groundwater management district who shall review, process and finally adopt or deny the proposed plan. The district may coordinate the review process with any local, state, federal or private person or group.

(c) The board-approved resource development plan shall be forwarded to the Division of Water Resources as a part of the application for permit to appropriate water and shall be fully implemented prior to operation of the system.

(d) A board-denied resource development plan shall result in a district recommendation for denial of the pending permit application.

(3) Enforcement of this policy shall be per groundwater management district policy VI-10-b.

(4) Exceptions may be requested by any applicant by requesting to meet with the board during any regularly scheduled board meeting.

HOUSE COMMITTEE ON ENERGY AND NATURAL RESOURCES
November 17, 1993
Testimony by
Kenneth F. Kern, Executive Director
State Conservation Commission

HEARING ON GOALS OF THE STATE CONSERVATION COMMISSION AND THE STATE WATER PLAN

1. Thank you for the opportunity to provide information on the Commission's program and their relationship to the state water plan.

2. The agency has eleven (11) full time equivalent (FTE's) employees and has been very busy implementing programs. Especially since the authorization of the dedicated water plan funding.

3. With implementation taking so much time, we have neglected to provide information on what is being accomplished.

4. Emphasis shall be placed on information and education. We shall be developing fact sheets, news releases, visual aids, and any other appropriate media. Of course, this will have to fit into a very limited budget and the availability of qualified staff.

5. We are a very efficient state agency. Less than 5% of the total agency budget is expended to administer programs. We administer:

   a. Eight programs eligible for funding from the state water plan special revenue fund (six are currently funded).

   b. One program traditionally funded from the general fund, but funded from the water plan special revenue fund since FY 1991.

   c. One program, Administrative Operations, funded from the State General Fund.

6. Today we are going to provide the Committee with:

   a. Objectives from the State Conservation Commission Long Range Program.

   b. Water plan subsections, issues, and guidelines addressed by the programs administered by the Commission.

   c. Slide presentation illustrating the programs and their relationship to the state water plan.

   d. Report of FY 1993 Program Activities.

11-17-93
H. En & NR
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ARTICLE I - COMMISSION OBJECTIVES

REFERENCE - State Conservation Commission Long Range Program for Kansas, Part I and Part II

The **KANSAS CONSERVATION COMMISSION LONG RANGE PROGRAM**, published in 1981 after consultation with conservation district officials, Kansas Association of Conservation Districts, State Association of Kansas Watersheds, USDA Soil Conservation Service, and other related agencies and groups, identified the following seven objectives for the State Conservation Commission:

1. EROSION - Reduce erosion to the acceptable level on agricultural land which has a soil-loss exceeding the allowable rate -- Retain as much prime and unique farmland as possible -- Maintain soil quality with regard to tilth, infiltration capacity, organic matter, and compaction.

2. WATER QUALITY - Reduce the discharge of potential pollutants and dissolved solids with highest priority directed to those posing the greatest threat to human health and safety -- Minimize pollution caused by organic waste from agricultural production -- Reduce the nutrients reaching the water from agricultural runoff -- Achieve sediment reduction goals set forth in the Agricultural Runoff Water Quality Management Plan.

3. WATER SUPPLY AND CONSERVATION - Increase the efficiency of water use in agriculture -- Increase agricultural water supplies.

4. FISH AND WILDLIFE HABITAT - Improve upland wildlife habitat on both cropland and non-cultivated land -- Improve the quality of fish habitat.

5. UPSTREAM FLOOD DAMAGES - Reduce upstream flood damages to agricultural and urban lands where economically and environmentally sound to do so. As a minimum, with available technology, reduce total upstream damages by 50 percent through both structural and nonstructural measures -- Emphasize projects that prevent loss of prime agricultural lands.

6. ENERGY CONSERVATION - Reduce energy uses per unit of output in agriculture -- Increase net production of energy from agricultural lands consistent with soil and water conservation principles.

7. URBAN AND BUILT-UP AREAS - Provide information to help urban developers and other landusers overcome resource limitations -- Reduce the conversion of prime and unique farmlands and wetlands to urban areas -- Reduce sediment delivery from construction sites.

STATE CONSERVATION COMMISSION

WATER PLAN PROGRAMS

WATER RESOURCES COST-SHARE PROGRAM

Subsections: Water Quality
Water Supply
Flooding

Issues:		BASINS
	Water Quality Protection	LARK, KLR, MDC, MO, NEO, UREP, SHS, SOL, VER & WAL
	Municipal & Industrial Water Supply	LARK, KLR, MDC, NEO, SOL & VER
	Rural and Urban Flooding	LARK, KLR, MDC, MO, NEO, SHS, SOL, VER & WAL
	Water Conservation	UARK, CIM, URER, SHS & SOL
	Reservoir Sedimentation	KLR, MDC, NEO, VER & WAL
	Ground Water Declines	UREP, SHS & SOL

Guidelines:
1. Priority to Conservation Compliance Plans required by 1985 Food Security Act.
2. Priority to highly erodible land above water supply reservoirs.
3. Priority to lands above flood control structures.
4. Target funds to Ag water supply developments for pasture and range land management.

Partners: Conservation Districts - Local Implementation
Soil Conservation Service
Landowners
ASCS
Cooperative Extension Service
Experiment Station
KDWP
KDHE
GMD

NON-POINT SOURCE POLLUTION CONTROL

Subsections: Water Quality
Environmental Protection Strategy
Stream Channelization

Issues:		BASINS
	Protection	LARK, UARK, KLR, MDC, MO, NEO, UREP, SHS, SOL & VER
	NPS Pollution Management	LARK, KLR, MDC, MO, NEO, VER & WAL
	Protection of Western Garden City Area	UARK
	Stream Channelization	KLR & MO
	Stream System Deterioration	KLR & MO
	Environmental Protection Strategy	KLR, MDC, MO, NEO & VER

Guidelines:
1. Identify present and potential sources and target areas.
2. Develop Local NPS Pollution Management Plan.
3. Identify management practices.
4. Submit Project Work Plan.

Partners:

Conservation Districts - Local Implementation	
SCS	County Commission
KDHE	Cities
EPA	RWD
GMD	PWWSD
KDWP	
Health Departments	
Extension	
Experiment Station	
State & Ext. Forestry	
RC&D's	

RIPARIAN AND WETLAND PROTECTION

Subsections: Water Quality
Stream Channelization

Issues:	BASINS
Protection Water Quality	LARK, UARK, CIM, KLR, MDC, MO, NEO, UREP, SHS, SOL, VER & WAL
Stream Channelization	KLR & MO
Stream System Deterioration	KLR

Guidelines:
1. Identify priorities with assistance for partners.
2. Include R&W plans and priority areas in conservation district annual work plan.
3. Cooperate with all entities in implementing plans.
4. KDWP work with conservation districts to obtain voluntary easements.

Partners: Conservation Districts - Local Implementation
KDWP
State and Extension Forestry
DWR
SCS
KDHE
KWO
Landowners
County Commission

WATERSHED DAM CONSTRUCTION PROGRAM

Subsections: Flooding
Water Supply

	BASINS
Issues: Rural and Urban Flooding	LARK, UARK, KLR, MDC, MO, NEO, VER & WAL
Reservoir Sedimentation (Water Supply)	KLR, MDC, NEO & VER

Guidelines:
1. Target to subwatersheds with highest priority for flood damage reduction.
2. Target to watersheds above public water supply lakes.

Partners:
Watershed Districts - Local Implementation
Drainage Districts
Conservation Districts
SCS
KDWP
KDHE
State and Extension Forestry
KWO
DWR
SAKW
Landowners

14-9

WATERSHED PLANNING

Subsection: Flooding

BASINS

Issue: Rural and Urban Flooding KLR & MDC

Guidelines: Target to areas of highest priority for flood damage reduction.

Partners: Soil Conservation Service - Implementing Agency
Watershed Districts
Consulting Engineering Firms

MULTIPURPOSE SMALL LAKES

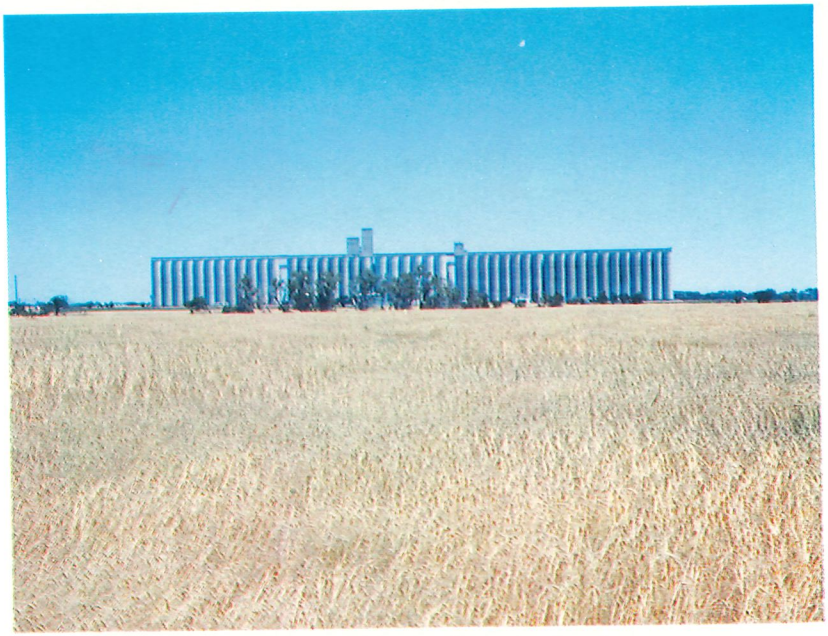
Subsections: Water Supply
Flooding
(Should also include Water Quality)

Issues:		BASINS
	Municipal and Industrial Water Supply	MDC
	Rural and Urban Flooding	MDC

Guidelines:
1. Priority to projects on public water supply improvement needs list or locally identified water needs.
2. Utilize criteria for determining relative feasibility of supply water to applicant.
3. Target to areas of high rural flood damage.
4. Target to areas of high flood-prone communities.

Partners: Local Sponsor (Cities, Rural Districts, Public Wholesale Water Supply District and Watershed District)
Watershed Districts
Conservation Districts
Landowners
KWO
DWR
KDHE
KDWP
State and Extension Forestry
Kansas Biological Survey
State Historical Society
Kansas Corporation Commission

CONSERVING
Soil and Water
FOR THE FUTURE



State Conservation Commission
Long Range Program for

K A N S A S

Part II

Conservation program objectives

Soil and water are the basic resources of the earth around us. National public opinions surveyed in 1979 revealed that most Americans believe that more soil and water conservation is needed and that the public should share in the cost as an investment for the future.

The State Conservation Commission has developed program objectives for seven areas related to soil and water conservation: soil resources, water supply, water quality, urban areas, energy, fish and wildlife habitat, and flood damages.

The program objectives are designed to maintain our natural resources, the quality of our environment, and our standard of living. (See Part I for a more detailed discussion and for source documentation.)

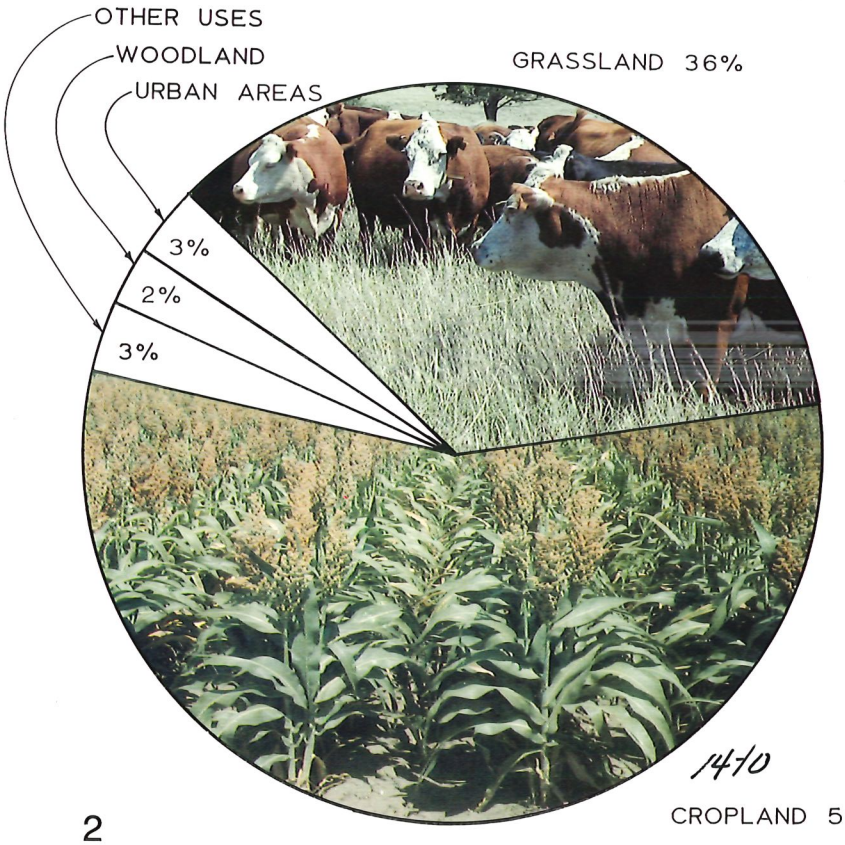
Credits

Photographs were furnished by the Soil Conservation Service, Kansas Department of Economic Development, Pottawatomie Creek Watershed District, Wabaunsee County Conservation District, and the State Conservation Commission. Graphs and artwork were supplied by the Soil Conservation Service.

This publication was financed by a Resource Conservation Act grant from the USDA Soil Conservation Service (Agreement No. 59-6215-8-73), 1981.

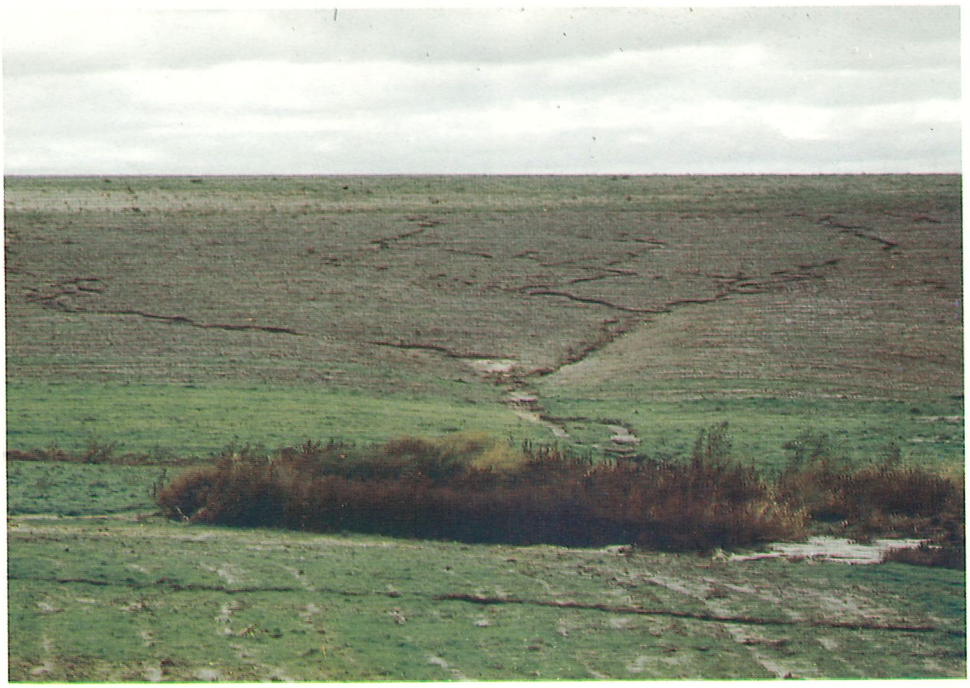
Using our resources

Land use in Kansas



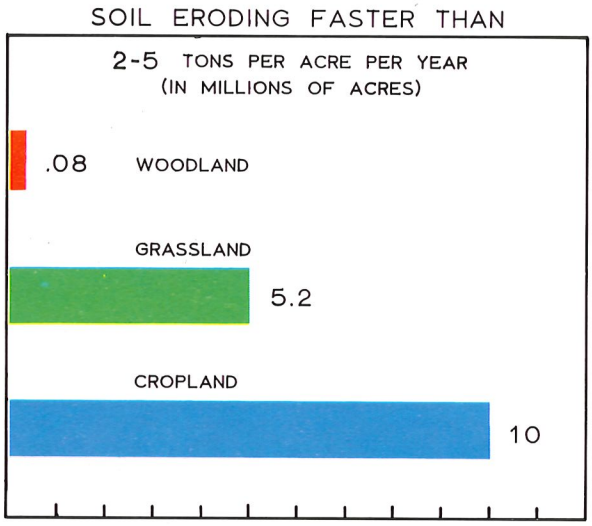
wisely . . . now and forever

. . . Most land needs conservation treatment



More than half of the crop and grass lands in Kansas need conservation treatment.

14-11



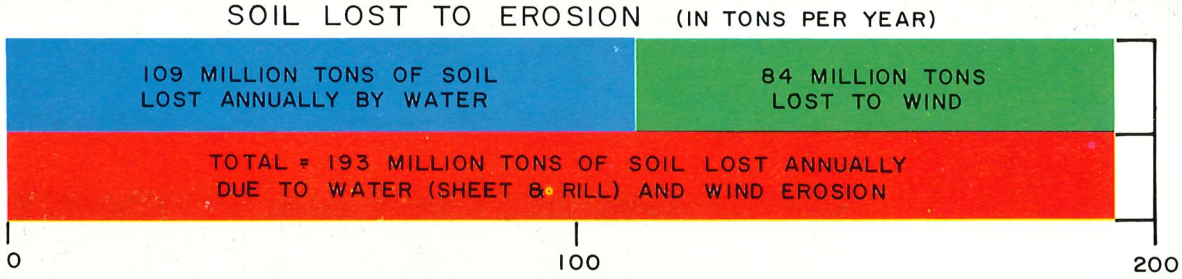
Erosion destroys ▼ Soil is our

Wind and water erosion destroy productive land where conservation practices are not used.

14-12

Contour farming, strip cropping, minimum tillage, and range management are conservation practices that protect our soil.

basic resource ▲ Conservation Protects



Wind and water erosion carry away an estimated 193 million tons of soil from our cropland every year. About 14 percent of the cropland in Kansas is losing over 10 tons of soil per acre per year. A loss of 4 to 5 tons per acre per year is faster than nature can replenish the topsoil on most land used for crop production.

A loss of topsoil makes the soil more difficult to till, decreases the soil's capacity for holding water, makes it less fertile and more costly to produce food and fiber.

On grassland, a loss of 2 tons per acre per year is faster than nature can replace the soil. Animals grazing too long on the same pasture can keep the grass from reproducing well. When the grass dies, the soil is exposed to erosion.

Urban areas expand over nearly 100 acres of prime farmland each day in Kansas. Food production on less fertile land is more costly per unit of production than it is on prime land.

We can't buy our soil back. We can't stop the wind and the rain. But we can build terraces and grassed waterways, and use conservation tillage and other good farming practices to keep our soil where we need it.

The Commission's objectives are to reduce soil erosion, maintain soil quality, keep prime farmland producing food and fiber, and improve grassland management.

14-13

Water management is essential

We are using up our underground water supply faster than the natural recharge rate can replace it. Irrigation alone is causing a serious depletion of the aquifer supplying water in the western counties. Frequent drought periods also cause problems for people who depend on surface water supplies.

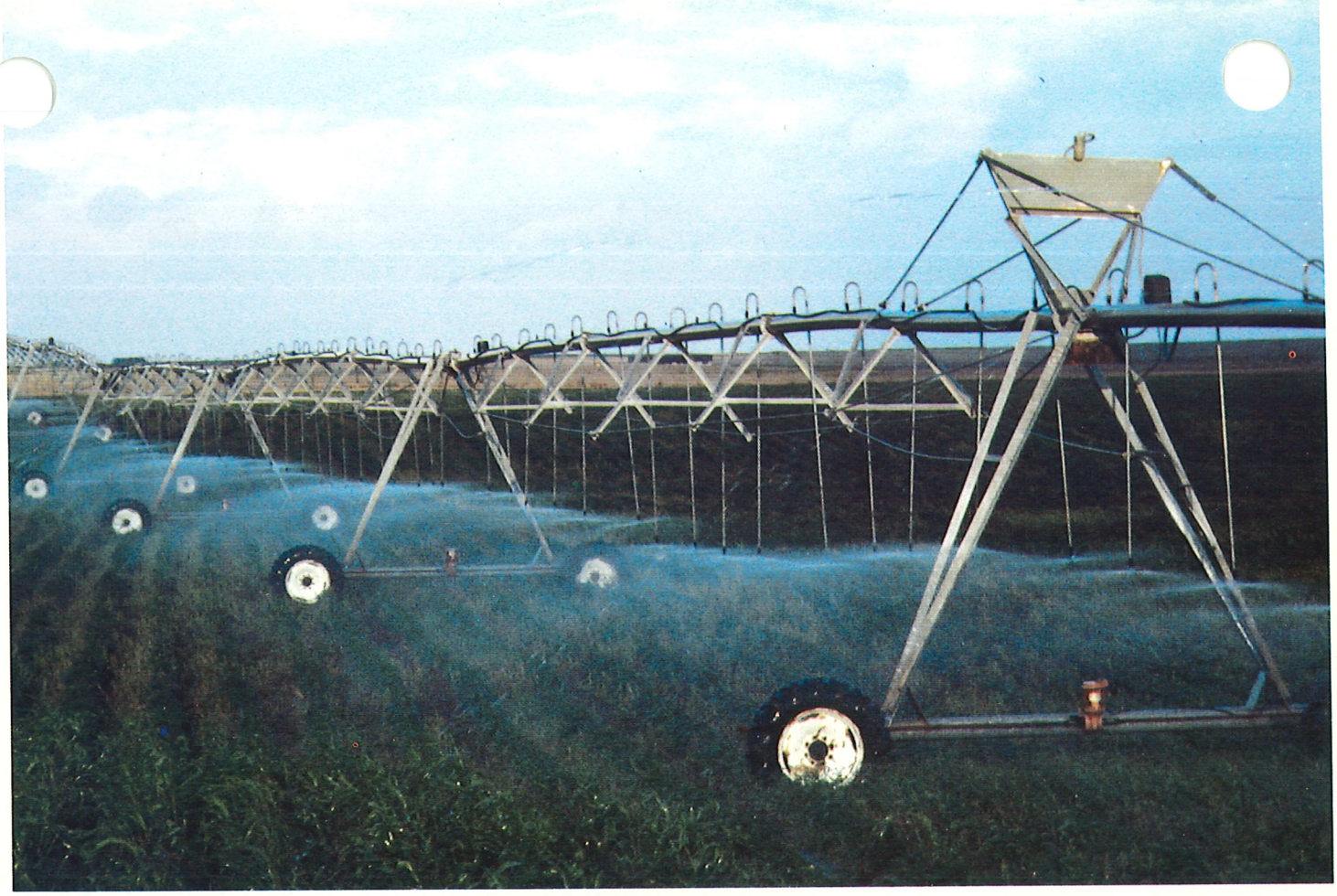
Some solutions are better water management, improved efficiency of irrigation equipment, crops that use less water, or dryland farming in areas where underground water may soon be depleted or where it will be too expensive to drill and pump.

The Commission's objectives are to increase efficiency of water use in agriculture and to increase agricultural water supplies.

Water! We need it . . .

Poor water quality results from excessive sediment and other pollutants flowing into Kansas streams. Better quality water can be obtained by installation and management of good conservation systems.

14-14



A good supply ▲ and good quality ▼

Clean water is our choice

Every stream in Kansas has too much sediment, according to the Kansas Agricultural Runoff Water Quality Management Plan, developed in 1978. Some water is not safe for drinking or swimming.

After a rain, as the water runs over the land, it carries loose particles of soil along with fertilizers and pesticides used on crops and pollutes the rivers.

The Commission's objectives for water quality are to reduce pollution caused by farm wastes, reduce nutrients reaching the water from agricultural runoff, reduce sediment, and reduce the discharge of toxic pollutants and dissolved solids especially those posing a threat to public health.

Urban expansion affects land use

Urban and built-up areas have been growing at the rate of about 3 million acres annually nationwide, using about 1 million acres of prime farmland and 875,000 acres of wet and floodprone soil. Kansas loses over 36,000 acres yearly to urban sprawl and other nonfarm uses.

Urban growth includes construction of homes, shopping centers, and streets. Parking lots, roofs, pavement and other hard surfaces keep the rain from soaking into the ground as it falls. The water running off these surfaces increases the potential of flooding, damages to buildings, soil erosion, and sediment damage.

Commission objectives are: to help urban developers and other land users recognize these potential soil erosion problems and develop plans to solve them; to reduce conversion of prime farmlands and wetlands to urban areas; and to reduce sediment delivery from construction sites.

Save fuel,

It takes fuel, and that's energy, to plow fields, produce fertilizers, and plant and harvest crops. Although agriculture consumes only 2.9 percent of the total energy used in the nation, there is a good potential for saving energy on farms.

Energy can be conserved by tilling less, leaving some residue from the previous crop, using crop rotations, and improving pasture and range management. Growing crops on prime land takes less energy per unit of production than growing crops on less fertile soil. Windbreaks for homestead and livestock protection are excellent energy conservation measures.

The Commission's objectives are to reduce energy use per unit of output in agriculture and to increase net production of energy from agricultural lands.

14-16

Fish and wildlife need homes, too

Fish and wildlife need a variety of places to live. Some need grasslands, some need woodlands, and all need ponds and streams. Most wildlife habitat in Kansas is on farms and ranches. When fewer types of habitat are available, the number of wildlife species becomes fewer, too.

