

Approved: Carl Dean Holmes
Date 4-24-96

MINUTES OF THE HOUSE COMMITTEE ON ENERGY AND NATURAL RESOURCES.

The meeting was called to order by Chairperson Carl Holmes at 12:35 p.m. on March 27, 1996, in Room 526-S of the Capitol.

All members were present except: Representative Doug Lawrence - Excused
Representative Terry Presta - Excused

Committee staff present: Raney Gilliland, Legislative Research Department
Dennis Hodgins, Legislative Research Department
Mary Torrence, Revisor of Statutes
Marcia Ayres, Committee Secretary

Conferees appearing before the committee: Bill Craven, Ks. Natural Resource Council & Sierra Club
Lance Burr, Friends of the Kaw
Dr. E. Robert Hedman, retired research hydrologist
T. J. Hittle, Riley County resident
Jon Held, Manhattan landowner
Paul Liechti, Kansas Biological Survey
Cynthia Abbott, Kansas Audubon Council
Steve Montgomery, Kansas Wildlife Federation
Caitlin Boley, Lawrence High School student
Mark Maher, Citizens for the Future of Jefferson County
Darrell Monte, Division of Parks and Recreation
Edward R. Moses, Kansas Aggregate Producers' Association

Others attending: See attached list

Chairperson Holmes updated the committee with regard to what is happening in the Nebraska legislature as they try to tighten their water laws. He also announced the planned schedule for working conference committee bills today and informed the committee of the possibility of hearings next Thursday on a couple of bills that are moving through the Senate at the present time.

Hearing on SB 617: Moratorium on sand dredging along portions of the Kansas river

Bill Craven. Mr. Craven, legislative coordinator for the Kansas Natural Resource Council, encouraged the committee not to delay in passing SB 617 if the previously undredged stretches of the river addressed in the bill are to endure. (Attachment #1)

Lance Burr. Mr. Burr spoke on behalf of the Friends of the Kaw and reported on studies of sand in the state. He also reported on studies of the cost of sand that show that off-river sand is a better bargain than dredging from the river. He urged the committee to pass SB 617 because there is a lot of sand available and the moratorium applies only to new dredging operations. (Attachment #2)

Bob Hedman. Dr. Hedman, a retired research hydrologist with the U.S. Geological Survey, spoke in support of SB 617. He presented a summary of his report: *Channel Geometry and Geomorphology of the Lower Kansas River*. (Attachment #3)

T. J. Hittle. Mr. Hittle testified as a lifelong Kansas resident and land owner, and he urged the committee to support passage of SB 617 in order to protect the Kansas river from additional damage from dredging while it is being studied for recreational use. (Attachment #4)

Jon Held. Mr. Held testified as a consulting engineer, farmer, KSU instructor, and avid outdoorsman. He opposed SB 617 due to environmental issues and because he believes it is an effective method of stealing land from farmers. (Attachment #5)

Paul Liechti. Mr. Liechti presented testimony from Edward Martinko, State Biologist and Director of the Kansas Biological Survey, who could not be present. He testified that dredging causes a change in the

CONTINUATION SHEET

MINUTES OF THE HOUSE COMMITTEE ON ENERGY AND NATURAL RESOURCES, Room 526-S Statehouse, at 12:35 p.m.. on March 27, 1996.

morphology and hydrology of a river and can have a significant effect on in-stream and near-stream habitats; therefore, the State of Kansas should carefully consider limiting dredging to only those segments currently being mined. (Attachment #6)

Cynthia Abbott. Ms. Abbott, representing the Kansas Audubon Council, strongly supported the concept of a recreational corridor along the Kansas (Kaw) River and thus supports a moratorium on new permits for sand dredging to prevent degradation while a feasibility study regarding such a corridor is done. (Attachment #7)