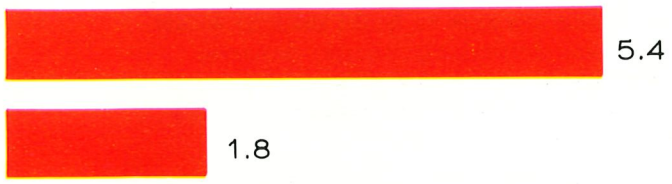
Cropland, because of the need to increase food production, reduces the variety of habitat for wildlife. Overgrazed rangeland provides little food or cover for wildlife.

Farm ponds can provide habitat for many species of fish, and the areas around ponds are beneficial for other animals. Good management plans for farms and ranches can improve wildlife habitat. An cleaning up the waters will benefit all.

The Commission's objectives are to improve wildlife habitat and water quality through erosion and sediment control.

time, money . . . Save energy

CONSERVATION SAVES ENERGY
(FUEL AND MAN-HOURS)



Conventional tillage takes 5.4 gallons of fuel per hour to produce a crop of corn, while conservation tillage takes only 1.8 gallons.

Conventional tillage takes 4.5 hours per acre to produce a crop of corn or soybeans; conservation tillage takes only 0.7 hour per acre.

14-17

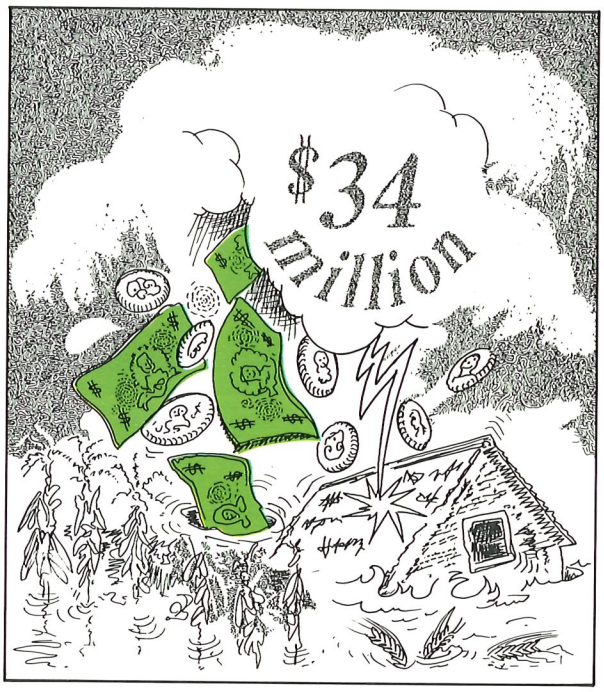
Floods damage crops, pastures,

When the rains fall and the rivers overflow their banks, many crops are washed out and must be replanted or remain unharvested. This not only costs farmers money, but causes food shortages and higher food prices.

About 2.3 million acres in Kansas are on the flood plains of major rivers. Most of that acreage is in cropland. The Soil Conservation Service reports that average annual flood damages exceed $34 million. About 60 percent of that loss is crop and pasture damage.

We can't stop the rains, but we can apply conservation land treatment and build floodwater retarding reservoirs—lakes that hold the water and release it slowly.

The Commission's objectives are to reduce flood damages to farmlands and urban areas through structural and nonstructural means and through conservation treatment of the land.



Investing in our natural resources

How much will we invest to have resources for future use? One thing is certain. If we don't invest now, we'll pay a much higher price later. Our natural resources are becoming scarce and costly.

The water resources cost-share program provides assistance to landowners to build animal waste control facilities, diversions, ponds, terraces, grassed waterways, irrigation water reuse and recovery pits, irrigation water supply pits, and spring developments.

The watershed construction program helps build floodwater retarding dams, grade stabilization structures, and multipurpose reservoirs for flood control, watershed protection and water supply.

Each of the 105 conservation districts receives state funds to match county funds for office and technical assistance.

A staff of four in the State Conservation Commission office administers these funds to the people, working to keep the earth around us for the future.

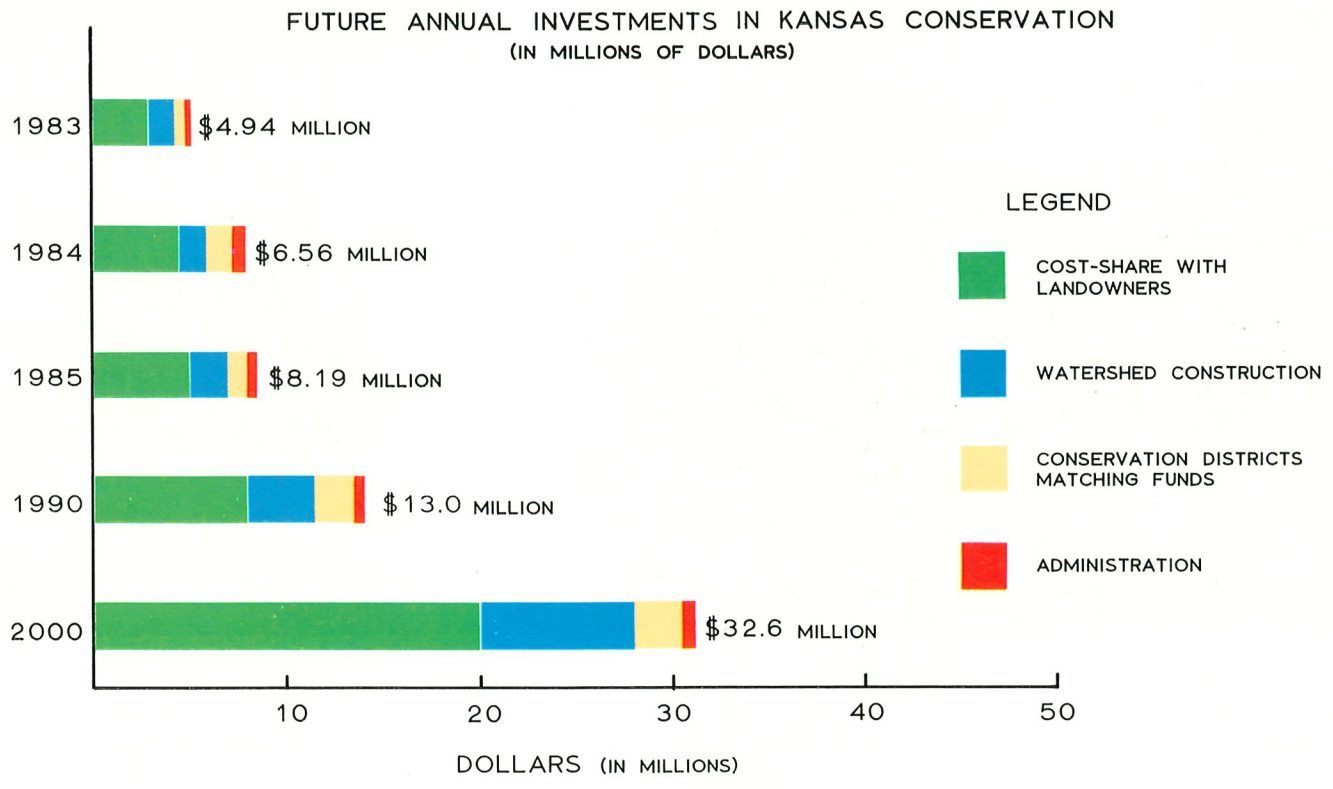
14-18

homes . . . $34 million lost every year

Floods damage farmlands, crops, homes, roads and machinery, affect our economy, and threaten lives.

Floodwater retarding dams control the floods and reduce the losses.

. . . now and for the future



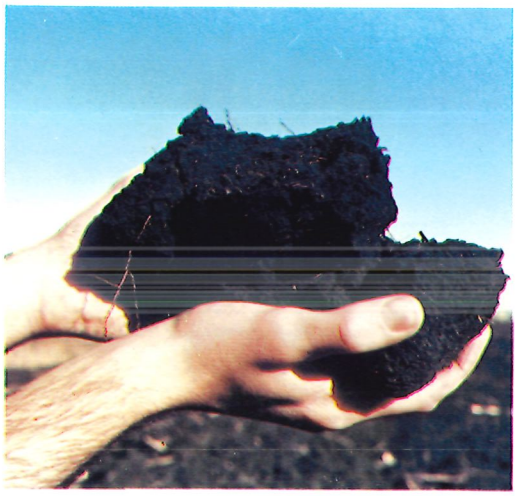
14-19

Doing the job . . .

Technicians, construction workers, farmers, watershed district officials, city planning commissions, conservation districts, legislators, office workers, local, state, and federal agencies, and YOU are the key to success.

The State Conservation Commission is working with you to conserve our natural resources for the future.

It's in your hands!



State Conservation Commission
535 Kansas Avenue
Topeka, Kansas 66603
Phone: 913-296-3600

14-20

TESTIMONY
PRESENTED TO THE
HOUSE COMMITTEE ON ENERGY & NATURAL RESOURCES

By

Tracy D. Streeter, Resource Administrator
November 17, 1993

INTRODUCTION

The State Conservation Commission is responsible for the implementation of six programs identified in the State Water Plan. Each program addresses one or more water resource issues contained in the plan. The following testimony outlines the Water Plan subsections and water issues impacted by Commission programs and how Commission program guidelines address each stated issue.

THE PROGRAMS

Water Resources Cost-Share Program - Provides up to 70 percent cost-share assistance for enduring soil conservation and water resource land treatment practices.

Nonpoint Source Pollution Control Fund - Provides financial assistance for the implementation of pollution control practices to protect, restore or enhance surface and/or groundwater quality.

Watershed Dam Construction Program - Provides cost-share assistance for engineering and construction of flood control and detention dams.

Multipurpose Small Lakes Program - Provides financial assistance for small lakes containing flood control, water supply, water-related recreational facilities and nonpoint source pollution control practices.

Watershed Planning Assistance - Provides financial assistance for preliminary engineering services and environmental assessments used in the development of state-prioritized P.L. 566 watershed projects.

Riparian and Wetland Protection Program - Provides up to 80 percent cost-sharing for riparian and/or wetland restoration, enhancement or creation demonstration projects.

11-17-93
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KANSAS WATER PLAN SUBSECTIONS

Three subsections provide guidance and priorities to assist the State Conservation Commission in the implementation of various programs. Those subsections include:

Water Quality
Water Supply
Flooding

Within each basin plan, specific issues are identified which fall under the subsections stated above. These issues are basin specific and provide guidance to agencies to address the stated issue. As a result, the Commission tailors its program policy and guidelines to address Water Plan concerns.

Basin plan issues addressed by Commission programs include:

Water Quality Protection
Reservoir Sedimentation
Groundwater Declines
Water (Moisture Conservation)
Urban & Rural Flooding
Municipal & Industrial Water Supply

HOW DO SCC PROGRAMS IMPACT WATER PLAN ISSUES?

Water Quality Protection

Nonpoint Source Pollution Control Fund (NPS) - To date, seventy-one project work plans have been developed to address nonpoint source pollution concerns identified in 27 NPS pollution management plans. These management plans cover all or part of 36 counties. Approved project work plans provide financial assistance for nonpoint source pollution control practices including:

* Information and education activities
* Livestock waste control systems
* Nutrient and pesticide management
* Cleanup of illegal dump sites
* Soil testing incentives
* Irrigation system improvements
* Mixing/loading pads for ag chemical application equipment
* Abandoned water well plugging
* Streambank stabilization
* Riparian/vegetative plantings
* Technical assistance

Each management plan and ensuing project work plans are developed locally through conservation district leadership

and assistance from appropriate local, state and federal agencies.

Water Resources Cost-Share Program (WRCSP) - Sediment is identified as the most prominent source of nonpoint source pollution in the state. A number of other pollutants, namely phosphorus, are attached to soil particles as they travel through runoff. Since FY 1990, the WRCSP has received enhanced appropriations for the treatment of lands subject to the Food Security Act of 1985. The Act contained a conservation compliance provision which required all producers participating in federal farm programs to develop and implement a plan to reduce soil erosion on highly erodible lands (HEL) by December 31, 1994. Thirteen million of Kansas' 29 million cropland acres fell subject to this provision.

As a result of enhanced appropriations and mandates of the Act, the Commission modified its allocation system to direct program funding to areas impacted greatest by the conservation compliance provision. Seventy percent of FY 1993 WRCSP expenditures were made on lands subject to the provision. This percentage is comparable to expenditure levels experienced in FY's 1990 - 1992.

Riparian and Wetland Protection Program (RWPP) - Riparian and wetland areas have proven water quality benefits. Healthy riparian vegetation alongside streams and rivers acts as a filter, sifting sediment and other pollutants traveling from runoff entering the watercourse. Wetlands have been so successful in filtering pollutants that man-made wetlands have been developed as alternatives to private lagoons and septic systems and serve as wastewater treatment devices for some small communities.

The Commission is active, along with Wildlife and Parks, KDHE, State and Extension Forestry, SCS and others in the development of pilot Riparian and Wetland Protection plans in each region of the state. FY 1993 appropriated funds of $100,000 is currently spawning streambank stabilization, riparian restoration and wetland restoration projects in Jefferson, Neosho and Reno County.

Reservoir Sedimentation

WRCSP - The Water Plan specifies WRCSP funds be targeted to HEL located above public water supply reservoirs. Terraces are the predominant practices utilized to reduce soil erosion on cropland. According to FY 1993 WRCSP expenditure records, 8,640,636 linear feet of terraces have been constructed statewide. Forty-seven percent of those terraces or 4,020,082 linear feet are located in the drainage areas above Kansas' federal reservoirs. USDA, Soil Conservation Service soil loss reduction estimates indicate

an average of 9.5 tons of soil per acre per year are saved as a result of the terrace projects constructed with WRCSP assistance.

Watershed Dam Construction Program (WSDCP) - Each watershed structure receiving assistance from the WSDCP has approximately 50 percent of its total designed storage appropriated to sediment. In addition, at least 75 percent of the drainage acres supporting funded structures must have adequate land treatment. Fifteen of the 30 watershed structures prioritized for FY 1993 funding are located above either Perry, Tuttle Creek or John Redmond Reservoir.

Groundwater Declines

WRCSP - Cost-share assistance is available for a number of practices capable of addressing the groundwater decline issue. In western Kansas counties, significant emphasis is placed upon improving the efficiency of existing flood irrigation systems with the installation of surge valves. The Haskell County Conservation District indicate approximately 800 wells provide water for flood irrigation in the county. Most county producers irrigate 156 acres per well. Through the use of surge valves, irrigators experience an estimated water savings of 0.8 acre feet per acre irrigated per year. The WRCSP provides assistance to landowners for underground pipeline and other permanent components necessary for surge valve installation.

Even greater water savings is derived from the conversion of existing flood irrigation systems to center-pivot sprinkler systems equipped with low drift nozzles. These systems are commonly called LEPA (Low Energy Precision Application). The WRCSP provides cost-sharing for underground pipeline and necessary components to facilitate the conversion practice. Cost-sharing for surge valves or actual sprinkler systems is not authorized.

Water (Moisture) Conservation

WRCSP - Cost-share assistance is available for level or flat channel terraces. These terraces provide no outlet and runoff is stored in the terrace channel. The practice is utilized primarily west of U.S. Highway 183 and serves as a moisture conservation measure. Many of the level or flat channel terraces are also constructed to comply with the conservation compliance provision of the 1985 Food Security Act.

Urban & Rural Flooding

WSDCP - Floodwater detention dams are constructed with cost-share assistance from the WSDCP. Local project cost-sharing is provided by the watershed or drainage district and in most cases, the property owner where the site is located. Twenty-eight of the 30 approved FY 1993 structures are located in areas identified by the Kansas Water Plan as having the highest potential for flood damage reduction. Each approved project receives a construction permit from the Division of Water Resources, KSBA, which certifies the project to be sound from an engineering standpoint as well as economically feasible.

Watershed Planning Assistance (WPA) - The Kansas Watershed Review Committee, made up of the State Conservation Commission and water-related state agency heads, establishes priorities for the federal P.L. 566 watershed program. The preliminary engineering and environmental assessments conducted with the use of WPA funds result in the receipt of substantial federal construction dollars. For every one dollar appropriated to WPA, 27 federal dollars are allocated to Kansas for project construction (based upon FY 1993 appropriations).

Multipurpose Small Lakes Program (MPSLP) - All projects funded through the MPSLP must be constructed with flood control storage. Nine projects have been funded through the MPSLP to date. Each structure is located in areas identified by the Kansas Water Plan as having the highest potential for flood damage reduction.

WRCSP - As mentioned, many of the structural land treatment practices receiving cost-share assistance from the WRCSP are designed to reduced runoff. The accumulative effect of land treatment practices play a major role in flood reduction efforts.

Municipal & Industrial Water Supply

MPSLP - Municipal and industrial water supply storage may be added to MPSLP projects if a water supply need is identified by the Kansas Water Office. Each of the nine funded MPSLP projects include water supply storage. Sponsors of the water supply portion of these projects include cities, rural water and public wholesale water supply districts.

WRCSP - The Water Supply subsection of the Water Plan targets the use of WRCSP funds to agricultural water supply developments needed to utilize pasture and range lands. This would include cost-sharing for domestic livestock wells, spring developments, ponds, pipelines and tanks. Although these practices are currently considered low

priority by the Commission, conservation districts with high pasture and range land acreages utilized these practices extensively.

SUMMARY

It's the State Conservation Commission's hopes that this overview of programs and State Water Plan issues has established an understanding of the diversity of water resource issues. We appreciate the opportunity to outline our program policy and priorities as they pertain to the implementation of the Water Plan. Thank you.

KANSAS
STATE CONSERVATION COMMISSION

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REPORT OF FY 1993 PROGRAM ACTIVITIES
STATE WATER PLAN FUNDS

STATE CONSERVATION COMMISSION
SUMMARY OF PROGRAM ACTIVITIES BY BASIN FOR FY 1993 APPROPRIATIONS OCTOBER 1993

16-2

The State Conservation Commission is pleased to present a summary of the program activities for the FY 1993 State Water Plan Special Revenue Fund appropriations. The Commission has administrative responsibilities to implement seven programs funded from the State Water Plan Special Revenue Fund. The programs with a brief description are:

WATER RESOURCES COST-SHARE PROGRAM: Cost-share assistance to landowners for land treatment to address problems identified in the Kansas Water Plan, Food Security Act of 1985 and other conservation needs. The report shows dollars available and the conservation practices completed in each basin. The program is available in and administered by the 105 County Conservation Districts. A majority of the cost-share funds was for installation of practices in the landowners Conservation Compliance Plan, which is required as part of the Food Security Act of 1985. All completed practices must meet the Soil Conservation Service Technical Guide practice specifications.

FISCAL YEAR STARTED: 1981 STATE WATER PLAN SUBSECTIONS: Water Quality, Water Supply and Flooding

STATE ASSISTANCE FOR WATERSHED DAM CONSTRUCTION: Watershed Districts are organized to provide for the development of flood control measures. Cost-share assistance is provided for the construction of flood detention and/or grade stabilization structures. The summary shows the number of contracts (one per structure) and the drainage acres controlled. County Conservation Districts are co-sponsors of the watershed districts.

FISCAL YEAR STARTED: 1977 STATE WATER PLAN SUBSECTIONS: Flooding and Water Supply

WATERSHED PLANNING: State funds are used for preliminary planning contracts with consulting engineering firms for engineering services and environmental assessments. The information is provided to the Soil Conservation Service to assist in the planning process for P.L. 566 flood control projects in priority watersheds. Planning for the USDA, Soil Conservation Service P.L. 566 program is a continual process. Federal funds for the P.L. 566 flood control projects in Kansas amounted to over $4,100,000 in FY 1993. The purpose of each contract explains how the information will be used.

FISCAL YEAR STARTED: 1959 STATE WATER PLAN SUBSECTION: Flooding

MULTIPURPOSE SMALL LAKES PROGRAM: The program provides state funds for flood control, water supply storage, and/or recreation. Due to the complexity and the size of some projects, considerable time between appropriations and actual expenditure of funds may occur. County Conservation Districts are responsible for developlment of a non-point source pollution management plan for the drainage area.

FISCAL YEAR STARTED: 1987 STATE WATER PLAN SUBSECTION: Water Supply and Flooding

NON-POINT SOURCE POLLUTION CONTROL FUND: The protection of the ground and surface waters of Kansas from pollution is a very complex process. Education of everyone of the potential or existing problem and methods of correction requires considerable time. The Kansas Department of Health and Environment, the State Conservation Commission, County Conservation Districts, and many other local, state, and federal agencies and the private sector have been working together in the development of Local NPS Pollution Mangement Plans. Project Work Plans are developed to implement the Mangement Plans.

FISCAL YEAR STARTED: 1990 STATE WATER PLAN SUBSECTIONS: Water Quality, Environmental Protection Strategy and Stream Channelization

BENEFIT AREA PROGRAM: This program provides a method for public corporations, namely watershed districts, to be reimbursed for specific expenses when more than 20 percent of the benefits of a flood control project are outside the taxing entities' boundaries.

FISCAL YEAR STARTED: 1993 STATE WATER PLAN SUBSECTION: Flooding

STATE AID TO CONSERVATION DISTRICTS: This program is normally funded from the State General Fund. The state provides funding, on a matching basis, for the activities and functions of the 105 Conservation Districts, up to a maximum of $7,500 per district. Districts receive funds from the County Commission general und and/or special conservation mill levy.

FISCAL YEAR STARTED: 1965 STATE WATER PLAN SUBSECTION: None

SPECIAL REVENUE FUNDS AVAILABLE FOR FY 1993

Program	FY 1993 Appropriation	Reappropriation From FY 1992	Total Available
Water Resources Cost-Share Program.....	$ 5,600,000	$ 264,148*	$ 5,864,148
State Assistance for Watershed Dam Construction..	1,362,163	112,489	1,474,652
Watershed Planning (Legislature authorized..... expending up to $150,000 from Watershed Dam Construction funds for this program).....	150,000	- 0 -	150,000
Multipurpose Small Lakes Program.....	1,602,969	121,543	1,724,512
Non-Point Source Pollution Control Fund.....	400,000	1,150,082	1,550,082
Benefit Area Program.....	172,534	- 0 -	172,534
State Aid to Conservation Districts.....	776,700**	- 0 -	776,700
TOTAL.....	$10,064,366	$1,648,262	$11,712,628

* Includes $920 in refunds.

** Requested from the State General Fund but appropriated from the State Water Plan Special Revenue Fund.

STATE CONSERVATION COMMISSION
SUMMARY OF EXPENDITURES OF STATE WATER PLAN FUNDS FOR FY 1993
BY PROGRAM AND BASIN

Basin	Water Resources Cost-Share	Watershed Dam Construction	Watershed Planning	Multipurpose Small Lakes	NPS Pollution Control Fund	Benefit Area Program	Aid to Conservation Districts	TOTAL
Cimarron	$ 215,104	$ 0	$ 0	$ 0	$ 21,911	$ 0	$ 65,645	$ 302,660
Kansas-Lower Republican	465,248	518,181	39,890	931,773	101,416	0	124,410	2,180,918
Lower Arkansas	198,880	65,013	0	0	67,816	0	94,447	426,156
Marais des Cygnes	143,766	121,631	74,600	500,000	10,952	0	52,182	903,131
Missouri	203,358	156,638	0	55,251	1,555	0	23,477	440,279
Neosho	158,300	89,032	10,980	0	0	0	70,130	328,442
Smoky-Hill Saline	378,470	0	20,000	0	249,237	0	105,490	753,197
Solomon	292,047	0	0	0	14,034	0	59,279	365,360
Upper Arkansas	221,743	120,000	0	0	41,591	172,534	86,662	642,530
Upper Republican	137,906	0	0	0	0	0	36,498	174,404
Verdigris	61,588	0	3,400	0	0	0	43,013	108,001
Walnut	34,967	0	0	0	0	0	15,467	50,434
Statewide	168,000	0	0	0	103,837	0	0	271,837
Encumbered Statewide	2,995,648*	0	0	0	0	0	0	2,995,648
TOTAL Expenditures	$5,675,025	$1,070,495	$148,870**	$1,487,024	$ 612,349	$172,534	$776,700	$ 9,942,997
Reappropriated to FY 1994	189,124	405,287	0	237,488***	937,733	0	0	1,769,632
TOTAL FY 1993 Funds	$5,864,149	$1,475,782	$148,870	$1,724,512	$1,550,082	$172,534	$776,700	$11,712,629

NOTE: The expenditures include the combined expenditures and encumberance of the funds appropriated for FY 1993.
* Encumbered funds cannot be designated by basin with current record system.
** From Watershed Dam Construction appropriation.
*** Funds to implement required NPS Project Work Plans being developed by conservation districts.

STATE CONSERVATION COMMISSION
PROGRAM ACTIVITIES BY BASIN FOR FY 1993 APPROPRIATION

PROGRAM: WATER RESOURCES COST-SHARE PROGRAM

PROGRAM EXPLANATION: State assistance to landowners for land treatment practices for water quantity and water quality benefits. Highest priority is the installation of practices in the landowners Conservation Compliance Plan, as required by the Food Security Act of 1985.

APPROPRIATION: $5,864,149 including reappropriation from FY 1992 and refunds.

SUMMARY OF PRACTICES COMPLETED BY BASIN:

			BASINS						
SCS Code	PRACTICE NAME	UNIT	CIMARRON	KANSAS LOWER REPUBLICAN	LOWER ARKANSAS	MARAIS DES CYGNES	MISSOURI	NEOSHO	SMOKY HILL SALINE
312	Animal Waste Management System	Number		1		1			
342	Critical Area Planting	Acres		1.5	13.1			64	42.29
362	Diversion	Cubic Yards	40,382	30,421	3,784	766	175	9,006.05	13,441.7
378	Pond	Number		13	5			10	4
382	Fencing	Rod	8,498					2,200	
392	Field Windbreak	No. Trees	3,421		1,386				2,148
410	Grade Stabilization Structure	Number			6				
412	Grassed Waterway or Outlet	Acres		444.03	64.7	22.26	38.84	33.02	121
430DD	Conversion Flood to Sprinkler	Feet	46,642		1,257				16,301
430EE	Pipeline for Surge Valve	Feet	17,810						8,533
484	Mulching	Feet	22,109		32,525				
512	Pasture & Hayland Planting	Acres		134.6	110.5	270.6	14	188.8	62.3
516	Pipeline (Stockwater)	Feet	4,777	1,243				6,708	7,814
550	Range Seeding	Acres		201.2	22.9	7.0		39.9	335.9
552	Irrigation Pit	Number							
574	Spring Development	Number		8	2			5	
600	Terrace	Miles	38.41	242.51	64.94	59.22	49.98	100.14	264.78
606	Surface Drain	Feet					1,860		
612	Tree Planting	Number			614				
614	Trough or Tank	Number	13	8	3			9	
620	Underground Outlet	Feet		42,540	2,421.5	4,274	41,181	40	63.6
638	Water & Sediment Control Basin	Number		2			15		
642	Livestock Well	Number	8		9				4

SUMMARY OF EXPENDITURES:

Funds Paid in FY 1993	$215,104	$465,248	$198,880	$143,766	$203,358	$158,300	$378,470

PROGRAM: WATER RESOURCES COST-SHARE PROGRAM - FY 1993
(PAGE 2)

SUMMARY OF PRACTICES COMPLETED BY BASIN:

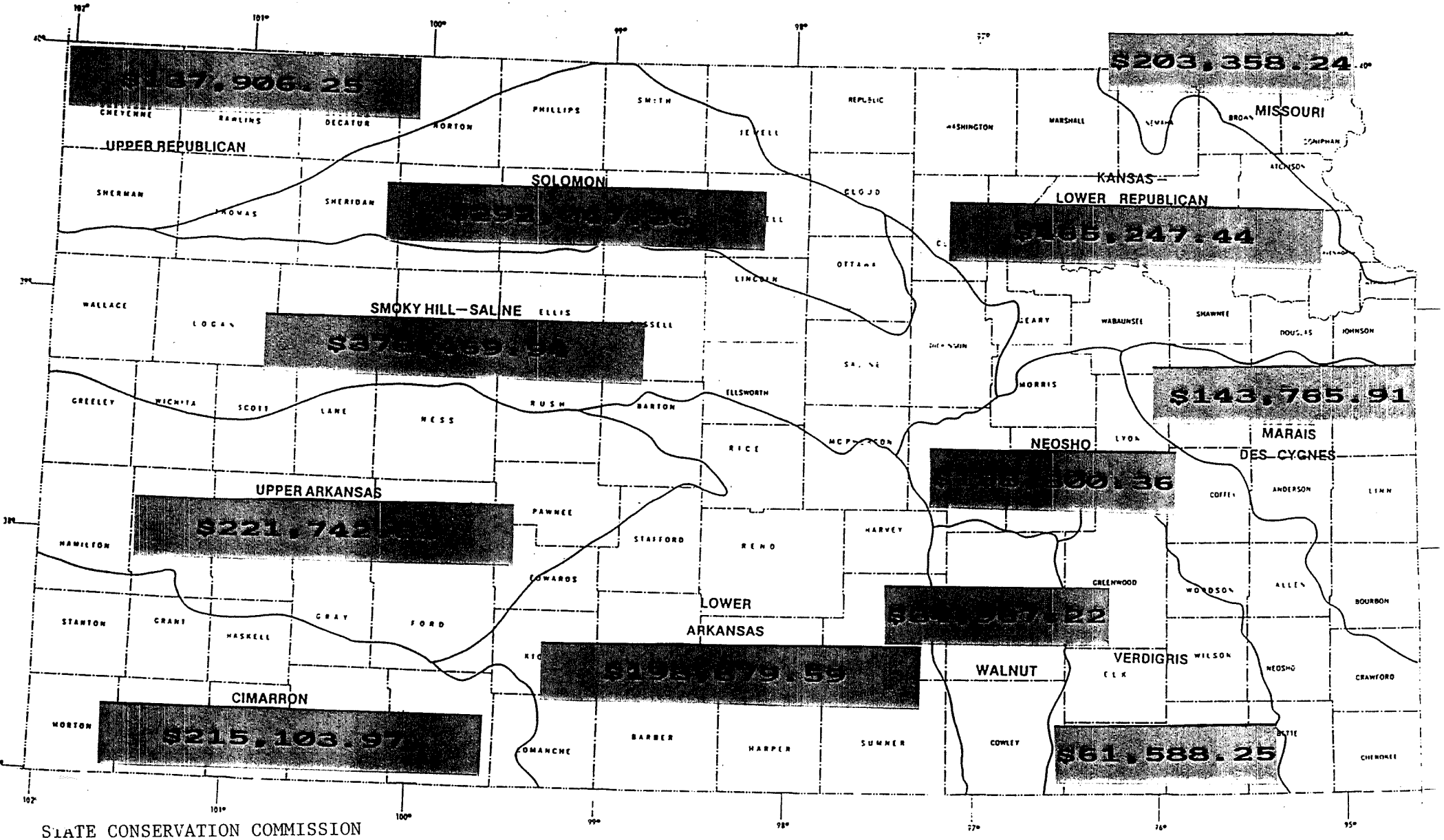
SCS Code	PRACTICE NAME	UNIT	BASINS: SOLOMON	UPPER ARKANSAS	UPPER REPUBLICAN	VERDIGRIS	WALNUT	STATE TOTAL
312	Animal Waste Management System	Number		1				3
342	Critical Area Planting	Acres	9.10	12.41		13.0	10.47	165.87
362	Diversion	Cubic Yards	14,046.9	34,533	8,820	3,861	1,460	160,697.65
378	Pond	Number		2		5		39
382	Fencing	Rod				5,800	5,125	23,723
392	Field Windbreak	No. Trees	1,250	1,700				9,905
410	Grade Stabilization Structure	Number					2	8
412	Grassed Waterway or Outlet	Acres	114.4	18.44	3.08	16.46	4.6	880.83
430DD	Conversion Flood to Sprinkler	Feet		7,793	2,764			74,757
430EE	Pipeline for Surge Valve	Feet		17,959				44,302
484	Mulching	Feet		15,929	850			80,974
512	Pasture & Hayland Planting	Acres		147		430.7	304.5	1,663
516	Pipeline (Stockwater)	Feet	11,290	19,235	7,550			58,617
550	Range Seeding	Acres	99	349.8	164.7	264	160.1	1,644.5
552	Irrigation Pit	Number		1				1
574	Spring Development	Number						15
600	Terrace	Miles	231.91	97.70	105.50	151.13	11.24	1,281.47
606	Surface Drain	Feet						1,860
612	Tree Planting	Number		210				824
614	Trough or Tank	Number		16	4			53
620	Underground Outlet	Feet	2,099					92,619.1
638	Water & Sediment Control Basin	Number						17
642	Livestock Well	Number	2	11	3			37

SUMMARY OF EXPENDITURES:

Funds Paid in FY 1993	$292,047	$221,743	$137,906	$ 61,588	$ 34,967	$2,511,377
Funds Encumbered for Completion in FY 1994						2,995,648
Funds Expended Statewide						168,000
Uncommitted and Reappropriated to FY 1994						189,124
TOTAL						$5,864,149

FY 1993
Water Resources Cost-Share Program
Total Expenditures
As of June 30, 1993
By Basin
Total $2,511,377.34

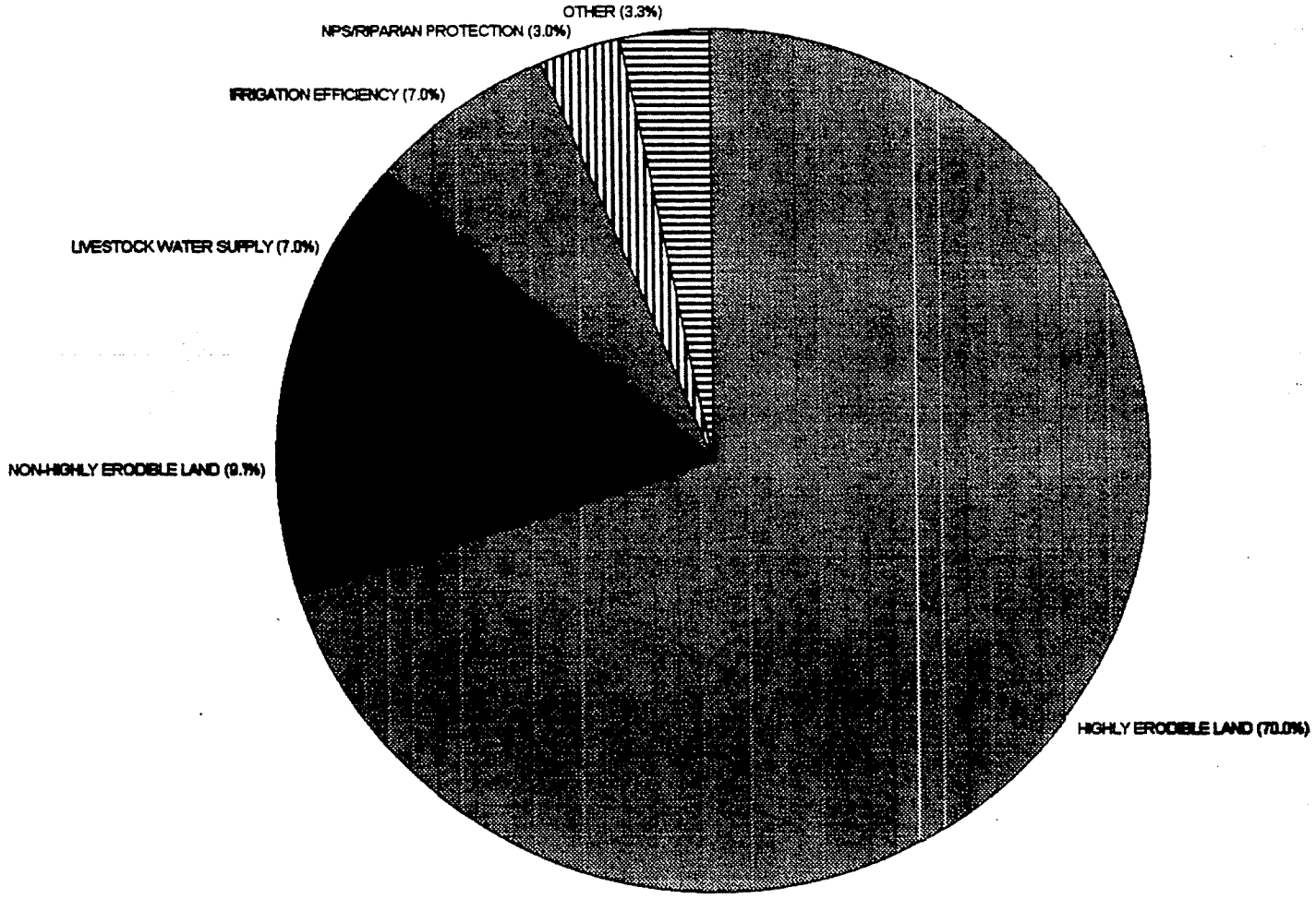
KANSAS



STATE CONSERVATION COMMISSION
OCTOBER 1993

FY 1993 WR COST-SHARE PROGRAM

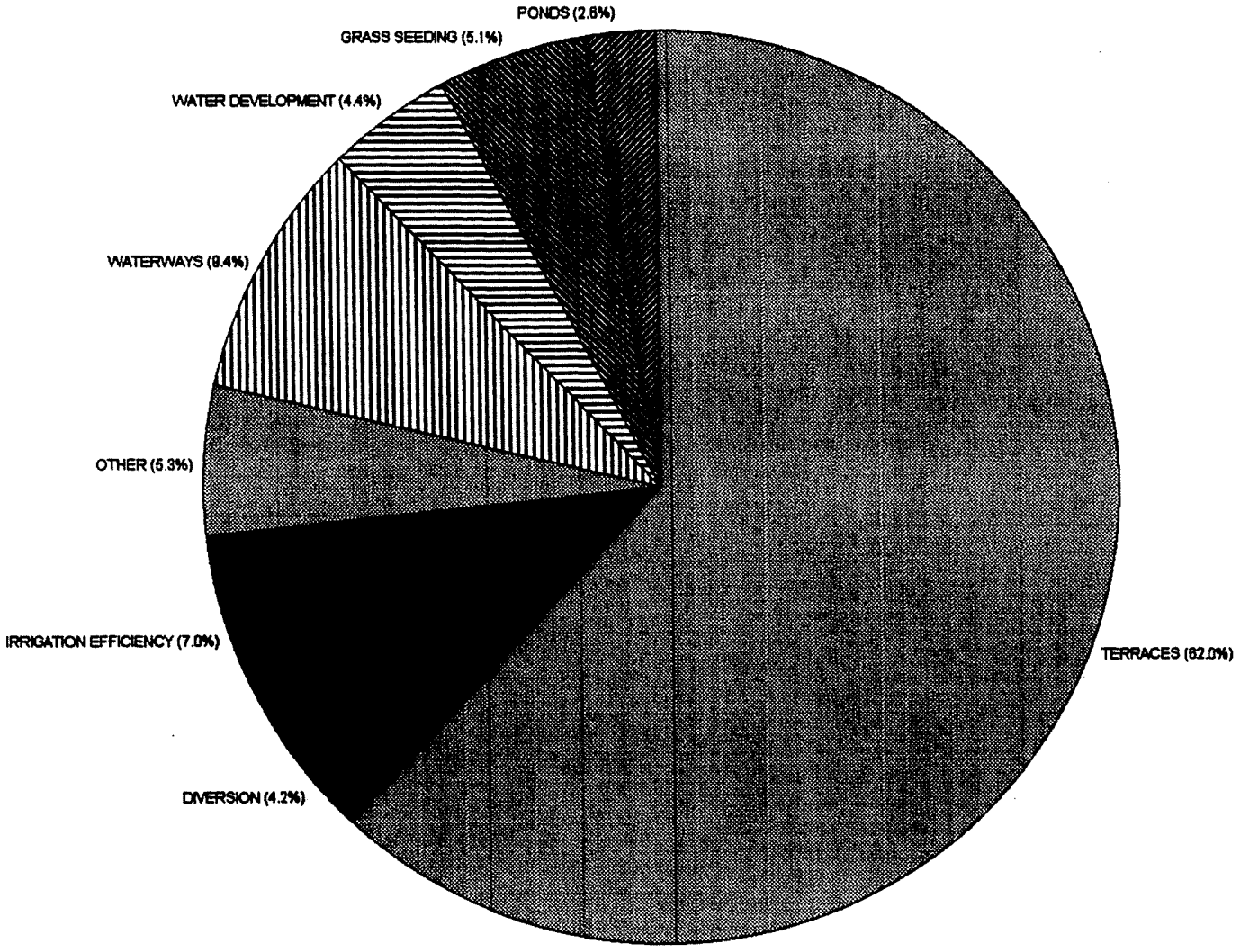
FUNDS PAID BY PROJECT TYPE



STATE CONSERVATION COMMISSION OCTOBER, 1993

FY 1993 WR COST-SHARE PROGRAM

FUNDS PAID BY PRACTICE



STATE CONSERVATION COMMISSION OCTOBER, 1993

STATE CONSERVATION COMMISSION
PROGRAM ACTIVITIES BY BASIN FOR FY 1993 APPROPRIATION

PROGRAM: STATE ASSISTANCE FOR WATERSHED DAM CONSTRUCTION

PROGRAM EXPLANATION: State funds for cost-share assistance for the construction of flood detention and/or grade stabilization structures in watershed districts or other special purpose districts.

APPROPRIATION: $1,624,652 including FY 1992 reappropriation of $218,837.

SUMMARY OF CONTRACTS BY BASIN:

Basin	Number of Contracts	Number of Districts	Drainage Acres	Estimated Total Cost	State Cost-Share	Contracts Completed	Contracts Encumbered
Kansas-Lower Republican	13	6	6,109	$1,039,991	$ 518,181	1	12
Lower Arkansas	1	1	1,120	107,000	65,013	0	1
Marais des Cygnes	3	2	1,810	184,319	121,631	0	3
Missouri (New)	4	3	797	212,080	141,970	1	3
(Supplemental)	2	1		20,954	14,668	2	0
Neosho	2	2	705	128,615	89,032	0	2
Upper Arkansas	1	1	10,240	185,000	120,000	0	1
TOTAL	26	16	20,781	$1,887,959	$1,070,495	4	22
Reappropriated to FY 1994					405,287		
Allocated to Watershed Planning (see note below)					148,870		
TOTAL					$1,624,652		

New contracts: a. Funded..... 24
b. Completed as of June 30, 1993..... 2
c. Encumbered for completion in FY 1994..... 22

Supplemental contracts: a. Funded..... 2
b. Completed..... 2

NOTE: A proviso in the FY 1993 appropriation bill authorized the expenditure up to $150,000 for Watershed Planning activities from the State Assistance for Watershed Dam Construction funds.

STATE CONSERVATION COMMISSION
PROGRAM ACTIVITIES BY BASIN FOR FY 1993 APPROPRIATION

14-11

PROGRAM: WATERSHED PLANNING

PROGRAM EXPLANATION: State funds for preliminary planning contracts with consulting engineering firms for engineering services and environmental assessments. The information is provided to the Soil Conservation Service for the planning process of PL 566 flood control projects in priority watershed districts. Federal funds for the PL 566 flood control projects in Kansas amounted to $4,100,000 for federal FY 1993.

APPROPRIATION: A proviso in the FY 1993 appropriation bill authorized the expenditure up to $150,000 of the State Assistance for Watershed Dam Construction funds for Watershed Planning activities.

SUMMARY OF CONTRACTS BY BASIN:

Basin	Location of Project	Purpose of Contract	Contract Amount	Comments
Kansas Lower Republican	Delaware Watershed Joint District No. 10 Cedar Creek Sub-Watershed	Engineering surveys for federal P.L. 566 planning process.	$ 33,838	Completed
	Nemaha-Brown Watershed Joint District No. 7	Topographical maps for P.L. 566 sites.	$ 1,675	Completed
	Upper Black Vermillion Watershed Joint District No. 37	Topographical maps for P.L. 566 sites.	$ 4,377	Completed
Marais des Cygnes	Marmaton Watershed Joint District No. 102	Engineering surveys for federal P.L. 566 planning process.	$ 64,500	Nearly complete
	Marmaton Watershed Joint District No. 102	District base maps for P.L. 566 planning process.	$ 10,100	Completed
Neosho	South Fork Watershed Joint District No. 76	Continuation of study of the effects of flood control dam construction on the Neosho Madtom, an endangered species.	$ 10,980	Second year of the study.
Smoky Hill-Saline	Lyon Creek Watershed Joint District No. 76	Expand original topographical maps.	$ 20,000	Completed
Verdigris	Otter Creek Watershed Joint District No. 83	Base maps for P.L. 566 planning process.	$ 3,400	Completed
TOTAL EXPENDITURES:			$148,870	

ontracts: a. Funded..... 8
b. Completed..... 6
c. Encumbered for completion in FY 1994..... 2

STATE CONSERVATION COMMISSION
PROGRAM ACTIVITIES BY BASIN FOR FY 1993 APPROPRIATION

14-12

PROGRAM: MULTIPURPOSE SMALL LAKES

PROGRAM EXPLANATION: State assistance for construction or renovation of a structure with flood control and water supply and/or recreation. A Local Non-Point Source Pollution Management Plan is required for the drainage area. A sponsor may be (1) any political subdivision of the state which has the power of taxation and the right of eminent domain; (2) any public wholesale water supply district; or (3) any rural water district.

APPROPRIATION: $1,724,512 including reappropriation of $121,543 from FY 1992.

SUMMARY OF PROJECT ACTIVITY BY BASIN:

Basin	Project Name	Purpose	Amount	Comments
RESERVOIR CONSTRUCTION - $1,357,265				
Kansas-Lower Republican	Banner Creek Lake (Jackson County)	Water Supply Storage	$ 396,969	Soil Conservation Service P.L. 566 project scheduled for construction in 1994. Funds under contract.
Kansas-Lower Republican	Mill Creek Reservoir (Wabaunsee County)	Flood control and water supply storage	$ 460,296	Under construction. Funds under contract.
Marais des Cygnes	Bone Creek Reservoir	Supplement for state owned water storage	$ 500,000	Project funded in FY 1991. Construction planned for 1994. Total funds appropriated - $2,900,000. All funds are under contract.
Sub-Total Construction			$1,357,262	
NON-POINT SOURCE POLLUTION CONTROL - $367,247				
Kansas-Lower Republican	Mill Creek Watershed Joint District No. 85	Sediment control, structures above reservoir	$ 45,080	Contract encumbered for completion in FY 1994.
Missouri	Pony Creek (Sabetha) Reservoir	Land treatment above reservoir	$ 84,679	Contracts encumbered for completion in FY 1994.
MPSL - NPS funds reappropriated to FY 1994			$ 237,488	
Sub-Total - Non-Point Source Pollution			$ 367,247	
OTAL Available			$1,724,512	

STATE CONSERVATION COMMISSION
PROGRAM ACTIVITIES BY BASIN FOR FY 1993 APPLICATION

PROGRAM: NON-POINT SOURCE POLLUTION CONTROL FUND

PROGRAM EXPLANATION: The NPS Pollution Control Fund provides state assistance through the 105 County Conservation Districts to implement a comprehensive program for the protection and/or restoration of surface and ground water quality.

SUMMARY OF LOCAL NPS MANAGEMENT PLANS AND PROJECT WORK PLANS BY BASIN:

Basin	Management Plan Submitted by:	Project Work Plan Title	Location	Expended and Encumbered	Accomplishments
Cimarron River Basin	Kiowa County Conservation District	1. Riparian Protection Project	Kiowa County	$ 21,511	Three wells and 11 tanks put in, 10,180 trees planted, 42,300 LF of weed barrier installed, and funds encumbered for one site that is near completion.
		2. Information & Education	Kiowa County	$ 400	Two newsletters and a range forage livestock tour given.
BASIN TOTAL				$ 21,911	
Kansas Lower Republican River Basin	Shawnee County Conservation District	1. Technical Assistance and Information and Education	Shawnee County	$ 26,627	Full-time Coordinator put together newsletters, did talks at schools and to civic groups, did presentations, and had booths at trade shows.
		2. Livestock Waste Systems	Shawnee County	$ 14,000	One application received and encumbered.
		3. Bank & Slope Stabilization	Shawnee County	$ 18,999	Four applications received and encumbered.
	Clay County Conservation District	1. Information & Education	Clay County	$ 1,142	Ten articles published, several radio stories and made well plugging display.
		2. Abandoned Water Well Plugging	Clay County	$ 798	Six applications, 2 plugged, and 4 encumbered.
		3. Livestock Waste Systems	Clay County	$ 17,686	Six final designs completed with permit applications sent to KDHE, 1 design in final stage, 1 cancelled after design was completed, 11 other contacts with landowner made with follow-up continuing. Completed designs will control 1,357 cubic feet of animal waste per day.

Basin	Management Plan Submitted by:	Project Work Plan Title	Location	Expended and Encumbered	Accomplishments
	Jewell County Conservation District	1. Nutrient and Pesticide Management	Jewell County	$ 16,444	Nitirification inhibitor test plot, crop consulting, and service for management plans. Thirty-one producers participated on 3,065.8 irrigated acres and 303.1 dryland acres.
		2. Abandoned Water Well Plugging	Jewell County	$ 631	Five plugged and 2 encumbered.
		3. Technical Assistance	Jewell County	$ 5,088	Part-time Coordinator, 74% of farmstead residents visited personally by phone or home visit, others received personal letters, took inventory of water wells, did water supply sampling, sent out 225 newsletters and published 3 articles.
BASIN TOTAL				$101,416	
Lower Arkansas River Basin	Equus Beds Water Quality Association	1. Technical Assistance and Education and Information	Harvey Reno County Sedgwick County McPherson County	$ 48,676	Full-time Coordinator, 2 slide presentations completed, 2 in development, made display boards, bought 4 soil probes which were used by 26 landowners, demonstration videos and slide shows reached 4,360 people, distributed information items i.e. brochures, fact sheets, etc., put on in-depth water clinics, and technical assistance given to about 600 landowners with water wells.
		2. Abandoned Water Well Plugging	Harvey County Reno County Sedgwick County McPherson County	$ 2,732	Six demonstrations with 184 people attending, 9 contracts encumbered and 13 wells plugged.
	Harper County Conservation District	1. Technical Assistance and Information and Education	Harper County	$ 2,408	Part-time Coordinator and published a newsletter.
		2. Critical Area Treatment	Harper County	$ 14,000	Cost-share program set up and implemented.
BASIN TOTAL				$ 67,816	

Basin	Management Plan Submitted by:	Project Work Plan Title	Location	Expended and Encumbered	Accomplishments
Marais des Cygnes River Basin	Miami County Conservation District	1. Soil Testing Incentive	Miami County	$ 582	Collected and tested 97 samples and started landowners on proper record keeping.
		2. Technical Assistance and Information and Education	Miami County	$ 10,370	Part-time Coordinator, several articles, presentations, illegal dump site information program, Downing board display, newsletter, coordinated clean up of two illegal dump sites, calendar developed to be printed soon.
BASIN TOTAL				$ 10,952	
Missouri River Basin	Brown County	1. Land Treatment (MPSL)	Brown County	$ 1,117	
	Nemaha County	1. Land Treatment (MPSL)	Nemaha County	$ 437	
BASIN TOTAL				$ 1,555	
Smoky Hill-Saline River Basin	Dickinson County Conservation District	1. Technical Assistance	Drainage Area of Herington Reservoir	$ 20,623	Part-time Coordinator, assisted with development of livestock waste systems, completed NPS plans for operators, assisted with cost-share applications, and wrote articles - 22 published in 5 newspapers or newsletters.
		2. Livestock Waste Systems	Drainage Area of Herington Reservoir	$ 35,347	Three structures partially constructed, 1 completed, 1 approved but not begun. Two other designed - sent to KDHE, and 4 in process of being designed.
		3. Nutrient and Pesticide Management	Drainage Area of Herington Reservoir	$ 4,520	All operators contacted about program, 30 signed up, cost-share paid to 27 operators on 1,817 acres, and 6 newspaper and 2 radio stories done.
		4. Vegetative Planting	Drainage Area of Herington Reservoir	$ 2,020	Forty-one acres of plantings done, 4.1 acre filter strip made, and another designed but not built.

Basin	Management Plan Submitted by:	Project Work Plan Title	Location	Expended and Encumbered	Accomplishments
		5. Structural Land Treatment	Drainage Area of Herington Reservoir	$ 12,000	Built 31,638 LF of gradient terraces and 2.58 acres of grassed waterways.
		6. Abandoned Water Well Plugging	Drainage Area of Herington Reservoir	$ 0	Well plugging demonstration, placed focus on locating wells, and 3 were located by demonstration participants.
	Saline County Conservation District	1. Technical Assistance and Information and Education	Saline County	$ 15,284	Part-time Coordinator handled I & E, did one half hour radio program, 2 presentations at meetings, 2 field days, and 1 newsletter.
		2. Abandoned Water Well Plugging	Saline County	$ 4,590	Twenty-nine applications, 13 plugged, and 16 encumbered.
		3. Livestock Waste Systems	Saline County	$127,043	Nine applications received, all encumbered, 2 approved by KHDE, 1 in review process and 6 in planning process.
		4. Riparian Corridor Mngmt.	Saline County	$ 13,964	One project in design stage.
	Ellsworth County Conservation District	1. Technical Assistance Information and Education	Ellsworth County	$ 11,181	Part-time Coordinator hired to assist with programs and prepare newsletters.
		2. Abandoned Water Well Plugging	Ellsworth County	$ 2,551	Nine plugged and 17 encumbered.
		3. Nutrient and Pesticide	Ellsworth County	$ 113	Two participants.
BASIN TOTAL				$249,237	
Solomon River Basin	Mitchell County Conservation District	1. Information & Education, Assessment, Technical Assistance	Mitchell County H.U. 10260015-020	$ 14,034	Part-time Coordinator, 3 newsletters to 180 people, public meetings, landowner contacts, water monitor installed in Walnut Creek in July 1992, removed in October. Samples taken 3 times. Hand dipped samples done in February and June.
BASIN TOTAL				$ 14,034	

Basin	Management Plan Submitted by:	Project Work Plan Title	Location	Expended and Encumbered	Accomplishments
Upper Arkansas River Basin	Finney County Conservation District	1. Technical Assistance and Information and Education	Finney County	$ 12,375	Part-time Coordinator, presentations, newsletters, articles, trade shows, fliers and brochures.
		2. Abandoned Water Well Plugging	Finney County	$ 4,392	Thirty-eight contracts, 28 plugged, 8 encumbered, 2 cancelled, FY 92 encumbered wells - 12 encumbered again, 3 plugged and 1 cancelled.
	Gray County Conservation District	1. Technical Assistance and Information and Education	Gray County	$ 3,739	Part-time Coordinator, fair booth, slide presentations, newspaper articles, and trade shows.
		2. Abandoned Water Well Plugging	Gray County	$ 2,507	Well plugging demonstration, 21 applications, 13 completed and 8 encumbered.
	Kearny County Conservation District	1. Technical Assistance and Information and Education	Kearny County	$ 14,344	Part-time Coordinator, preparing newsletters, giving well plugging demonstrations and presentations, preparing bulletin boards, posters and bumper sticker contests.
		2. Abandoned Water Well Plugging	Kearny County	$ 4,235	Forty-six applications submitted, 19 plugged and 27 encumbered.
BASIN TOTAL				$ 41,591	
Statewide	State Conservation Commission	1. Technical Assistance for Planning		$ 53,837	Assistance to conservation districts in developing management and Project Work Plans.
		2. Soil Conservation Service-Engineering-Animal Waste Systems		$ 50,000	Engineering plans for 20 animal waste control systems to implement Project Work Plans.
STATE TOTAL				$103,837	
TOTAL Expenditures and Encumbrances				$612,346	

SUMMARY:

Local NPS Pollution Management Plans:
- Counties with approved plans for FY 94.....41
- In review process.....3
- In planning process.....36

SUMMARY:

Project Work Plans:
- Approved in FY 93.....45
- Allocation in FY 93.....$900,258.64
- Amount paid and encumbered in FY 93.....$507,209.25

NPS Contracts by the State Conservation Commission:
- Approved in FY 93.....3
- Contract amount approved in FY 93.....$103,836.75
- Contracts completed in FY 93.....2
- Cost of contracts completed in FY 93.....$70,503.75
- Contacts encumbered for completion in FY 94.....1

Abandoned Well Cost Share Program
- Counties participating in FY 93.....9
- Wells plugged in FY 93.....102
- Contracts encumbered to FY 1994.....105
- Demonstration programs conducted in FY 93.....5
- Amount paid and encumbered in FY 93.....$22,690.02
- Cost of 102 wells plugged in FY 93.....$9,560.16
- Average cost per plugged well in FY 1993.....$93.73

Soil Testing Incentives
- Counties participating in FY 93.....1
- Contract amount.....$582
- Number of samples collected for record keeping.....97

Nutrient and Pesticide Management
- Counties participating in FY 93.....4
- Contract amount.....$21,658.35
- Number of producers participating in program.....63
- Amount of acres covered in the program.....5,186

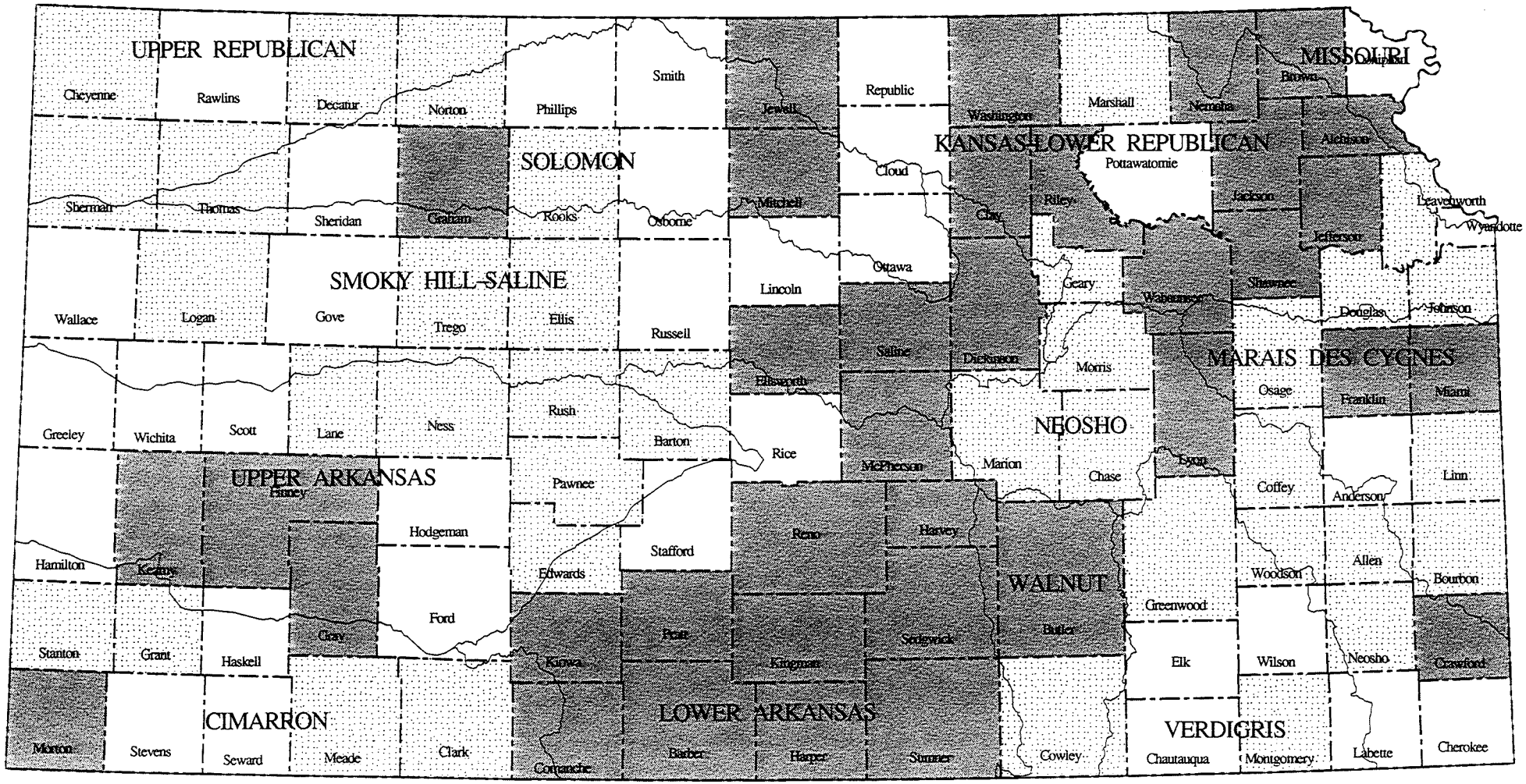
Riparian Protection Project
- Counties participating in FY 93.....3
- Contract amount.....$47,474.74
- Trees planted.....10,180
- LF of weed barrier installed.....42,300
- Number of wells installed.....3
- Number of tanks installed.....11
- LF of gradient terraces built.....31,638
- Acres of grassed waterways completed.....2.58
- Projects in design stages.....1

Livestock Waste Systems
- Counties participating in FY 93.....4
- Contract amount.....$194,076.07
- Structures completed.....1
- Structures in progress.....3
- Structures in planning stages.....35

Vegetative Planting
- Counties participating in FY 93.....1
- Contract amount.....$2,020
- Acres of planting completed.....41
- Acres of filter strip made.....4.1
- Planned plantings not begun.....1

Technical Assistance/Information and Education
- Counties participating in FY 93.....14
- Amount paid and encumbered for FY 93.....$186,291.06

Kansas
Non – Point Source Pollution Planning Status
August 1, 1993



Approved Management Plan Developing Management Plan

STATE CONSERVATION COMMISSION
PROGRAM ACTIVITIES BY BASIN FOR FY 1993 APPROPRIATION

PROGRAM: BENEFIT AREA PROGRAM

PROGRAM EXPLANATION: The program provides a method for public corporations, namely watershed districts, to be reimbursed for specific expenses when more than 20 percent of the benefits of a flood control project are outside the taxing entities' boundaries.

SUMMARY OF PROJECT ACTIVITY BY BASIN:

Basin	Location of Project	Expenditures	Comments
Upper Arkansas	Wet Walnut Watershed Joint District No. 58 (Barton, Rush, Ness, and Lane Counties)	$172,534	Contract completed.

ATE CONSERVATION COMMISSION
ROGRAM ACTIVITIES BY BASIN FOR FY 1993 APPROPRIATION

PROGRAM: STATE AID TO CONSERVATION DISTRICTS

PROGRAM EXPLANATION: The program, normally funded from the State General Fund, provides state funds on a matching basin for conservation district operation expenditures. The conservation districts receive funds from the County Commission and the state matches up to $7,500 per district.

SUMMARY OF PROJECT ACTIVITY BY BASIN:

Basin	Expenditures
Cimarron	$ 65,645
Kansas-Lower Republican	124,410
Lower Arkansas	94,447
Marais des Cygnes	52,182
Missouri	23,477
Neosho	70,130
Smoky-Hill Saline	105,490
Solomon	59,279
Upper Arkansas	86,662
Upper Republican	36,498
Verdigris	43,013
Walnut	15,467
TOTAL	$776,700

Testimony of
Stephen A. Hurst, Director
Kansas Water Office
Before the
House Energy and Natural Resources Committee

Re: Interaction of the State Water Plan and the Programs of the State Conservation Commission

November 17, 1993

Thank you, Mr. Chairman. I am Stephen A. Hurst, Director of the Kansas Water Office. My agency is charged with the development of the *Kansas Water Plan*; the blueprint for state policy and programs for the management and protection of the water resources of Kansas. The *Kansas Water Plan* has two main components: Policy Sub-sections and Basin Plans. The Policy Sub-sections examine policy options and makes recommendations for addressing topical water resource issues, including plans to implement the policies through state programs. The Basin Plans reference these state programs to issues specific to each of the 12 river basins that we use for management purposes.

The dominance of these issues at the local level, particularly in rural settings, requires a coordinated effort to focus state and federal resources into local implementation. The model which is used most often by the *Kansas Water Plan* are the 105 Conservation Districts which are the local points of program implementation for the State Conservation Commission. Throughout the *Kansas Water Plan*, issues such as water quality and non-point source pollution control, riparian protection, rural flooding, moisture conservation, public water supply and watershed planning refer to the programs of the State Conservation Commission for implementation direction. While there are a few naysayers out there who state that planning efforts and expenditures yield nothing in the way of tangible benefits, the programs

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of the Commission fly in the face of that assertion. Implementation of the *Kansas Water Plan* is most tangible, with "on the ground" projects in place to deal with any of the issues previously mentioned. The programs of the Commission receiving State Water Plan Funds include:

1. Water Resources Cost-Share Program: currently focused on final conservation compliance under the 1985 Farm Bill, but ready to transition toward increased water efficiency practices after 1995.
2. Watershed Dam Construction Assistance Program: funding priority dams and grade stabilization structures within watershed districts across the state to reduce flooding and provide increased water quality benefits through reduced sediment and nutrient runoff.
3. Multipurpose Small Lakes Program: providing opportunities to place small scale structures in regions of water supply, flood control and recreation needs. Nine such structures have received state funding since 1987. These lakes will be incorporated in basin strategies for future regional water supply, as appropriate.
4. Non-point Source Pollution Control Program: providing funds to develop and implement comprehensive water quality and pollution management plans at the local level through project work plans including bank stabilization, abandoned well plugging, animal waste systems and land treatment to curtail runoff.
5. Riparian and Wetland Protection Program: a FY 1994 initiative to implement plans by conservation districts to protect or restore riparian or wetland areas within counties.
6. Watershed Planning Assistance Program: providing funds to watershed districts to

facilitate watershed plans dealing with flooding, sedimentation or environmental issues. In each of these programs, some aspect of the *Kansas Water Plan* is implemented.

The Kansas Water Office and the State Conservation Commission enjoy a close working relationship, working together on plan development and implementation through participation in technical support committees, basin advisory committee support, area coordination team participation and the water planning process and State Water Plan Fund budgeting process.

I envision three areas of emphasis for these programs through the revisions of the 12 Basin Plans which the Kansas Water Office is undertaking. First, further targeting of efforts directed at priority water resources of value and vulnerability. Second, integration of the benefits accruing to the basin as a whole through the comprehensive implementation of these programs within the basin. Finally, ongoing coordination of these programs with other state programs to be incorporated in comprehensive management plans to protect the water resources of the state. As current issues of non-point pollution, wetlands, this summer's floods and water supply continue to arise, the programs of the State Conservation Commission will continue to be utilized through the State Water Planning process to address those issues.

Thank you for the opportunity to speak before you on this issue.

Statement
of the
Kansas Association of Conservation Districts
on
Hearings on Goals of the State Conservation Commission
and the
State Water Plan

Presented to
House Committee on Energy and Natural Resources
Topeka, Kansas
November 17, 1993

I am Richard G. Jones, Executive Director of the Kansas Association Conservation Districts.

The Association represents the 105 county conservation districts in Kansas. The Conservation Districts are a subdivision of state government and provide assistance to Kansas landowners and operators for the protection and improvement of the soil, water, plant and animal resources. Conservation Districts are governed by a five member board of supervisors made up of local farmers and ranchers who serve without compensation.

Conservation Districts are being ask, in some cases mandated, to carry out more and more programs that are directed at maintaining and/or improving out state's natural resources. Through the State Conservation Commission, Conservation Districts are assisting in carrying out the State Water Resources cost share program, the Clean Lakes program, the Nonpoint Source Pollution program, the Riparian and Wetlands Protection program. These programs a funded with State Water Plan funds that have been dedicated, by the State Legislature, to implementing the the State's natural resource needs as shown in the State Water Plan. The State Conservation Commission allocates a certain portion of the funds to each Conservation District, based on a priority of needs within the District, to carry out the programs within their District. The District then sets the priority of how the funds will be spent in their District. For example, a District with a large percentage of highly erodible land

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it designate that the funds they receive for the State Water Resour cost share program will only be used for waterway and terrace construction on land that is designated as highly erodible. They also work closely with the State Conservation Commission in setting priority for the Clean Lakes, the Nonpoint Source Pollution, and the Riparian and Wetlands programs that will be implemented in their District.

Add these programs to the federal mandates that they assist the U. S. Department of Agriculture in carrying out, through a Memorandum of Understanding between the District and the Department, which include the Agricultural Stabilization and Conservation Service cost share program for farmers to install conservation practices, the Soil Conservation Service's Great Plains Conservation program, the 1985 and 1990 Food Security Act requiring farmers to control erosion on highly erodible lands through compliance plans or they would forfeit any benefits from USDA, and the Conservation Reserve program from the same federal legislation. These activities do not include the everyday assistance to local people in solving resource conservation problems. The Kansas Conservation Districts are and have been carrying out these programs without any increase in operating or administrative funds. We cannot keep giving them jobs to do without giving them adequate operating funds to efficiently carry out their responsibilities.

Conservation District Supervisors in carrying out the business of their District volunteer over 25,000 hours of service to the state each year. (12 meetings/year X 4 hours per meeting X 525 supervisors) Many Districts have resorted to selling grass seed, trees for windbreaks, drip irrigation equipment, etc, in order to meet their operational and and administrative needs. State Water Plan Funds are used for cost sharing with farmers and ranchers and are not used for operation or administration of the District.

Since they are carrying out state and federal programs directed at protecting our natural resources for the use of all citizens, they should be adequately funded to most effectively carry out their duties.

Our Association (KACD) and the State Conservation Commission (SCC) have recognized how important it is for Conservation Districts to be efficient and effective in carrying out their responsibilities. This year a joint KACD/SCC District Operations Task Force was established to study better ways for Districts to operate with all the programs they have to direct. The Task Force was made up of District Supervisors from across the state, advisors from District employees and from the Soil Conservation Service and with staff help from the Commission and KACD. The Task Force divided itself into 3 subcommittees. One was to look into the State Conservation District Law for bringing it up to date with current state and local needs, another was to study or investigate possible ways of funding for District operations, administration and for conservation programs, and another subcommittee was to study how Districts can be more efficient through changes in management. The Task Force recommendations will be brought before all the Districts at their annual meeting next week. (November 23, 1993) At the business session of the KACD Annual Convention each District will have the opportunity to hear the recommendations and to vote on any changes they feel will improve their operations as a District.

We believe that the State Water Plan Funds are being properly directed as originally designated by the State Legislature for the protection and improvement of our state's natural resources. Without this designated source of funding for resource development, our soil and water resources would continue to deteriorate and would have a major negative impact on our state's agricultural economy.

HOUSE COMMITTEE ON ENERGY AND NATURAL RESOURCES

Testimony offered by
James N. Habiger, State Conservationist
USDA Soil Conservation Service
Salina, Kansas

In assessing the conservation work completed in our great state, it is obvious that Kansas farmers and ranchers have recognized the resource problems they face, and they have asked for our help. To illustrate this point I would like to share with you that according to our records -

* Over 332,400 miles of terraces have been built on Kansas cropland either to slow soil erosion or to conserve moisture. Laid end-to-end we could circle the Earth over 13 times with Kansas' terraces. No other state even approaches us in terracing cropland. Farmers build 3,000 to 6,000 miles each year.

* Over 302,500 acres of grassed waterways have been shaped and seeded to protect crop fields from gully erosion and to serve as terrace outlets. That is equivalent to almost 473 square miles or an area about the size of Douglas County.

* Since 1935, we have helped landusers build over 130,000 ponds for livestock and domestic use, improving rangelands, fire protection, irrigation, flood control, fish and wildlife production and enhancement, and recreation.

Most Kansas farmers and ranchers possess a strong conservation ethic shown by the figures I just shared with you. But there is more to be told about soil and water conservation work in Kansas.

With the enactment of the conservation provisions of the 1985 and 1990 Farm Bills came conservation compliance. Conservation compliance affects over 106,000 Kansas producers on nearly 12.8 million acres, or roughly 44 percent of the state's crop acres.

As a result of this landmark legislation farmers have responded greatly. Since 1987, over 26,542 miles of terraces have been built, 38,412 acres of grassed waterways constructed, and almost 9 million acres with increased levels of crop residue. Many other conservation practices have been applied as well.

As of July 1, over 84 percent of the acres subject to conservation compliance had approved conservation systems applied. That's over 10 million acres. We're confident that producers are working hard to meet the December 31, 1994, compliance deadline. Unfortunately, the weather has hindered their progress this year throughout much of the state.

The bottom line to this spreadsheet is that we estimate that more than 100 million tons of our precious topsoil have been saved - left in place - over the past seven years as the result of all reported conservation work on cropland, range and pasturelands. Millions more will be protected as the balance of producers complete their conservation compliance plans.

We realize the positive impacts this conservation work is having on water quality. While we cannot quantitatively show these benefits we do know two things - that sediment is still the number one water pollutant by volume, and that many nutrients and pesticides attach onto soil particles and are carried into our watercourses.

Over time, monitoring activities carried out by KDHE, the U.S. Geological Survey and others will give us a more accurate reflection of these conservation actions.

Conservation Reserve Program
Kansas farmers have used the Conservation Reserve Program, or CRP, to treat soil erosion and water

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quality problems on their farms by enrolling more than 2.9 million acres in this program. Soil loss reduction averages more than 16 tons per acre per year on CRP permanent covers. This is included in the 100 million tons, I mentioned before, and it accounts for less than half the Food Security Act , or FSA, total tons saved.

Most of these acres were seeded to native grasses, and many landowners are looking for guidance as to what they can do to balance the economics to keep those acres in grass after their CRP contracts expire. They are well aware of the environmental implications of bringing highly erodible soils back into crop production.

Kansas farmers have successfully used other USDA programs to carry out needed conservation work and to protect our waters. The Great Plains Conservation Program, the PL-566 Small Watershed Protection Program, and special water quality projects are excellent examples.

The Great Plains Conservation Program

The Great Plains Conservation Program, or GPCP, is a long-term contracting arrangement administered by the SCS since 1956 to help farmers and ranchers apply needed conservation treatment on their entire farm or ranch. The GPCP establishes cost-share money for the life of the contract that extends from three to 10 years, and we provide the technical help for producers to implement their plans. Throughout its 37-year span, almost 8,200 contracts have been completed protecting nearly five million acres. Kansas receives about $1.6 million in GPCP funds each year.

Currently, Mitchell County, Kansas is involved in one of five national GPCP Water Quality Special Projects. To date, 46 contracts covering about 16,000 acres have been obligated to help the landusers in the Walnut/Mill Creek watersheds apply traditional, as well as new, conservation practices on all land uses to protect the waters in Lake Waconda.

These practices are nutrient and pesticide management. Contract holders track their fertilizer needs and application, and pesticides used. Fertilizer is applied based on soil fertility tests, and crops are scouted for weeds and insects before determining pesticide use. Our district conservationist, Mr. Delmar Roberson, at Beloit, reports that far less fertilizer is being used than soil tests indicate are needed. This is a multi-agency effort meeting many coordinated objectives with stream and project monitoring.

Small Watershed Protection Program

The success of the PL-566 Small Watershed Protection Program is another example of the determination of Kansas farmers, ranchers, and communities to solve natural resource problems. Since its inception in 1954, PL-566 has allowed local people to assess their problems and organize as watershed districts to prevent upstream flooding, manage agricultural waters, create recreation opportunities, offer municipal and industrial water supply and enhance fish and wildlife development.

For PL-566 work, Kansas itself receives between $3-4 million each year. The state has 116 organized watershed districts, and through those districts, 720 dams and thousands of acres of upland land treatment have been completed. Besides protecting more than 5.7 million acres from flooding, providing safe, dependable water supplies and the other benefits I just mentioned, these structures are designed to store about 2,300 acre-feet of sediment each year. That equates to more than 5.5 million tons of sediment that is kept from our watercourses. What this means is that besides the conservation work on the slopes above these dams catching silt, the sediment and associated pollutants that escape are trapped to settle out in these retention structures. Many Kansans enjoy recreation days on these lakes.

If you will allow me to digress for one moment, early reports indicate that Kansas watershed dams operated as intended through this recent storm period. Only seven dams flowed through the emergency spillways and just one new structure sustained damage to the spillway. We are preparing a report on the positive impacts these dams had on the upstream flooding they averted.

Also, I would report briefly on our Emergency Watershed Protection program activities. We are working to assess damages and inform state and local entities of help we can offer.

ıter Quality Program
ı have addressed certain SCS-directed programs up to now, but there are other USDA water quality programs being used by producers that I should mention. Besides the state nonpoint source program, which Mr. Kern outlined, SCS provides technical help for ASCS's White Rock Water Quality Project in Smith and Jewell counties (the main tributary to Lovewell Reservoir), Walnut Creek Water Quality Project in Jefferson and Atchison counties, and Webster Creek Hydrologic Unit Area Project in Brown and Nemaha counties.

These projects will provide $710,000 in cost-share assistance to apply conservation practices impacting water quality. Additionally, SCS carries out its responsibilities for the ASCS Agricultural Conservation Program that provided about $5 million in cost-share money in 1992.

We are helping producers in the Johnson and Miami county areas above Hillsdale Lake through the Hillsdale Watershed Protection Project. This is a pilot project with several agencies working together to evaluate the resource problems and suggest alternatives to treat those problems from a broad perspective.

Residue Management
Kansas farmers have expressed their concern about a cooperative effort to promote crop residue management and its positive effects on water quality and soil erosion. A task force met in March 1992 to devise a strategy to build a coalition promoting this cause.

Six farmers from across the state sat on the task force, and they continue to offer guidance to a newly-formed Kansas Crop Residue Management Alliance. The Alliance is made up of farmers, agencies and agribusinesses who are initiating a comprehensive plan to inform people and market the benefits of this management practice. Without producer support, this effort would not have succeeded as it has to date.

I have concentrated most of my remarks on efforts to minimize soil erosion and improve water quality on cropland. I do not want to overlook the range management initiatives that have contributed to the overall success story in Kansas.

Range Management
Ranchers and stockmen are using state-of-the-art management techniques to improve their bottom line and their resource base. Practices such as early intensive stocking, rotational grazing, prescribed burning, brush controlling and livestock water developing have generated more profit while creating a healthier grass stand. Healthier stands increase the soil's water uptake which reduces runoff.

SCS also helps livestock producers in designing animal waste facilities. We have been averaging about 125-150 designs in past years.

SCS is working with the Kansas Department of Health and Environment and the State Conservation Commission to complete an animal waste site appraisal and companion evaluation form. This is a system that evaluates the physical features of the site, identifies the producer's operation and provides alternatives for water pollution control measures. It also includes a rating system to help prioritize agency workload. The underlying motive for this effort was to make standard the appraisal process for all agencies so producers are treated fairly across the state.

With the myriad of environmental programs and activities in the Ag community in recent years, SCS is seeking to be more responsive to customer needs. This has prompted us to rethink and revise our Field Office Technical Guide. This document serves as our foundation to provide planning and implementing to land use decision-makers. We are expanding our scope in this process to include not only the soil, but water, air, plants and animals.

Resource Management System
We realize that today a farmer or rancher may be required to keep track of several plans, such as a compliance plan, CRP plan, or an irrigation development plan. The list can go on. With this system we hope to address all those areas in one plan. It is called by several names - total resource management, ecosystem management, holistic management. We prefer to call it resource management system,

or RMS planning for now, but are looking for more customer-friendly terms that accurately describe the process. We are offering this help on a voluntary basis to interested producers.

The point here being, that if we were able to take this RMS planning process and assess a broad cross-section of our land today, I think we would find that many producers would meet or exceed the quality criteria set for each of the five resource areas - soil, water, air, plants and animals. In other words, Kansas farmers and ranchers have done and are doing a tremendous job in taking care of the resources with which they have been entrusted.

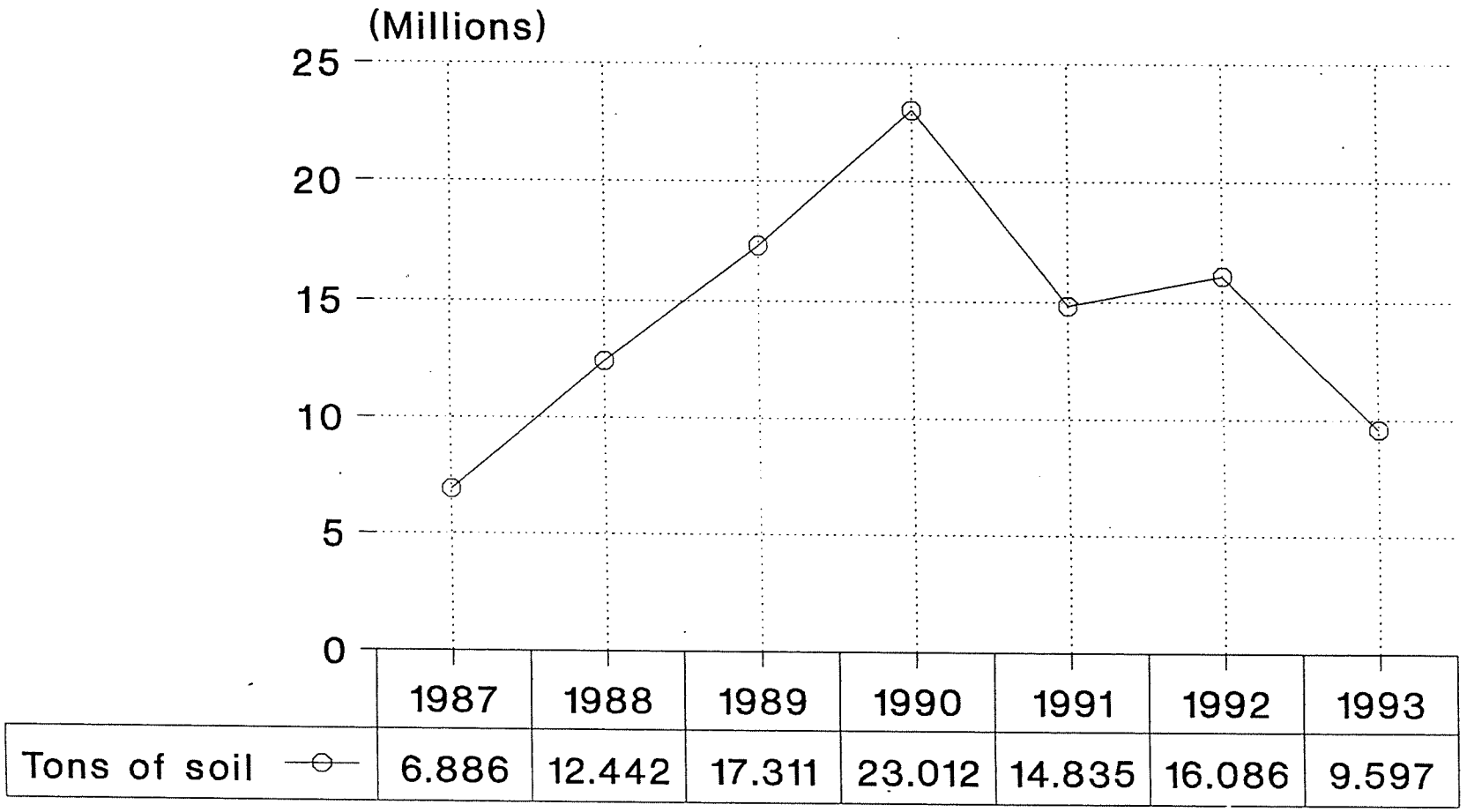
Conclusion

In order to carry out an effective voluntary water quality program, the most important ingredient is available technical assistance with an adequate delivery system to allow on-site specific treatment alternatives. The Soil Conservation Service provides this assistance through local conservation districts. The demand for this type of assistance is out there; however adequate staff is unavailable due to budget restraints. For example, there are hundreds of agricultural waste systems currently on a waiting list for technical assistance to implement treatment. This is only one example, but there are many others where landusers have an interest in land and water quality treatments. I urge a first level approach to clean water in this country is to recognize and fully address technical assistance needs.

My thought on legislation is that incentives will go much further than regulation. With the complexity of natural resource management on private lands, and also with the complexity of balancing the individual's livelihood versus sustaining the needed resources, it seems logical to reward good management rather than creating additional frustration, becoming entwined in red tape and the ensuing paper chase.

I hope you understand that I am not trying to gloss over the fact that we still have some serious resource problems to deal with, but I do feel strongly that Kansas agriculture, when informed and given the chance to respond - voluntarily - does so in a grand fashion!

Soil Saved in Kansas
FY 1987 - 1993



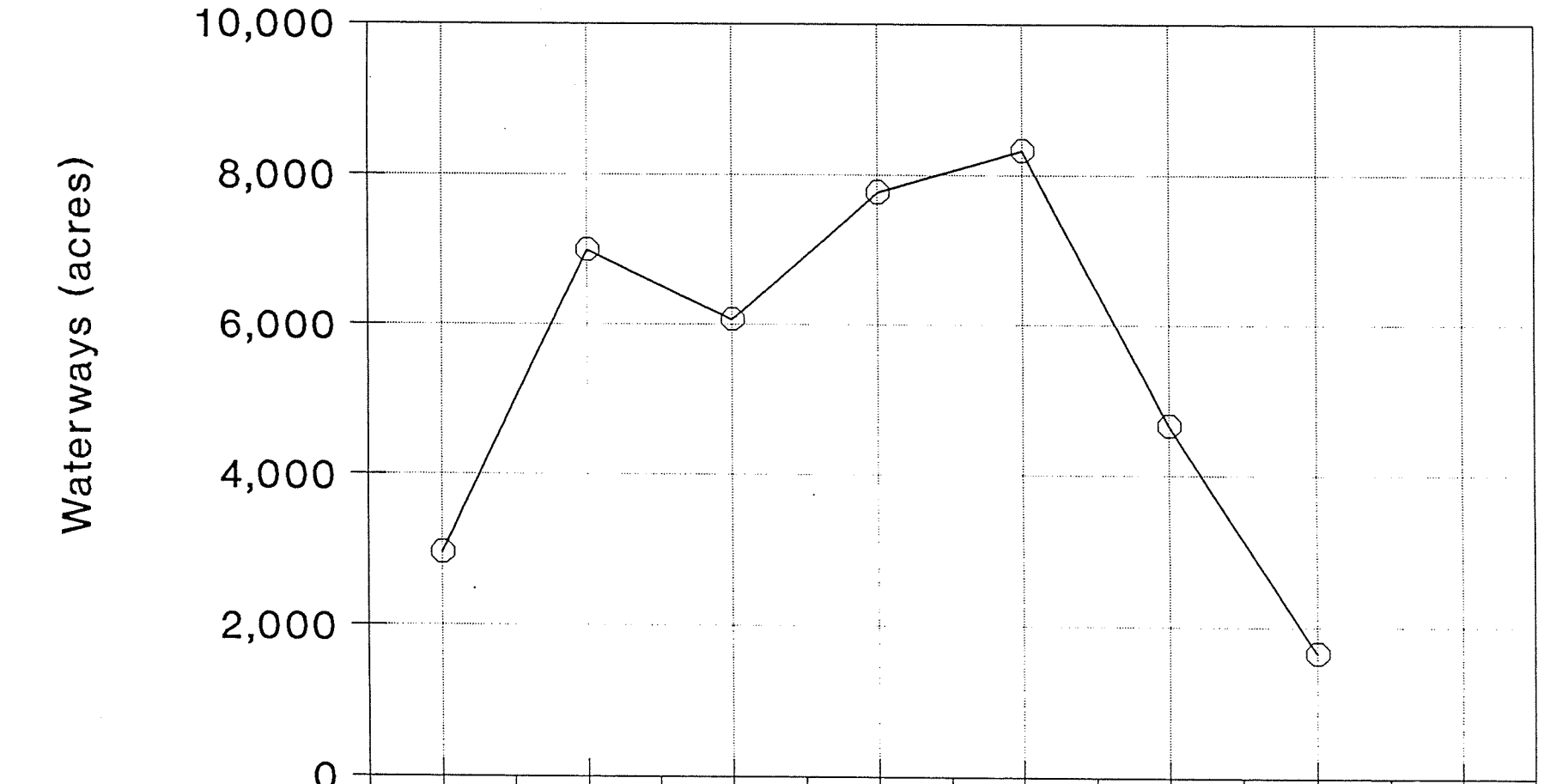
	1987	1988	1989	1990	1991	1992	1993
Tons of soil	6.886	12.442	17.311	23.012	14.835	16.086	9.597

Fiscal Year

Total = 100,168,844 Tons of soil

Prepared 8-6-93

Waterways Installed In Kansas
FY 1987 - 1993



	1987	1988	1989	1990	1991	1992	1993	1994
Waterways	2,958	7,002	6,059	7,767	8,319	4,657	1,650	

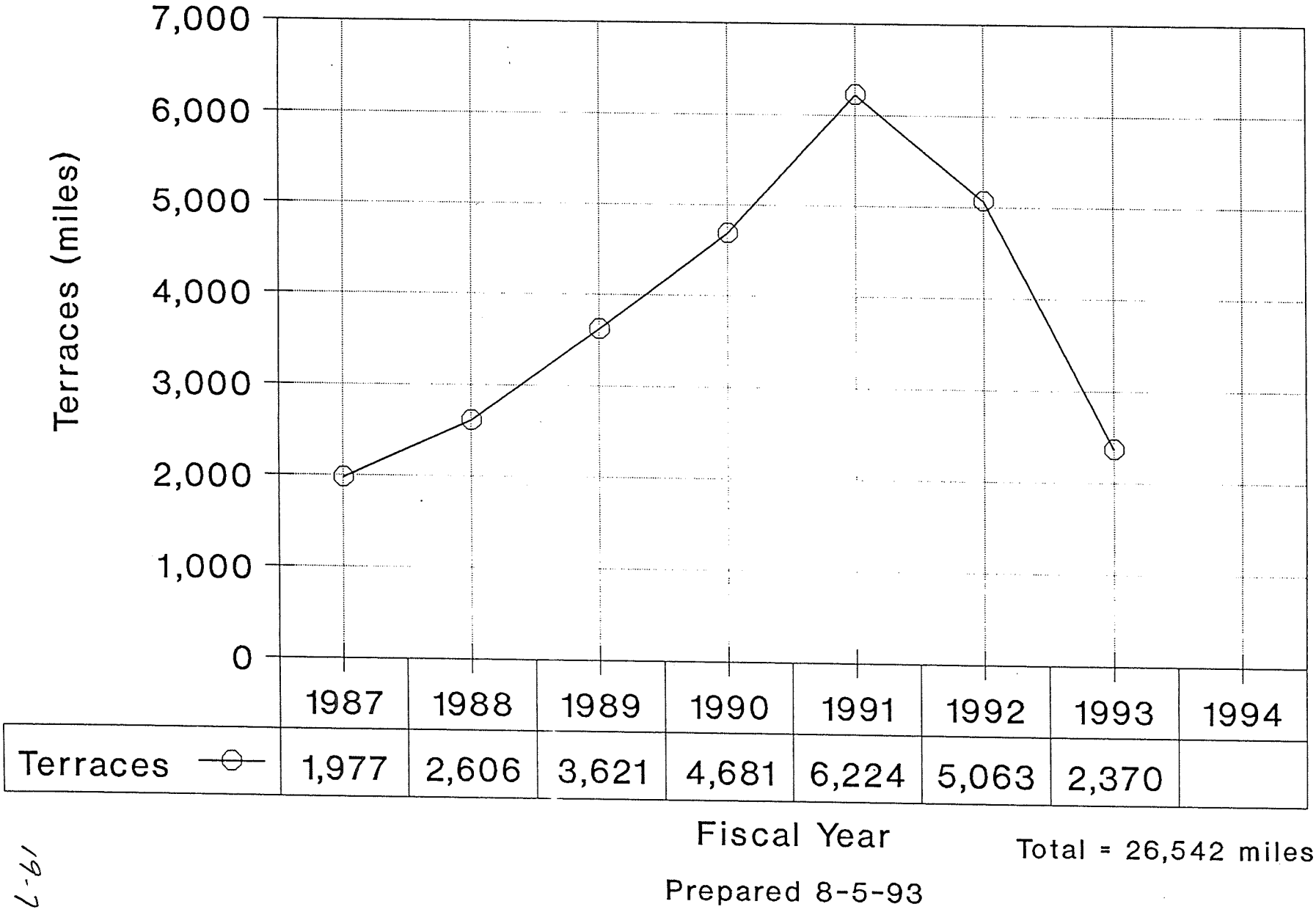
Fiscal Year

Total = 38,412 acres

Prepared 8-5-93

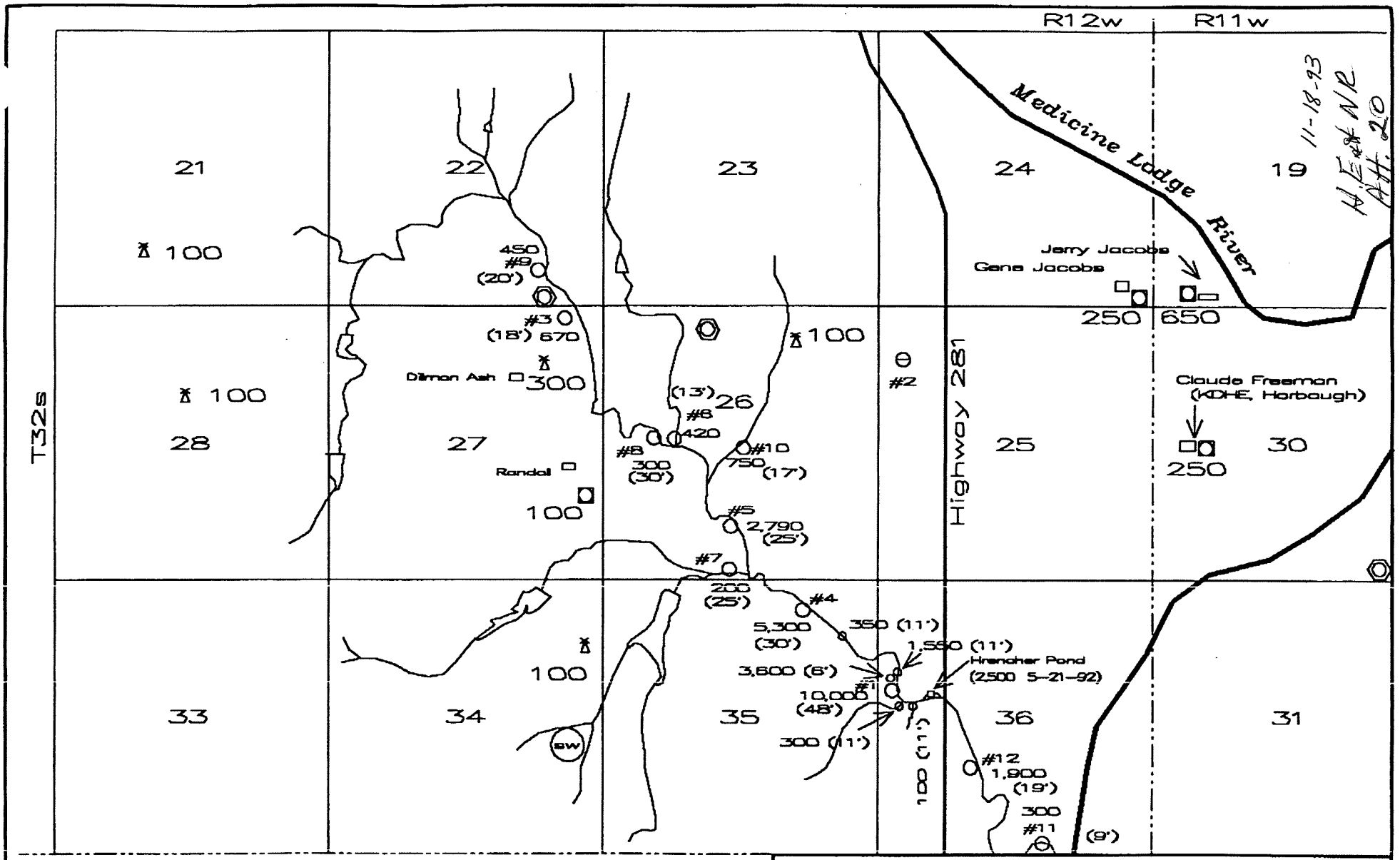
7-61

Terraces Installed In Kansas
FY 1987 - 1993



Total = 26,542 miles

Prepared 8-5-93



Windmill

Domestic Well

Core Hole

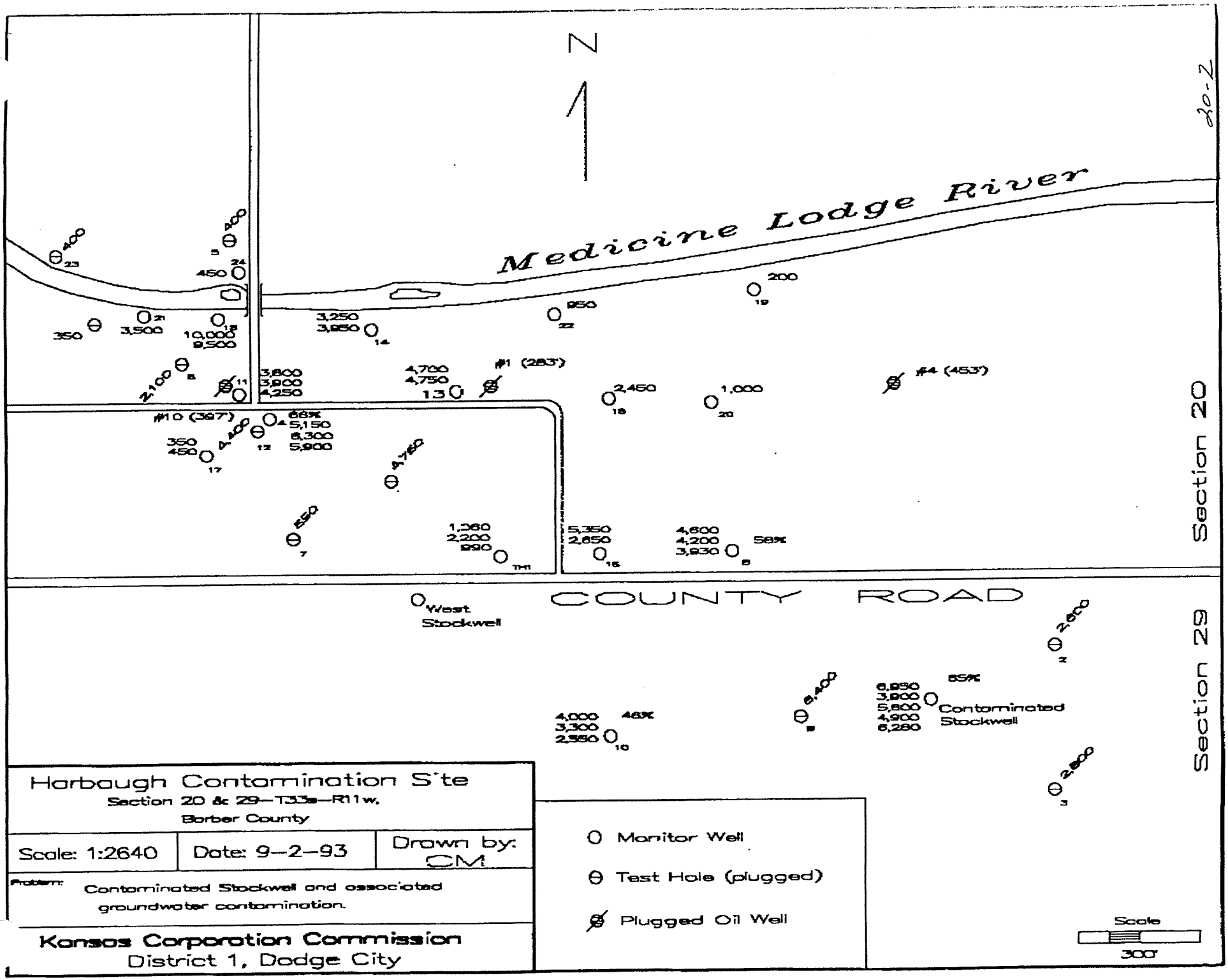
Monitor Well

Area 1
Barber County

Scale: 1:2640	Date: 9-2-93	Drawn by: CM

Problem: Groundwater investigation for Barber County local environmental group.

Kansas Corporation Commission
District 1, Dodge City



TESTIMONY
by
William R. Bryson

PRESENTED ON BEHALF
of the
KANSAS CORPORATION COMMISSION
Before
HOUSE ENERGY AND NATURAL RESOURCE COMMITTEE

November 18, 1993

Mr. Chairman, members of the Committee, I am William R. Bryson, Director of the Conservation Division of the Kansas Corporation Commission. I am happy to have the opportunity to appear today for purposes of discussing some of the aspects of the Commission's oil field contamination site investigation and remediation program. The Conservation Division is currently involved with approximately 80 sites where chloride contamination exists from primarily past practices. These sites are under one of three active programs: investigation, monitoring or remediation. All are directed toward groundwater rather than surface water.

Some background information is appropriate to give the Committee some idea of how the program is administered and implemented. In 1986, the Kansas Legislature enacted House Bill (H.B.) 3078 which provided, in part, that the KCC shall have exclusive jurisdiction and authority to regulate oil and gas activities. The bill further established that prevention and cleanup of pollution from oil and gas activities is within KCC jurisdiction to be exercised cooperatively with the Kansas Department of Health and Environment (KDHE) pursuant to a Memorandum of Understanding (MOU) between the agencies. The MOU essentially places lead responsibility in the KCC to pursue cleanup on active oil and gas leases and in the KDHE to pursue cleanup on abandoned oil and gas leases. Through the years, this division of responsibility has required interagency discussion of what abandonment of a lease means and the current working definition means that where all wells have been properly plugged and abandoned, KDHE has the responsibility. Charles Jones and I are currently reviewing the MOU since it is due to be renewed. The working relationship between KCC and KDHE on cases where joint effort has either been desirable or dictated by MOU provisions has been excellent.

11-18-93
H. E. & N. R.
Att. 21

Discussion

I have attached a portion of a paper prepared on this subject a few years ago for the Kansas Water Authority and an Environmental Conference held by KIOGA. Since this description is as appropriate now as when it was written, a condensed version is attached as our current program description. (Attachment I)

Also attached is a list of active sites and a list of those which have been officially closed through KDHE's Contamination Site list. (Attachment II and Attachment IIa)

Other attachments include a chloride profile of the remediation programs for the Macksville Sinkhole in Pawnee County (Attachment IIIa) and the Hollow Nikkel (Attachment IIIb) field project administered by KCC and Equus Beds Groundwater Management District #2. KDHE was in partnership with GMD#2 until funding ran out this year.

Attachment I

BACKGROUND HISTORY OF OIL FIELD CONTAMINATION IN KANSAS

Chloride contamination of groundwater has been a point of concern to those owning or renting property in Kansas oil or gas producing areas since the late 1930's when water wells in the Burrton Oil Field in Reno and Harvey Counties began to become salty. In the early days of oil production in Kansas, brine disposed of into surface ponds was thought to evaporate, particularly in central and western Kansas. Before very long, both industry and the State of Kansas realized that the disappearance of disposed brines in surface ponds was due to percolation and not evaporation. Even as late as the early 1960's, when groundwater in several areas of Kansas had become polluted beyond the level safe for human consumption, many operators did not believe they were leaving an undesirable legacy for future generations to investigate and remediate. Most operators required education that dilution was not the cure for pollution.

In 1957, K.S.A. 65-171d was amended to require surface brine disposal pits to have permits from the Board of Health (now KDHE) prior to operation. Although approximately 4400 surface pond applications were filed with the Department between January 1, 1958 and 1968, the program was basically one of closing pits through denial, issuance of short term permits to allow completion of more acceptable disposal facilities or revoking permits as the water production increased to potentially polluting levels.

By the early 1970's, residents of Kansas finally accepted the concept that our groundwater resource is a finite quantity and the assurance of adequate supply rested upon proper management of reserves. Groundwater Management Districts (GMD) were statutorily created to provide a semi-autonomous local component to the state water appropriation regulatory program carried out by the Division of Water Resources (DWR). Both the DWR and GMD programs initially were concerned with developing policies and regulations directed toward the prevention of water waste, safe yield and developing spacing patterns for groundwater resources which would prevent mining of groundwater and further depletion. Until the late 1970's water quality, while tacitly a concern to most water users, was of secondary concern and was taken for granted except for those few individuals who happened to have experienced oil field pollution to their water supplies.

The emphasis on continued availability of groundwater and the accompanying concern over premature depletion of the Ogallala and other unconsolidated aquifers did finally allow a refocusing into the effects enclaves of groundwater contaminated by oil field salt water might have on long range groundwater management goals and the future acquisition of groundwater for public supplies in oil producing areas. Prior to 1980, the Bureau of Oil Field and Environmental Geology of KDHE and its predecessor, the Oil Field Section made investigation of oil field brine pollution occurrences and was generally successful in terminating the pollution source. Occasionally, an operator took responsibility for providing the owner of a contaminated water supply with a new source. The cleanup of past salt water contamination is basically an advent of the 1980's, consequently many of the listed contamination sites

for which the Commission is currently investigating cleanup feasibility occurred 20-40 years ago from the era of pond disposal, frequent emergency pit usage and unreclaimed salt water spillage.

This background demonstrates the temporal hiatus which exists between time of pollution discovery and the current development of salt water policy to attempt restoration of aquifer quality to levels usable for human consumption and other normal water uses. Complete understanding of the rationale behind the Kansas Corporation Commission, Conservation Division, Salt Water Contamination Site Remediation Program for FY 1994 and ensuing years probably makes the best sense to industry when a historical perspective has been provided.

KCC SITE CONTAMINATION PROGRAM

The Kansas Corporation Commission, through its Conservation Division, is committed to an oil field contamination remediation program which adheres to the following objectives:

(1) Investigate and determine feasibility of cleanup of past oil field pollution at lease sites where past brine disposal or poor lease maintenance practices have raised the chloride concentration of groundwater to above acceptable concentrations for human consumption, irrigation or industry.

(2) KCC Department of Environmental Protection and Remediation and our district offices work cooperatively with the Department of Health and Environment Bureau of Environmental Remediation to investigate and conduct cleanup feasibility assessments or develop remediation plans

for those cases where oil field brine contamination has traveled offsite from leases in the area of downstream water supplies or where contamination from more than one past source has coalesced into a real non-point source pollution problem.

(3) Use the Commission's legal resources to identify and require former or present lease operators to assume responsibility for developing and implementing a Commission approved cleanup plan. Some cleanup plans are done by Commission order.

(4) Determine whether each documented oil field related salt water contamination site is more appropriately dispositioned for a remediation or monitoring program.

(5) Work with the Kansas Department of Health and Environment to develop definitive cleanup standards which are realistic, cost-effective, and yet acceptable to those engaged in water resource planning, water policy development and environmental protection.

(6) Develop, with assistance from other water and land resource agencies, a soil restoration policy for the State of Kansas which provides direction to landowners of salt contaminated soil areas as to whether state participation in reclamation or restoration can be expected. During the last two years, more landowners have viewed reclamation of oil field related salt scars as a State responsibility. There is neither policy or statutory direction addressing this issue. Since soil, unlike water, has been deemed as the property of the landowner.

KCC FY 1994 PROGRAM

The Commission developed an informal strategy in 1989 to assist in site prioritization recognizing that both personnel resources and funding for site activities will always be limited. Prioritization is carried out as follows from highest to lowest for investigation and remediation plan development.

(1) New pollution cases forwarded to KCC through either complaint, agency referral or as a result of staff field investigation of active sources of salt water pollution (spills or illegal use of ponds for emergency or disposal). The most effective way to address salt water contamination is to contain and retrieve the pollutants before they have a chance to migrate or partially diffuse through dilution. In this category, KCC would use Fee Fund money only when necessary to address those areas of contamination which exhibit immediate endangerment of water supplies. Where responsible parties are identified, funding for cleanup will come from the responsible party; unless the operator takes voluntary responsibility to abate the problem which is generally cheaper. Complaints involving old contamination sources may or may not be relegated to a lesser priority after the initial investigation. These cases may remain a problem if cleanup is of short duration or officially put on the Contamination Site list if they are not.

(2) Areas of pollution, recent and past, for which a responsible party exists. The Commission has been using formal orders to companies to develop

and implement plans. Orders contain a scope of required work to be done and include time frames for submittal of plans and target dates for implementation. Such orders are issued after the operator has had a chance to review a list of project tasks with Commission staff.

(3) Selected older contamination sites which have been investigated using Fee Fund money or in cooperation with KDHE and the aquifer at that location does not supply groundwater to wells and where alternative sources of water have been installed.

Monitoring and water sample collection for chloride analysis are considered a part of the Commission routine district responsibility and those sites strictly under monitoring are not generally on the priority schedule.

PUBLIC OUTREACH

The Commission posses a high level of communication with industry, state water agencies, river basin advisory committees, and legislators. Chloride contamination is difficult, expensive and time consuming to remove from aquifers. An open dialogue on the successes and failures of various cleanup projects allows all parties a better understanding of the problems and gradually builds a level of technical credibility which is an essential quality for state regulatory program effectiveness. To achieve communication, Commission staff:

(1) Attends River Basin Advisory Committee meetings and is available to provide updates upon KCC supervised contamination sites within the basin.

(2) Provides quarterly updates to ongoing projects to the Kansas Water Office and at KDHE/KCC management meetings.

(3) Provides legislators updates of progress on sites in their district.

REMEDIATION OF ABANDONED WELL SITES

Part of the Conservation Division's remediation program involves the plugging of abandoned oil, gas or service wells. These wells are generally abandoned through operators abdication of responsibility or through inability to fulfill statutory plugging requirements as a result of bankruptcy. The philosophy of KCC statutory authority under Chapter 55 is that any abandoned well is a potential source of salt water or oil pollution if left unattended or open. Such wells, in certain cases, may act as conduits for downward drainage of fresh and usable water and, consequently, cause a loss of water resources into an unreclaimable environment. The KCC routinely prioritizes the district office request for access to Conservation Fee Fund money to plug abandoned wells. Wells generally receive high priority attention because they are:

(1) Actively flowing salt water and/or oil.

(2) Located in sensitive environmental or resource areas such as sole source aquifers, confined aquifers with interformational flow potential, wetlands or close proximity to public water supplies (surface or groundwater).

(3) Located in densely populated areas.

(4) Subject of many landowner complaints.

The Conservation Division does not generally include abandoned wells as listed contamination sites unless the pollution seems to be related to the existence of wells ~~rather than~~ along with some other facility such as a pond which was present during the active life of the lease. On any contamination site where well locations appear to be a factor in the pollution or where the retention of abandoned wells on the site might eventually negate an otherwise successful remediation effort, the final resolution of the well's status will be included in the contamination site cleanup plan.

PROBLEMS OF REMEDIATING ABANDONED WELLS

(1) There will probably never be enough money in the KCC Conservation Fee Fund to plug all the known abandoned oil, gas or service wells. Generally speaking, the number of well abandonments increases when the oil economy slumps as it did in 1986 after a period of high ride for speculators. Fortunately, the highest number of past well abandonments has occurred in Southeast Kansas where there are less groundwater resources and the flow potential of a given well creates "localized" rather than "areal" pollution.

(2) In FY 1993, approximately $457,398 was spent on the actual plugging of abandoned wells. A routine Fee Fund plugging costs from $3,500 to $5,000 per well. When the well has to receive remedial work prior to plugging or the well has collapsed or has to be drilled out to a depth where an effective plug can be set, the cost as everyone knows can increase substantially to the $10,000 to $50,000 range. For example, the

well plugged by KCC in the Neosho River in early 1989 cost over $25,000, and the Witt Sinkhole well in Russell County cost a total of $200,000 after two remediation efforts. Two wells plugged in 1993, one of which was the Meitner Sinkhole Northwest of Hoisington cost $88,000 and $85,000 respectively. An attempt to recover some or all of the costs will be made by our legal staff.

(3) The KCC does have statutory authority to seek reimbursement for plugging abandoned wells from past operators of the well or lease and to require new owners of a lease to plug existing abandoned wells. In many cases, the amount of expenditure to pursue legal means for the reimbursement to the KCC Conservation Fee Fund exceeds the cost of the plugging.

LEGAL ACTIVITIES

Unlike some regulatory agencies, the Kansas Corporation Commission has legal services to assist technical staff on contamination site remediation plans. The Conservation Division has two attorneys on the staff in Wichita which participate in informal conferences, represent staff and the Commission at hearings and draft legal documents such as orders, consent decrees and agreements on salt water contamination site investigations and remediation plan requirements. Because of the transient nature of the oil business, researching responsible parties or past lease ownership is often necessary even on a pollution case which has just been discovered. Discovery of an occurrence of groundwater pollution in 1993 does not

necessarily mean the pollution is of recent vintage. Many old pollution plumes have avoided discovery until now because no one drilled a water well at the location. The legal staff develops a list of potentially responsible parties prior to development of remediation plans. The KCC-KDHE Memorandum of Agreement outlines those situations where the legal staff of the two agencies work together on issues.

CONCLUSIONS

The Kansas Corporation Commission is committed to administering an oil field pollution remediation program that is necessary and should have been started forty years ago when the groundwater pollution occurred. We believe there is an obligation on the part of industry to restore the quality of water which became unusable through past waste management practices to a level where it can be used for human consumption, irrigation or industrial purposes. Major gains in this effort realistically cannot be done without the cooperation of industry. Although legal safeguards and rights of both industry and the State need to be honored and preserved, it is of paramount importance to remember the quality of groundwater is basic to all users, including industry.

ATTACHMENT #II
KCC Sites

SITENAME	COUNTY	SEC	TWP	RGE	QQQ	STATUS
ALTA MILLS	HARVEY	02	22	02W		
ASBURY	COWLEY	07	30	08E	SE	
ATKINSON	COWLEY	24	32	05E	SE	
AYERS COMPLAINT(TRANS/KDHE)	BUTLER	26	25	06E		
BALTHAZOR GIL & RAY BRAULT	GRAHAM	13	09	21W		
BATT ROBERT	RUSSELL	35	15	14W	SE	
BELL	RENO	04	22	07W		
BLOOD ORCHARD	SEDWICK	29	29	01E	SE	KDHE
BOGUE AREA	GRAHAM	34	08	21W		
BRAMWELL	KINGMAN	30	29	09W	NE	
BRAUN	ELLIS	32	13	16W	SW	
BROTHERS	RICE	12	21	07W	S2NE	
BROWNING	GW	20	22	10E	SW	
BUCKNER	GRAHAM	01	08	22W	NE	
BYFIELD AREA	ROOKS	19	07	17W		
CATRON JAMES (RIO VISTA)	SEDGWICK	07	26	01E		
CLAWSON/MESA	HASKELL	34	29	34W		AR(KDHE/PRP)
CODEL AREA (ROLFE)	ROOKS	02	10	17W		
CODEL AREA (ROLFE)	ROOKS	03	10	17W		
CODEL AREA (ROLFE)	ROOKS	10	10	17W		
CODEL AREA (ROLFE)	ROOKS	11	10	17W		
CODEL AREA (ROLFE)	ROOKS	13	10	17W		
COOK (MARTINDALE ENTERPRISES)	COWLEY	13	32	04E		
GAS WELL PROBLEM (PLUGGED)	COWLEY	17	34	04E	SWNW	
CRAWFORD SINKHOLE	RUSSELL	02	14	15W		
DARNES	HARPER	19	31	08W		
DINKEL JIM	ELLIS	32	13	17W		
DINKEL LEON	ELLIS	16	14	17W	NW	
DORTLAND EVERETT	RUSSELL	05	14	15W	NWSW	
DOUGLAS	GW	22	22	13W	SE	
DUMLER DENNIS	RUSSELL	22	13	14W	SW	
EASTMAN	MG	12	35	16E	E2	
ELM CREEK	ROOKS	06	09	17W		
EMERSON ELECTRIC IND	MG	26	32	15E		
ERRETT	GW	15	23	13W		
EVANS (PLAINS OIL)	RENO	23	23	04W		
EQUUS BEDS CRUDE OIL CONT	RENO	25	23	04W		AR(KCC)
FAIRFAX GAS	WY	34	10	25E	NW	
FAITH PARTNERSHIP	ALLEN	07	26	18E		
FENSTER	COWLEY	22	30	04E	SENE	
FIDELITY IVES	SEDGWICK	21	25	01E		
FINK LEON	GRAHAM	27	08	22W		
FOSTER RAY GRIEBEL(STOCKTON)	ROOKS	09	07	19W		
FOSTER RAY GRIEBEL(STOCKTON)	ROOKS	15	07	19W		
FOSTER RAY GRIEBEL(STOCKTON)	ROOKS	22	07	19W		
FOSTER RAY GRIEBEL(STOCKTON)	ROOKS	23	07	19W		
GOERING A	RENO	26	23	04W		
GREAT BEND REPORT	BARTON	18	19	13W		
GRIMES	STAFFORD	16	22	13W		
GREENWOOD	GW	27	22	13E		
GROSS MARCELLUS	ELLIS	18	15	17W		
HAINES (PAT & CHESTER)	RENO	08	25	05W		
HAINES (PAT & CHESTER)	REON	09	25	05W		
HARBAUGH SINKHOLE	RUSSELL	25	14	15W		
HAYSVILLE	SEDGWICK	17	29	01E		
HOLLOW NIKKEL FIELD	HARVEY	19	22	03W		AR(KCC/GMD2/KDHE

ATTACHMENT #II
KCC Sites

SITENAME	COUNTY	SEC	TWP	RGE	QQQ	STATUS
HOUSER	ROOKS	08	10	17W	NW	
HRABE	ROOKS	01	09	17W		
HRABE	ROOKS	12	09	17W		
HULLMAN DON	PRATT	07	27	12W	NW	
HURST (RUPE OIL)	RENO	22	23	10E	SWSWSW	
HUTTON/BROWN	ROOKS	05	09	16W		
HUTTON/BROWN	ROOKS	06	09	16W		
JENNINGS CITY OF	DECATUR	25	04	27W		
JENNINGS CITY OF	DECATUR	19	04	26W		
JOHNSON CONTAMINATION	PRATT	07	27	12W		
JOHNSON KERY	RENO	31	23	10W	SW	
K-39 REMEDIATION SITE	WILSON	24	27	16E	N2NE	AR(PRP/KCC)
KAUFFMAN	RICE	08	20	08W	NW	
KEIR	RUSSELL	11	15	14W		
KEITH FRED	GRAHAM	32	08	24W		
KEITH PAUL	GRAHAM	03	09	24W		
KEJR	RUSSELL	11	15	13W	S2	
KEJR	RUSSELL	14	15	13W	N2	
KELLER	ROOKS	32	10	20W		
KELLER	ROOKS	29	10	20W		
KNACKSTEDT	MCPHERSN	30	20	05W		AR(KCC)
KOELLING POLLUTION CASE	OSBORNE	22	10	15W		
KRAUSE (VON FELDT SINKHOLE)	ELLIS	09	14	19W		
LANG DORIS	ELLIS	04	14	17W		
LINDSBORG KANSAS	MCPHERSN	17	17	03W		
LONG RIFLE GUN CLUB	ELLIS	27	11	19W	NWNWSE	AR
MACKSVILLE SINKHOLE INV/REM	PAWNEE	30	23	15W		AR(KCC/PRP)
MARCOTTE	ROOKS	19	09	19W	SE	
MARLETTE L E	PAWNEE	13	21	16W	NW	
MAXEDON	PRATT	25	27	11W		AR(PRP)
MC CARTHY OIL EUREKA	GW	12	27	10E		
MCDONALD CONTAMINATION SITE	LINN	27	19	22E		AR(KCC/PRP)
MINIUM POLLUTION	GRAHAM	36	08	25W		
MINIUM POLLUTION	GRAHAM	01	09	25W		
MOFFETT STANLEY	PAWNEE	16	21	15W	SW	
MOWAT (PRITZ)	MARION	25	18	04W	NWNWSW	
NEISES (SCHULTE FIELD AREA)	SEDGWICK	19	28	01W	NE	KDHE
NIELSON SINKHOLE	ELLIS	28	11	16W	SW	
NEOSHO RIVER PLUGD WELLS	ALLEN	09	26	18E		
NUSS LELAND	RUSSELL	22	14	14W		
O S A UNIT (CONOCO)	SEDGWICK	15	29	01W	SE	
PANNING SINK HOLE	BARTON	02	20	11W		
PAWNEE COUNTY (EASTERN)	PAWNEE	16	23	15W	SE	
PEAVY MOWRY VINE & BATES	ROOKS	16	10	18W		
PEAVY MOWRY VINE & BATES	ROOKS	21	10	18W		
PEAVY MOWRY VINE & BATES	ROOKS	28	10	18W		
PEAVY MOWRY VINE & BATES	ROOKS	33	10	18W		
PEMBER ART	NESS	17	19	24W		
PLEASANT PRAIRIE UNIT	FINNEY	19	26	34W		
PLUM CREEK AREA	GOVE	32	14	29W		
POTWIN MOORE UNIT	BUTLER	36	24	03E	S2SW	
PRICE POLLUTION PROBLEM	FINNEY	24	24	32W		
RAYMOND OIL (SEELYE SWD)	RUSH	02	13	19W		AI
RAYMOND OIL (SEELYE SWD)	RUSH	03	16	19W		AI
REESE MC FADDEN KSU	ROOKS	03	09	16W		
REESE MCFADDEN KSU	ROOKS	04	09	16W		

ATTACHMENT #II
KCC Sites

SITENAME	COUNTY	SEC	TWP	RGE	QQQ	STATUS
REIN	RUSSELL	18	14	13W	NESWSW	
RICHMEIER PAXSON INVEST	GRAHAM	16	08	25W		AR(KCC)
RIO VISTA (JAMES CATRON)	SEDGWICK	07	26	01E		
ROBBEN	ELLIS	27	14	16W		
RIXON KENT	STAFFORD	07	24	13W	NENE	
SCATTERED SITES	ROOKS	06	09	17W		
RUDER AREA	ELLIS	08	15	18W		
RUSSELL RWD #1	RUSSELL	34	14	14W		
S & K SPILL	REON	13	23	04W		
SAMPLE	SEDGWICK	29	26	02E		
SANDER LOUIS	RUSSELL	03	14	15W	NW	
SARVER ORVILLE	ROOKS	12	09	16W		
SCHEPMAN	EW	07	17	10W	W2	
SCHAFFER AREA	RUSH	28	18	16W		KDHE
SCHNELLER	TREGO	25	13	21W		
SCHRAEDER	HODGEMAN	03	24	24W	NWNE	
SCHRUBEN ROGERS AREA	ROOKS	18	07	17W		
SCHULTE FIELD	SEDGWICK	19	28	01W		KDHE
SHAFFER VERNON	RUSSELL	18	11	13W	NW	
SHEPARD	KINGMAN	10	29	05W	NE	
SHUTTLEWORTH	RICE	18	18	07W	NWNW	
SIEFKES A 6 SWD	STAFFORD	03	22	12W	NENENE	AI
SMITH JUSTINA	BUTLER	03	28	04E	SE	
SMITH RAYMOND	HODGEMAN	01	23	23W	NW	KDHE
STAFFORD COUNTY	STAFFORD	24	24	14W		AI
STANTON SMITH WELL SMITH/FINN	MORTON	08	34	43W	SE	AR(PRP)
STAUDINGER HENRY	BARTON	07	16	11W		
STOCKTON AREA PROJ GEN INFO	ROOKS	23	07	18W		
RICHARDSON BRUMMER AREA	ROOKS	24	07	18W		AR
SUMNER COUNTY OIL IN RIVER	SUMNER	25	31	02E	SW	
WEST STOCKTON - WEBSTER	ROOKS	23	08	19W		
STRIKER PETROLEUM SITE	RENO	07	24	10W	SW	
SWISHER	SALINE	08	16	01W	NE	
THOMPSON ENOCH	PAWNEE	17	21	20W		AR(PRP)
TILLOCK HERB (FARM)	MCPHERSN	21	19	02W	SE	
VALLEY CENTER BOOSE	SEDGWICK	21	25	01E		
WAITE	COWLEY	19	32	03E	NE	
WERTH FRANK	ELLIS	23	12	18W	NE	
WESTFALL (FELL OIL & GAS)	RENO	19	24	04W	SE	
W HISS AQUIFER RESTORATION	BARTON	36	20	14W		AR(PRP)
WESTERMAN COMPLAINT	KINGMAN	32	30	09W		
WILDBOYS	BARBER	28	33	11W		AI
WILDBOYS	BARBER	33	33	11W		AI
WILGUS AREA	SALINE	20	14	02W		
WINGATE	WILSON	17	29	17E	SE	AR(PRP/KCC/L)
WITTMAN COMPLAINT	RUSSELL	24	14	15W	S2NE	
WOODY	MG	07	33	15E		
ZIMMERMAN R J	ELLIS	35	15	19W		
GORDON LEASE	MG	18	33	15E	NW	AI
RHODES POOL	BARBER	16	33	11W		AI

21-15

R = *Resolved and KDHE reflects in report*

AR = *Active Remediation by: PRP (Potentially Responsible Party*
KCC
KDHE
L (Landowner)

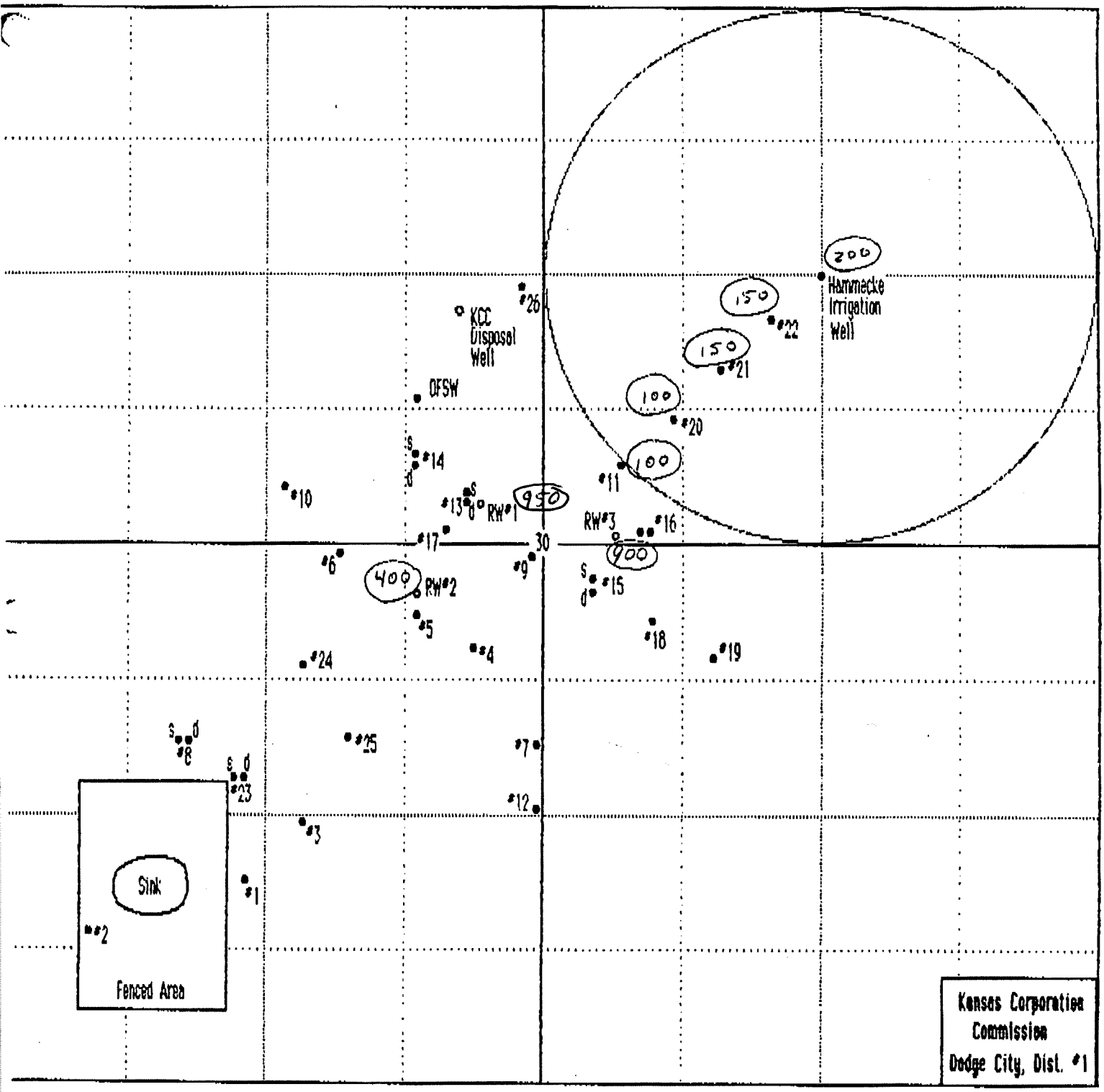
AI = *Active Investigation*

KDHE = *Transferred to KDHE by Letter*

ATTACHMENT #II a
KCC Sites

SITENAME	COUNTY	SEC	TWP	RGE	QQQ	STATUS
COLEMAN GEORGE	BARBER	36	32	11W		R
ALBERT CITY OF	BARTON	30	18	15W		R
BURMEISTER HENRY	BARTON	02	17	11W	S2	R
MEITNER SINKHOLE	BARTON	28	17	14W		R(KCC)
BUCMAN (CLOSE)	CHASE	13	18	06E	NW	R
BREMER PAUL	DECATUR	03	03	29W		R
ANTONIO POLLUTION	ELLIS	01	15	19W	NW	R
FELL OIL (PEARL CRESS LEASE)	ELLIS	13	11	17W	SE	R
MAXWELL JAMES	ELLIS	34	14	19W	SW	R
PHILLIP DOUG	ELLIS	09	15	17W		R
STRAMEL (PFIEFER)	ELLIS	36	15	17W		R
WASINGER	ELLIS	13	15	19W	SE	R
FRANKLIN COUNTY RWD 6	FRANKLIN	22	17	21E		R(KCC/PRP)
JUDSON TULLOS (RANTOUL)	FRANKLIN	27	17	21E	NENW	R(KCC/PRP)
TATE CREEK AREA	GW	06	22	12E		R
STRECKER HENRY	HODGEMAN	09	24	21W	SW	R
FOWLER (TEMPLE OIL CO)	MG	19	32	14E		R(KCC)
WAYSIDE PROD CO (W BLAKE LS)	MG	28	33	14E		R(KCC)
HILGERS CARL	ROOKS	13	09	19W		R
LATON AREA (LANDOWNERS)	ROOKS	03	09	16W		R
SHEPARD FOSTER	ROOKS	22	10	18W		R
SHEPARD FOSTER	ROOKS	25	10	18W		R
SHEPARD FOSTER	ROOKS	26	10	18W		R
OKMAR OIL	RUSSELL	23	14	13W		R
TITTEL	RUSSELL	14	15	14W		R
TRAPP OIL	RUSSELL	11	14	15W	N2SE	R
HAZARDOUS WST INJ (VULCAN)	SEDGWICK	27	28	01W	SW	R
BRUCE IVAN	SUMNER	12	32	04W		R
CHURCHILL FIELD (ARK RIVER)	SUMNER	25	31	02E	E2NWSW	R(PRP)
KELLOGG/WYNN	TREGO	36	12	22W	SE	R

R = Resolved and KDHE reflects in report



lacksville Sinkhole - Section 30-T23s-R15w, Pawnee County, Kansas

ocation of Sink, Recovery Wells, and, Monitor Wells

November 8, 1993 sampled #2 - was shut down

21-18

File: Macksville Data

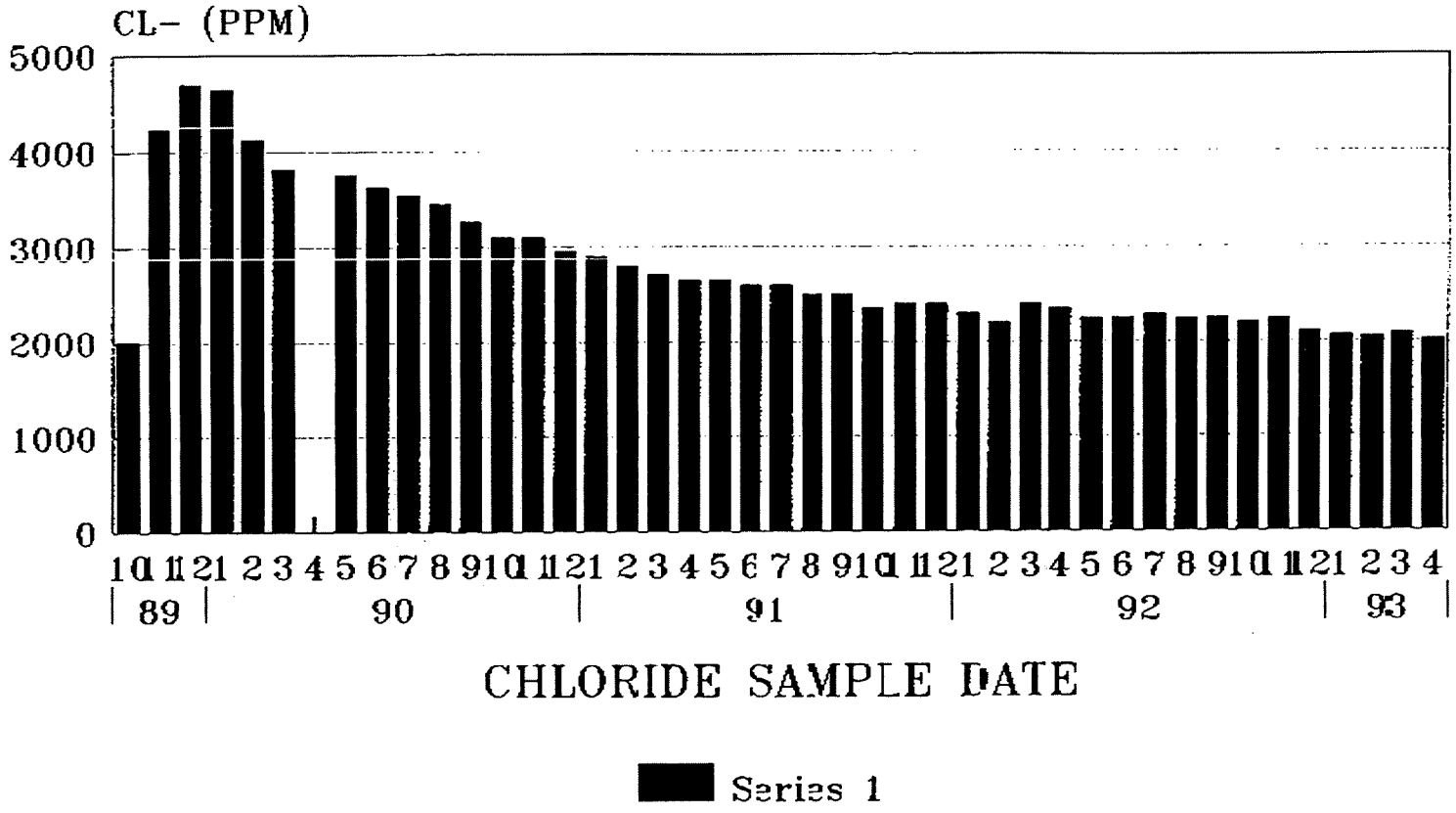
Chlorides

Well #	Pumped 3-23-89	Bailed 7-19-89	Pumped 7-24-89	Bailed 1-9-90	Pumped 6-8-90	Bailed 11-01-90	Pumped 3-11-91	Pumped 6-25-91	Pumped 11-13-91	Pumped 2-26-92	Pumped 6-22-92	Pumped 7-20-93	+ OR - From last Pumped
1	4,400	800		1,050	1,300	100	90	450	400	350	200	200	0
2	30				40	110	40		150	100			
3	4,100	2,900			1,800	1,750	1,250	950	700	350	200	150	-50
4I	11,900	8,400		11,400	7,200	7,900	5,300	4,700	4,300	3,600	3100	2,150	-950
4S				100	50		150						
5	11,500	8,200	11,500	6,700	9,500	6,500	7,800	6,800	6,300	6,000	4900	2,600	-2300
6	13,500	12,500	13,500	8,100	13,100	1,000	8,900	7,600	5,650	4,500	3400	1,000	-2400
7	10,600		10,200		6,100	3,150	3,200	2,900	2,650	2,350	2250	1,800	-450
8S		25			40		20	100	100	100		100	100
8I	600	1,100			110	160	70	200	100	200	100	200	100
8D	700	70			70	65	65	100	150	100	100	100	0
9I	13,000	9,900	13,650	3,900	14,000	11,500	6,800	12,150	11,400	10,000	9500	7,700	-1800
9D	100	200		200	100	150	100	150	150	150	150	300	150
10	60	50		50	50	35	35	30	30	50	50		
11	4,500	6,600	6,400	3,900	1,700	1,150	330	250	150	200	100	100	0
12	320	380	240		290	650	315	400	250	400	400	2,000	1600
13I	3,000	130		250	2,600	200	1,300	1,700	1,750	1,350	1300	1,300	0
13D	1,200	100		200	150	100	200	250	450	200	300	200	-100
14I	930	100		300	50	70	105	100	50	100	100	150	50
14D	220	110		200	110	105	170	100	100	150	100	200	100
15I	8,700	8,200	12,150	12,700	13,300	8,000	11,500	11,400	10,900	10,000	10000	5,000	-5000
15D	500	1,400		600	320	200	200	200	1,100	2,700	1000	300	-700
16I	3,100	1,100	3,400	1,150	700	900	720	1,100	2,200	1,550	800	400	-400
16D	70	70		150	80	80	180	150	100	150	200	200	0
17	1,000	1,000		200	110	105	140	150	150	100	150	200	50
18	7,300	6,100	6,350	4,900	5,000	4,500	2,800	2,900	3,250	2,550	1650	400	-1250
19	800	440	850	500	600	400	400	400	300	300	350	250	-100
20	185	695	930	520	620	245	500		140	250			
21	160	160	170	240	280	280?	370		160	300			
22	240		250	275	280	275	245		125	150			
23S		100			100	100	150		300	200			
23	12,400	13,550			5,200	4,400	2,800		2,250	1,850	1300	950	-350
24	12,100	9,500			8,100	1,500	4,000	3,350	2,650	2,500	1500	550	-950
25	15,000	14,500			12,800	6,500	10,500	10,500	9,750	9,500	8450	6,450	-2000
26S						55	45						
DFSW					60	50	40						
Hammeke Irr.	125	120		75	170	90		155	130	100			
SINK------													
top		30,500			18,500	20,500						3,600	
bottom	40,500	32,000			29,500	25,000	25,000	25,000	22,500	22,000	20,000	16,000	-4000

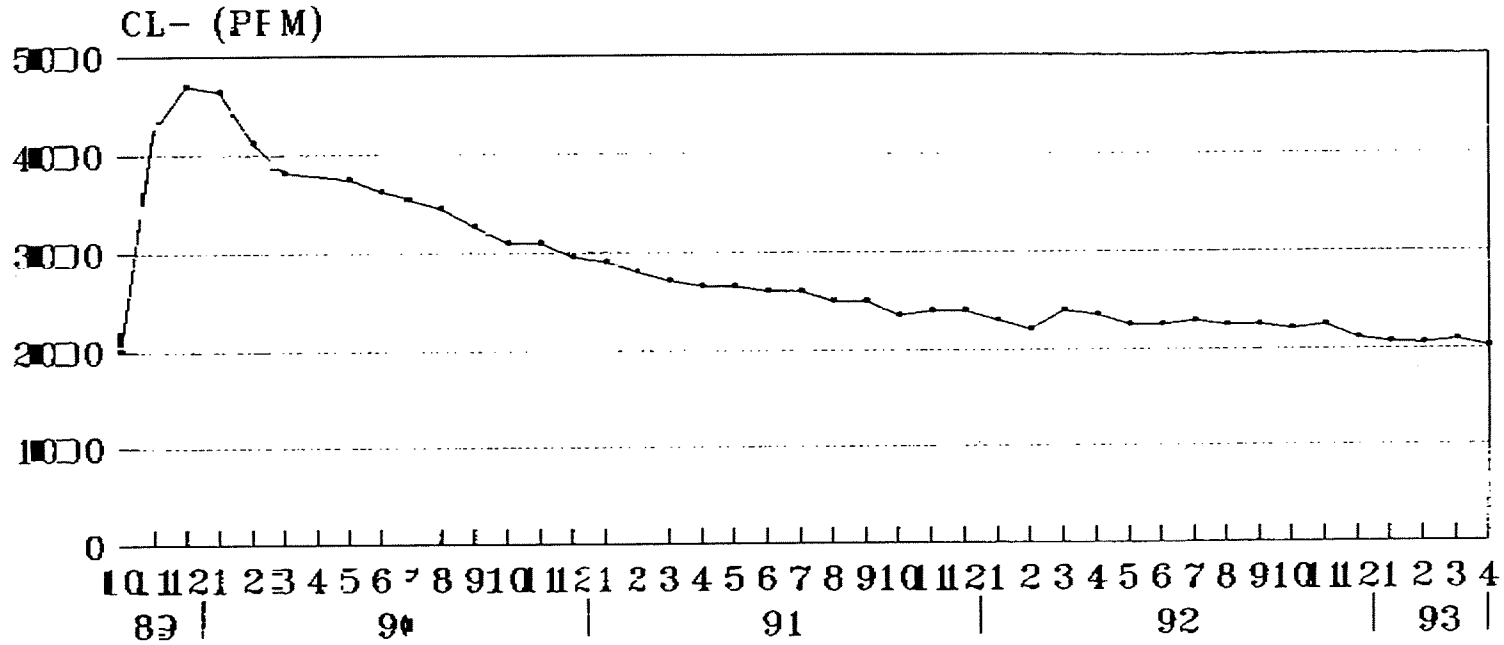
Recovery Wells November 4, 1993

	Total	CL
#1	213,694,100	950
#2	137,953,500	450
#3	203,553,800	900
	555,201,400	

HOLLOW-NIKKEL
GROUNDWATER CLEANUP PROJECT
MONTHLY CHLORIDE VALUES



HOLLOW-NIKKEL
GROUNDWATER CLEANUP PROJECT
MONTHLY CHLORIDE VALUES



OUTLINE

Oil Field Activity in Barber County
- Early Drilling
  - No regulation
  - Plugging haphazard

Walnut Creek Watershed Area
- 40 Oil and Gas wells drilled since 30's
  - 8 in operation now
  - Leaving 32 wells abandoned

In the 60's 2 core holes started flowing salt water on the surface.
Dillman Ash lost both water wells at his house.

The salt water disposal well was started in 1980.

In 1990 Jim McCollough lost several cows when his well turned salty.
In 1992 Clarence Hrencher's livestock water pit turned salty (3600 PPM).

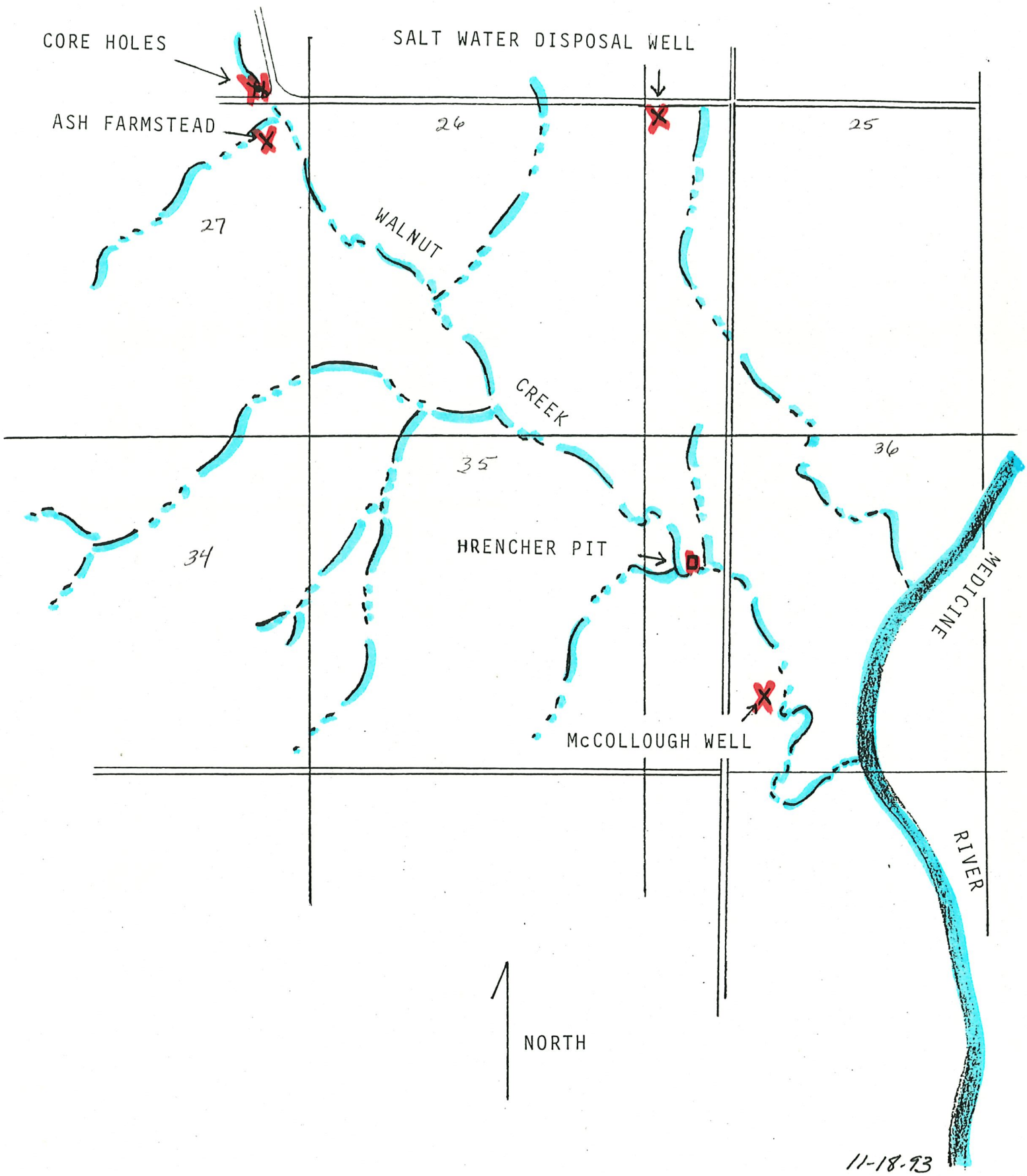
The Medicine River is 1/4 mile from the McCollough well that went salty 3 years ago.

KCC agreed on April 20, 1993 to keep the Conservation District office and the landowners informed of their activities. The Conservation District office has been notified once. KCC has initiated little or no contact with the landowners.

KCC is not accepting the responsibility of the salt water problem.

The main concern is: There is a need for water to be piped into this area so that the pastures can be utilized.

11-18-93
H. En & NR
Att. 22



11-18-93

H. En & NR
Att. 23

SOLID WASTE UPDATE

September 29, 1993 **Bureau of Waste Management**

EXTRA! EXTRA!

EPA Grants Landfill Extension

The US Environmental Protection announced on Tuesday September 28, 1993 that the Administrator signed the final rule that provides an extension of the compliance dates with 40 CFR Part 258. These regulations are commonly referred to as Subtitle D and are applicable to all municipal solid waste landfills (MSWLFs).

The extensions were originally proposed on July 28, 1993, and apply to facilities based on their size. A synopsis of the rule is as follows:

- **October 9, 1993** is the effective date for existing MSWLF units and lateral expansions meeting the following conditions:
  - The MSWLF unit accepts more than 100 tons per day (tpd) of solid waste based on an annual average.
  - The MSWLF unit does not meet the criteria for an extension based on acceptance of flood debris.

- **April 9, 1994** is the effective date for existing MSWLF units and lateral expansions meeting the following conditions:
  - The MSWLF unit accepted less than 100 tons per day (tpd) of solid waste based on an annual average prior to 10/9/93.
  - The MSWLF unit accepts less than 100 tpd of solid waste each month between 10/9/93 and 4/9/93.
  - The MSWLF unit is located in a state that has submitted an application for permit program approval to EPA by 10/9/93. **KANSAS QUALIFIES!**

- **April 9, 1995** is the effective date for Subpart G - Financial Assurance for all existing MSWLF units and lateral expansions that do not qualify for the Small Landfill Exemption in 40 CFR Part 258(f)(1).

- **October 9, 1995** is the effective date for existing MSWLF units and lateral expansions that meet the small landfill exemption state in Subtitle D. These units must comply with all parts of 40 CFR Part 258 except Subpart D - Design Criteria on October 9, 1995. This includes Subpart G - Financial Assurance.

- **Flood Debris Affected MSWLFs** - The deadline for MSWLFs that are receiving flood related debris from federally designated disaster areas will be set on a case-by-case basis by the state in which the MSWLF unit is located. This state approved deadline can apply to any MSWLF regardless of size. The guidelines for state-granted extensions are as follow:
  - The MSWLF unit may accept waste up to April 9, 1994 without being subject to Subtitle D if the state of Kansas certifies the MSWLF unit is needed to receive flood related debris from a federally designated disaster area.
  - Any MSWLF unit that receives the initial extension for flood related debris, may be granted an additional extension up to October 9, 1994 without being subject to Subtitle D. Again, however, the state of Kansas must certify the MSWLF unit is needed to receive flood related debris from a federally designated disaster area.

The Department will provide potentially affected landfill owner/operators guidance on the information KDHE will require from the owner/operator in order to make the certification the landfill is needed for flood debris. This information will be forthcoming shortly.

It should be noted Kansas was a driving force behind the development of the extension rule. Special thanks go out to US Sen. Nancy Kassebaum, US Rep. Jim Slattery, State Rep. Carl Holmes, and the Kansas Association of Counties.

11-18-93
H. En & NR
Att. 24

See Reverse Side for Instructions

Notice of Intent Form (NOI) for Municipal Solid Waste Management

Kansas Department of Health and Environment - Bureau of Waste Management

Forbes Field • Building 740 • Topeka, Kansas 66620 • 913/296-1600

Submission of this Notice of Intent form constitutes notice of the status of municipal solid waste planning as of the date this form is signed by the party identified in Section I. This form is intended to capture planning information available at the time of submission. Submission of this form does not obligate the owner/operator to abide by this information at a later date. PLEASE TYPE OR LEGIBLY PRINT REQUESTED INFORMATION ON THIS FORM.

I. Facility Owner Information

Name: |_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_| **Phone:** |_|_|_|-|_|_|_|-|_|_|_|_|

Address: |_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_| **Status of Owner:** ☐

City: |_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_| **State:** |_|_| **Zip Code:** |_|_|_|_|_|-|_|_|_|_|

II. Facility/Site Location Information

Facility Name: |_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_| **Permit No.:** |_|_|_|_|_|

Facility Address: |_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|

City: |_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_| **State:** |_|_| **Zip Code:** |_|_|_|_|_|-|_|_|_|_|

Latitude: |_|_|° |_|_|' |_|_|" **Longitude:** |_|_|_|° |_|_|' |_|_|"

Quarter: |_|_| **Section:** |_|_| **Township:** |_|_|S **Range:** |_|_|_|

III. Facility Operating Information

Do you plan to remain open after October 8, 1993 (Y/N)?: |_|

If yes, we plan to (check appropriate boxes)

- |_| Upgrade to Subtitle D
- |_| Upgrade and apply for small landfill exemption
- |_| Other (briefly explain)_____

If no, we plan to (check appropriate boxes)

- |_| Construct transfer station and haul
- |_| Incinerate
- |_| Construct material recovery facility, compost, etc.
- |_| Other (briefly explain)_____

Are monitoring wells installed? (Y/N): |_|

If you plan to stay open, will operation be public or private? *(Circle one)*

If you plan to close, has a closure plan been submitted to KDHE? (Y/N): |_|

IV. Planning/Grant Information

Have you formed a solid waste planning committee? (Y/N): |_|

Are you :

- |_| Currently developing a comprehensive plan?
- |_| Developing a comprehensive plan at a later date?
- |_| Modifying existing plan now/developing comprehensive plan later?

Are you anticipating applying for a planning grant? (Y/N): |_|

Are you a participant in a regional solid waste planning group? (Y/N): |_|

If yes, with which counties? _____/_____/_____/_____/

If yes, do you have a signed interlocal agreement? (Y/N) |_|

As per K.S.A. 65-3405, has a municipality been delegated planning responsibility? (Y/N): |_|

If yes, which municipality? _____ *(Attach interlocal agreement)*

_____ _____

Signature/Title *Date*

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Notice of Intent Instructions

I. Facility Owner Information

A. Indicate the landfill owner's name, address and telephone number. In the case of a City or County, the *owner name* should be the contact person for the City or County. In the case of a private owner, the *owner name* should be the name of the local contact person, while the address and phone number should be the address and phone number of the local contact person.

B. In the *Status of Owner* box, enter:
1 - public owner/public operator
2 - public owner/private operator
3 - private owner/private operator

II. Facility/Site Location

A. Indicate the name and address and existing permit number of the landfill. If an address is not pertinent, it need not be included.

B. Indicate the latitude and longitude of the approximate center of the landfill facility in degrees (°), minutes ('), and seconds ("). This information can be obtained from a US Geological Survey topographic map. If you are unable to determine the latitude and longitude, provide a copy of a scaled map indicating the approximate center of the landfill. KDHE will estimate the latitude and longitude.

C. Indicate the legal description of the approximate center of the facility by quarter section, section, township and range. This information can be obtained from a US Geological Survey topographic map. If you are unable to determine the legal description, provide a copy of a scaled map indicating the approximate center of the landfill. KDHE will estimate the legal description.

III. Facility Operating Information

A. Indicate whether you plan to keep your landfill open. If you do plan to remain open, place an "X" in the box which best describes the type of operation you are proposing - fully Subtitle D compliant, upgrading to meet the exempt small landfill criteria, or other type of operation. If you plan to close your landfill, place an "X" in the box which best describes the type of operation you are proposing to replace the landfill - transfer station, incineration, materials recovery, or other type of operation (ie. direct haul).

B. Indicate whether you currently have groundwater monitoring wells installed the landfill. If wells are installed, please attach any monitoring data.

C. If you plan to keep the landfill open, indicate whether the operation will be a private or public operation.

D. If you plan to close the landfill, indicate whether a closure plan has been submitted to KDHE.

IV. Planning/Grant Information *(if you are a private entity, skip this section)*

A. Indicate whether you have formed a solid waste management committee.

B. Indicate the status of your planning efforts in relation to K.S.A. 65-3406 - currently developing a comprehensive plan; modifying existing plan in order to move forward now and planning on developing a comprehensive plan at a later date; or planning to address comprehensive plan at a later date.

C. Indicate whether you plan to apply for a solid waste planning grant.

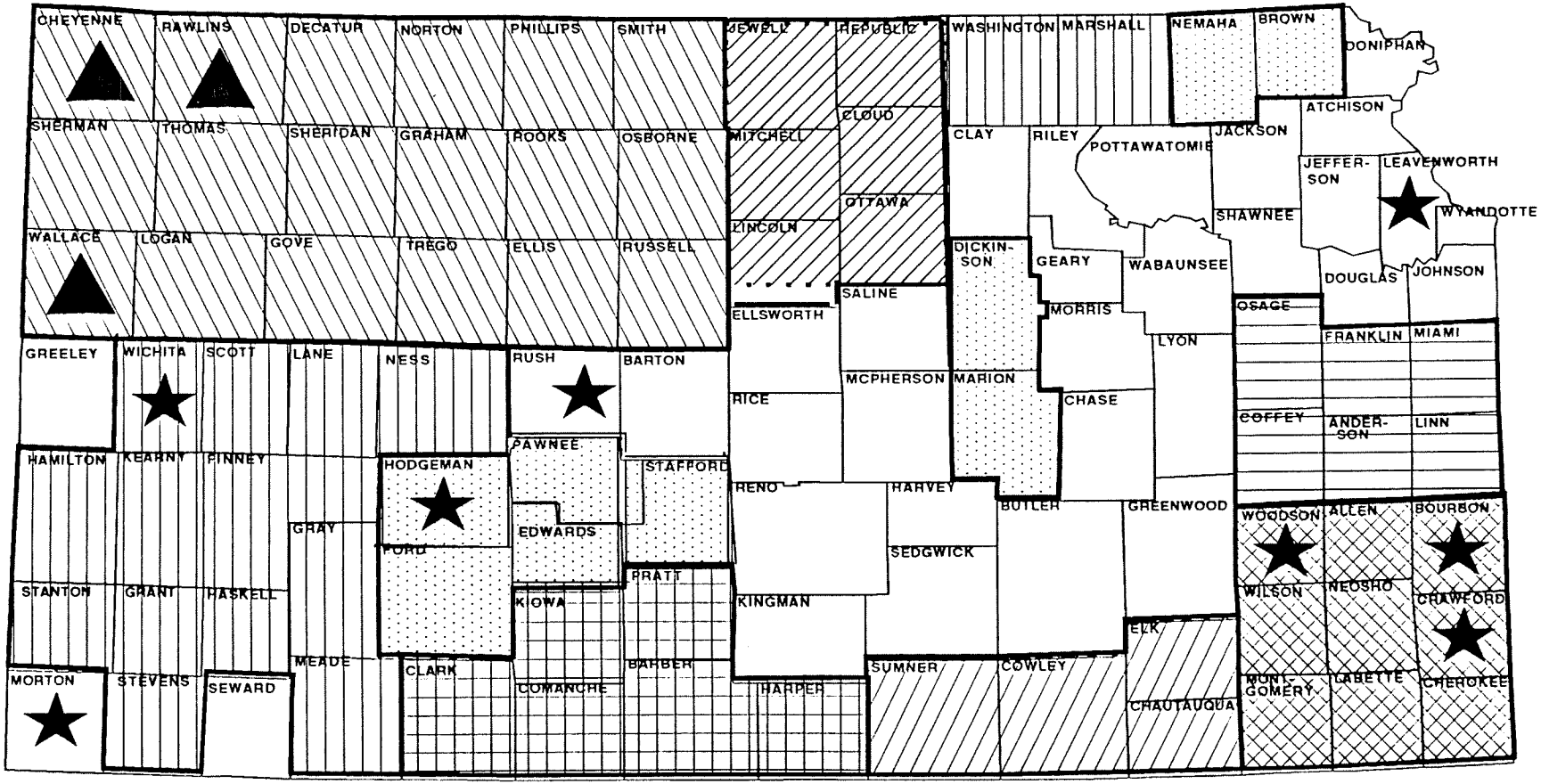
D. Indicate whether you plan to participate in a regional landfill. If you do, list the county or counties with which you plan to form a region. If you are planning to participate in a region, list any interlocal agreements you have with the other participants and attach those agreements.

E. Indicate any municipality which has been delegated planning responsibility in lieu of the county.

V. Signature - sign and date the form. Be sure to include your job title.

Solid Waste Management Planning Grant Applications

Aug & Oct 1993 Grant Cycles



★ **Individual Counties**

▲ **New Region**

24-4

11/3

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
726 MINNESOTA AVENUE
KANSAS CITY, KANSAS 66101

NOV 1 1993

OFFICE OF
THE REGIONAL ADMINISTRATOR

Charles Jones, Director
Division of Environment
Kansas Department of Health and Environment
Forbes Field, Building #740
Topeka, Kansas 66620-0001

Dear Mr. Jones:

We are happy to announce the Environmental Protection Agency's (EPA) partial approval of the Kansas municipal solid waste landfill permit program. EPA's approval of the Kansas program was effective on the date of publication of the Federal Register notice, October 7, 1993. A copy of the Federal Register notice is enclosed. Details on your approval appear in the notice.

We congratulate you and your staff on being the first state landfill permit program to gain final approval in Region VII. The Kansas landfill permit program is only one of eighteen final approvals, in the entire country, granted prior to the October 9, 1993 effective date of the Municipal Solid Waste Landfill Criteria. We look forward to continuing our partnership in environmental protection.

Sincerely,

William W. Rice
Acting Regional Administrator

Enclosure

RECEIVED
BUREAU OF
NOV 0 5 1993
WASTE MANAGEMENT

RECEIVED
NOV 0 3 1993
DIRECTOR OF ENVIRONMENT
DEPT. of HEALTH & ENVIRONMENT

RECYCLE

24-5

need to give notice prior to making its approval effective.

Compliance With Executive Order 12291

The Office of Management and Budget has exempted this rule from the requirements of section 3 of Executive Order 12291.

Certification Under the Regulatory Flexibility Act

Pursuant to the provisions of 5 U.S.C. 605(b), I hereby certify that this approval will not have a significant economic impact on a substantial number of small entities. It does not impose any new burdens on small entities. This notice, therefore, does not require a regulatory flexibility analysis.

Authority: This notice is issued under the authority of section 4005 of the Solid Waste Disposal Act as amended; 42 U.S.C. 6945.

Dated: September 22, 1993.

John C. Wise,

Acting Regional Administrator.

[FR Doc. 93-24662 Filed 10-6-93; 8:45 am]

BILLING CODE 6560-60-F

[FRL-4786-8]

Kansas; Final Partial Program Determination of Adequacy of State/Tribal Municipal Solid Waste Landfill Permit Program

AGENCY: Environmental Protection Agency.

ACTION: Notice of final partial program determination of adequacy on Kansas' application.

SUMMARY: Section 4005(c)(1)(B) of the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments (HSWA) of 1984, requires States to develop and implement permit programs to ensure that Municipal Solid Waste Landfills (MSWLFs) which may receive hazardous household waste or small quantity generator waste will comply with the revised Federal MSWLF Criteria (40 CFR part 258). RCRA section 4005(c)(1)(C) requires the Environmental Protection Agency (EPA) to determine whether States have adequate "permit" programs for MSWLFs, but does not mandate issuance of a rule governing such determinations. The EPA has drafted and is in the process of proposing a State/Tribal Implementation Rule (STIR) that will provide procedures by which the EPA will approve, or partially approve, State/Tribal landfill permit programs. The Agency intends to approve adequate State/Tribal MSWLF permit programs as applications are submitted. Thus the approvals are not dependent on final promulgation of the STIR. Prior to promulgation of the STIR, adequacy determinations will be made based on the statutory authorities and requirements. In addition, States/Tribes may use the draft STIR as an aid in interpreting these requirements. The Agency believes that early approvals have an important benefit. Approved State/Tribal permit programs provide for interaction between the State/Tribe and the owner/operator regarding site-specific permit conditions. Only those owners/operators located in State/Tribes with approved permit programs can use the site-specific flexibility provided by 40 CFR part 258 to the extent the State/Tribal permit program allows such flexibility. The EPA notes that regardless of the approval status of a State/Tribe and the permit status of any facility, the Federal criteria under 40 CFR part 258 will apply to all permitted and unpermitted MSWLF facilities.

Kansas applied for a determination of adequacy under section 4005 of RCRA. The EPA reviewed Kansas' application and made a tentative determination that Kansas' permit program would be adequate to ensure compliance with 40 CFR part 258 contingent upon its adoption of 40 CFR part 258 by reference. After consideration of the one comment received, plus review of Kansas regulations in relation to the EPA regulations promulgated since the application was submitted, the EPA is today issuing a final determination of partial program adequacy for the Kansas landfill permit program.

EFFECTIVE DATE: The determination of adequacy for Kansas shall be effective on October 7, 1993.

FOR FURTHER INFORMATION CONTACT: Ms. Althea M. Moses, 726 Minnesota Ave., Kansas City, Kansas 66101; (913) 551-7055.

SUPPLEMENTARY INFORMATION:

A. Background

On October 9, 1991 the EPA promulgated revised Criteria for MSWLFs (40 CFR part 258). Subtitle D of RCRA, as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA), requires States to develop permitting programs to ensure that facilities comply with the Federal Criteria under 40 CFR part 258. Subtitle D also requires in section 4005 of RCRA that the EPA determine the adequacy of State municipal solid waste landfill permit programs to ensure that facilities comply with the revised Federal Criteria. To fulfill this requirement, the Agency has drafted and is in the process of proposing a State/Tribal Implementation Rule (STIR). The rule will specify the requirements which State/Tribal programs must satisfy to be determined adequate.

The EPA intends to propose in STIR to allow partial approval if: (1) The Regional Administrator determines that the State/Tribal permit program largely meets the requirements for ensuring compliance with 40 CFR part 258; (2) changes to a limited narrow part(s) of the State/Tribal permit program are needed to meet these requirements; and (3) provisions not included in the partially approved portions of the State/Tribal permit program are a clearly identifiable and separable subset of 40 CFR part 258. As provided in 40 CFR part 258, the EPA's Subtitle D standards will take effect on October 9, 1993. Consequently, any portion of the Federal Criteria which are not included in an approved State/Tribal program by October 9, 1993 would apply directly to the owner/operator. The requirements of the STIR, if promulgated, will ensure that any mixture of State/Tribal and Federal rules that take effect will be fully workable and leave no significant gaps in environmental protection. These practical concerns apply to individual partial approvals granted prior to the promulgation of the STIR. Consequently, the EPA reviewed the program approved today and concluded that the State/Tribal and the Federal requirements mesh reasonably well and leave no significant gaps. Partial approval would allow the Agency to approve those provisions of the State/Tribal permit program that meet the requirements and provide the State/Tribe time to make necessary changes to the remaining portions of its program. As a result owners/operators will be able to work with the State/Tribal permitting agency to take advantage of the flexibility of 40 CFR part 258 for those portions of the program which have been approved.

The EPA will review State/Tribal requirements to determine whether they are "adequate" under section 4005(c)(1)(C) of RCRA. The EPA interprets the requirements for States or Tribes to develop "adequate" programs for permits or other forms of prior approval to impose several minimum requirements. First, each State/Tribe must have enforceable standards for new and existing MSWLFs that are technically comparable to the EPA's revised MSWLF criteria. Next, the State/Tribe must have the authority to issue a permit or other notice of prior approval to all new and existing MSWLFs in its jurisdiction. The State/Tribe also must provide for public participation in permit issuance and

24-6

enforcement as required in section 7004(b) of RCRA. Finally, the EPA believes that the State/Tribe must show that it has sufficient compliance monitoring and enforcement authorities to take specific action against any owner or operator that fails to comply with an approved MSWLF program.

The EPA Regions will determine whether a State/Tribe has submitted an "adequate" program based on the interpretation outlined above. The EPA plans to provide more specific criteria for this evaluation when it proposes the STIR. The EPA expects State/Tribes to meet all of these requirements for all elements of a MSWLF program before it gives full approval to a MSWLF program. The EPA also is requesting State/Tribes seeking partial program approval to provide a schedule for the submittal of all remaining portions of their MSWLF permit programs. The EPA notes that it intends to propose to make submissions of a schedule mandatory in the STIR.

B. The State of Kansas

In the tentative determination at 58 FR 44833 (August 25, 1993) the EPA announced the availability of the application for public comment. There were no requests for a public hearing, consequently no public hearing was held. The only written comment received was from a municipality in favor of the EPA's approval of the Kansas program.

As stated in the tentative determination, Kansas was adopting the Federal Criteria by reference, with some minor, "practical" changes (e.g., all references to "an approved state" were replaced with "the Director"). Kansas indeed adopted those Federal Criteria effective June 1, 1993, by reference, in KAR 28–29–98. The Kansas regulation does not include an exemption from ground water monitoring for small landfills. This is consistent with the current Federal regulations as a result of *Sierra Club* v. *U.S. Environmental Protection Agency*, 992 F.2d 337 (D.C. Cir. 1993), which vacated the exemption found at 40 CFR 258.1(f). In addition, Kansas will be using the flexibility afforded in 40 CFR 258.54(a)(1) and (2), to specify a different list of Appendix I monitoring parameters that are more appropriate for the landfills in Kansas; Appendix II will be the same as the Federal Appendix II.

However, Kansas also had adopted KAR 28–29–99 on July 1, 1993, which gives an extension of the effective dates of their landfill regulations to certain landfills. The Kansas extension was written in an effort to keep pace with the EPA regulations in providing relief for small landfills in complying with 40 CFR part 258 by its effective dates. However, during the period from July 28, 1993, to September 27, 1993, the EPA proposed and published its final rule for the small landfill extension, 40 CFR 258.1(f), 58 FR 51536 (October 1, 1994). The EPA's rule is now more restrictive than the Kansas rule, with the result that the EPA can only approve Kansas as a partial program.

Thus, the EPA is reserving for Federal enforcement the following facilities: (1) New units accepting less than 100 tons per day (tpd) of solid waste; (2) existing units or new units which are listed on the National Priorities List (NPL); and (3) existing units which have accepted less than 100 tpd of solid waste prior to October 9, 1993 and accept greater than 100 tpd of solid waste during the period from October 9, 1993 to April 4, 1993. All such units, in accordance with the Federal requirements at 40 CFR 258.1(f), are subject to a compliance date of October 9, 1993 and are not eligible for a compliance date extension to April 9, 1994.

All other aspects of the Kansas program are determined adequate for approval, and the Kansas program is determined to have adequate enforcement capabilities and public participation and monitoring requirements.

The Kansas landfill permit program is not enforceable on Indian lands.

While the State of Kansas had originally requested full program approval, it has acknowledged that the EPA can only grant partial approval. The State has met the requirements of the State/Tribal Implementation rule for partial program adequacy determination by submitting a schedule to comply with the small landfill compliance extension date rule. The schedule is as follows: (1) Draft regulations, October 15, 1993; (2) public hearing on regulations, January 15, 1994; (3) adopt regulations, February 15, 1994; and (4) regulation effective, April 2, 1994. The EPA has reviewed this schedule and concludes that it is reasonable.

C. Decision

After reviewing the public comments, I conclude that Kansas' application for partial program adequacy determination meets all of the statutory and regulatory requirements established by RCRA for partial program adequacy.

Accordingly, Kansas is granted a partial program determination of adequacy for its municipal solid waste landfill permit program, with the exception that the EPA is reserving for Federal enforcement the following facilities: (1) New units accepting less than 100 tons per day (tpd) of solid waste; (2) existing units or new units which are listed on the National Priorities List (NPL); and (3) existing units which have accepted less than 100 tpd of solid waste prior to October 9, 1993 and accept greater than 100 tpd of solid waste during the period from October 9, 1993 to April 4, 1993. All such units, in accordance with the Federal requirements at 40 CFR 258.1(f), are subject to a compliance date of October 9, 1993 and are not eligible for a compliance date extension to April 9, 1994.

Section 4005(a) of RCRA provides that citizens may use the citizen suit provisions of section 7002 of RCRA to enforce the Federal MSWLF criteria in 40 CFR part 258 independent of any Sate/Tribal enforcement program. As the EPA explained in the preamble to the final MSWLF criteria, the EPA expects that any owner or operator complying with provisions in a State/Tribal program approved by the EPA should be considered to be in compliance with the Federal Criteria. See 56 FR 50978, 50995 (October 9, 1991).

Today's action takes effect on the date of publication. The EPA believes it has good cause under section 553(d) of the Administrative Procedure Act 5 U.S.C. 553(d), to put this action into effect less than 30 days after publication in the **Federal Register**. All of the requirements and obligations in the State's/Tribe's program are already in effect as a matter of State/Tribal law. The EPA's action today does not impose any new requirements that the regulated community must begin to comply with. Nor do these requirements become enforceable by the EPA as Federal law. Consequently, the EPA finds that it does not need to give notice prior to making its approval effective.

Compliance With Executive Order 12291

The Office of Management and Budget has exempted this notice from the requirements of section 3 of Executive Order 12291.

Certification Under the Regulatory Flexibility Act

Pursuant to the provisions of 5 U.S.C. 605(b), I hereby certify that this final approval will not have a significant economic impact on a substantial number of small entities. It does not impose any new burdens on small entities. This notice, therefore, does not require a regulatory flexibility analysis.

Authority: This notice is issued under the authority of section 4005 of the Solid Waste Disposal Act as amended; 42 U.S.C. 6946.

24-7

LANDFILLS WITH GROUNDWATER CONTAMINATION

LANDFILLS WITH KNOWN CONTAMINATION		25
CONTAMINATED LANDFILLS WITH PRECIPITATION LESS THAN 25 IN/YEAR		13
LESS THAN 20 TON/DAY	11	
GREATER THAN 20 TON/DAY	2	
CONTAMINATED LANDFILLS WITH PRECIPITATION GREATER THAN 25 IN/YEAR		12
LANDFILLS WITH CONTAMINATION ABOVE THE DRINKING WATER STANDARD		19
LANDFILLS WITH VOC CONTAMINATION ABOVE THE DRINKING WATER STANDARD		15
LANDFILLS WITH INORGANIC CHEMICAL CONTAMINATION ABOVE THE DRINKING WATER STANDARD		8

TABLE I
SUMMARY OF CHANGES TO THE EFFECTIVE DATES OF THE MSWLF CRITERIA

	MSWLF units accepting greater than 100 TPD	MSWLF units accepting less than 100 TPD; are not on the NPL; and are located in a state that has submitted a [redacted] application for approval by 10/9/93	MSWLF units that meet the small landfill exemption in 40 CFR §258.1(f)	MSWLF units receiving flood-related waste
General effective date.[1] This is the effective date for location, operation, design, and closure/post-closure.	October 9, 1993	April 9, 1994	October 9, 1995	Up to October 9, 1994 as determined by State in six month intervals
Date by which to close if cease receipt of waste by the general effective date.	October 9, 1994	October 9, 1994	October 9, 1996	Within one year of date determined by State; no later than October 9, 1995
Effective date of ground-water monitoring and corrective action.	Prior to receipt of waste for new units; October 9, 1994 through October 9, 1996 for existing units and lateral expansions	October 9, 1994 for new units; October 9, 1994 through October 9, 1996 for existing and lateral expansions	October 9, 1995 for new units; October 9, 1996 for existing and lateral expansions	October 9, 1994 for new units; October 9, 1994 through October 9, 1996 for existing and lateral expansions
Effective date of financial assurance requirements.	April 9, 1995	April 9, 1995	October 9, 1995	April 9, 1995

[1] If a MSWLF receives waste after this date the unit must comply with all of Part 258.

24-9

WICHITA

DEPARTMENT OF PUBLIC WORKS
OFFICE OF THE DIRECTOR
CITY HALL — EIGHTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202

September 15, 1993

House Energy and Natural Resources Committee
Carl Holmes, Chairman
State Capitol Building
Topeka, Kansas 66612

Re: Proposed Bill on Landfill Disposal of Incinerator Ash

Ladies and Gentlemen,

I am writing on behalf of the City of Wichita to provide the Committee with the position of the City in regards to the proposed bill addressing the disposal of incinerator ash in Kansas Landfills.

The City of Wichita supports the prohibition of the disposal of incinerator ash at solid waste disposal areas in the state.

Thank you for the opportunity to provide comment on this proposed legislation.

Sincerely,

Joseph T. Pajor,
Natural Resources Director
CITY OF WICHITA

JTP/bn

11-18-93
H. E&NR
Att. 25

Post-it™ brand fax transmittal memo 7671	# of pages ▸ 2
To Rainey Gilliland	From Peter Revell
Co. State House	Co. Lyons Salt Co
Dept. KS	Phone #
Fax # 1-296-3824	Fax # 1-262-7297

Steve KADel

INFO ON ASH IN AKZO'S NY MINE

TO: Mpls Mgmt
GM's
REM's
Plant Managers
Transportation on East Coast
Terminal Supt.

FROM: BOLSON SALT Brian Olson

DATE: October 15, 1993 01:00:54 PM
SUBJECT: Retsof Ashcrete project cleared

REFERENCE: Articles 8/27/93

The following excerpts were taken from the latest 2 articles (Rochester and New York City papers) regarding the Retsof, NY (Akzo) project to use incinerator ash to create a ash/concrete slurry to fill the mine. Please note the dates are the end of August. If anyone has current information, please forward.

Akzo has moved a step closer to building a demonstration project that could lead to construction of a controversial storage facility for waste incinerator ash. The state DEC informed them on August 24, 1993 that the application was complete. If Akzo is able to answer several technical questions, final approval could be issued within 45 days (about NOW!!!).

The project would use 60 tons of ash to determine the flow patterns of large volumes of as slurry. Larry Milliken, Akzo's director of storage projects, said they would like to begin the experiment in late October. The firest stage, depositing the slurry, would take about a week. It would then take about 3 months to cure the material and another 2 months to do chemical analysis and leach tests.

The full scale operations would be capable of handling 8000 tpd. Various components of the demonstration plant would range from 1/4 to 1/2 of the full size project.

Akzo must answer several questions regarding environmental and engineering requirements:

1. How effectively the structure will contain any contaminants.
2. How much water would be left over after the cement solidifies.
3. How accurately the company can analyze the chemical composistion of various batches of ash.

DEC also said that they must satisfy all concerns brought up by Leicester town officials.

The project would also mechanically extract metals from the ash

11-18-93
H. En & NL
Att. 26

v[illegible] of ash entering the processing plant would be reduced by 3-5% th[illegible]gh the upfront removal of metals, which could be sold for $.3[illegible]/pound. ($700/ton - at 8,000 tons/day * 4% (ave) metal removal =

$224,000/day potential in metals alone.) Whether they could achieve these numbers or not would have to be seen.

The mine is 8,000 acres - almost as big as Manhatten - and contains 80 million cubic feet of air space. The mine cavity in which the ashcrete will be dumped is 1,100 feet deep, 58 degrees and 38 percent humidity at all times.

Any further information would be greatly appreciated.

Brian Olson
"U-spy, They Cry"
(612) 742-4713

26-2