Steve Montgomery. Mr. Montgomery testified as secretary of the Kansas Wildlife Federation and as the owner of riverfront property in support of **SB 617**. He stated that the Kaw River Study by the Department of Wildlife and Parks is consistent with the Kansas Wildlife Federation goal of promoting and preserving access to the outdoors for future generations, and that authorization for new dredging activities could conflict with plans the Department may be developing. He urged the continued stewardship of this public resource (the Kansas River) by a sound and studied approach. (Attachment #8)

Caitlin Boley. Ms. Boley, a junior from Lawrence High School, spoke in support of **SB 617**. As a Girl Scout and frequent canoeist, she has learned the importance of preserving the environment for future generations. (Attachment #9)

Mark Maher. Mr. Maher spoke on behalf of Citizens for the Future of Jefferson County and for Friends of the Kaw in support of **SB 617**. He stated it would be irresponsible for the state or any county to grant permits for dredging operations in reaches of the river which have not been degraded by dredging until the Corps, KDOR, other concerned state and federal agencies, industry representatives, and other interested parties can agree on a set of production figures that truly represents what has been taken from the Kansas River since February, 1991. (Attachment #10)

Darrell Montei. Mr. Montei, representing the Kansas Department of Wildlife and Parks, agreed with the basic premise of **SB 617** as originally understood which was to examine portions of the Kansas River as a recreational corridor. He is concerned that amendments to the bill have significantly broadened the scope of the study so the Department offered amendments to narrow the scope to a level that can be performed and provide meaningful information. (Attachment #11)

Edward "Woody" Moses. Mr. Moses appeared on behalf of the Kansas River Sand Producers in opposition to **SB 617**. He displayed the \$1.4 million dollars' worth of studies conducted on the Kansas River. He feels the bill is a poorly constructed and fatally flawed piece of legislation incapable of meeting the goals of those seeking to protect the Kansas River or those seeking to develop its mineral resources for all Kansans. He would support a study of the recreational aspects of the Kansas River only if it is funded and its goals are clearly outlined. (Attachment #12)

Written testimony from Joe Hyde of Lawrence (Attachment #13) and Dr. Cynthia Annett, a university professor specializing in the ecology of large river systems, (Attachment #14) in support of **SB 617** was distributed to committee members.

Questions followed after which the hearing was closed so the committee could convene the conference committees.

Chairperson Holmes handed out information provided by the Division of Water Resources that committee members had requested on Monday regarding **SB 621**. (Attachment #15)

The meeting adjourned at 2:05 p.m.

ENERGY AND NATURAL RESOURCES COMMITTEE
COMMITTEE GUEST LIST

DATE: March 27, 1996

NAME	REPRESENTING
Robert Neis	Weaver Bottom drainage dist
Bob Hedman	SELF
RUSSELL LARKIN	SELF
RICHARD HILL	SELF
Steve Montgomery	Ks Wildlife Federation
Jon Held	self - landowner/farmer
T.J. Hittle	Riley county resident
Cynthia Abbott	Ks. Audubon Council
Bey Gaver	KARC/Seena
Tom Hall	Victory SAND & GRAVEL
HUGH DIDIER	MEIER'S READY MIX, INC
JOHN NEUNER	KANSAS SAND & CONCRETE INC
DON COLLINS	BUILDERS SAND CO.
Jim Peterson	Victory Sand
A.Y. DRUMMOND	KAN VALLEY SAND, GRAVEL, &
Bob Toffer	Ks Contractors Association
Jean Burke	Burke & Associates
John Naramore	Self - potential dredge in backyard
Lance BURR	Friends of the Kaw



Kansas Natural Resource Council

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Ken Grotewiel, Wichita

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Testimony of Bill Craven Kansas Natural Resource Council and Kansas Sierra Club S.B. 617

House Energy and Natural Resources Committee
March 27, 1996

S.B. 617 has been substantially amended since the bill was first conceived during last fall's interim hearings, and considerable changes were made to the bill before it passed the Senate by a vote of 24-11. In the spirit of compromise, several changes have been made to accommodate various concerns. These changes have been accepted by the bill's proponents. We encourage the committee to report favorably this bill. Unlike a lot of legislation, this bill must not be delayed if the previously undredged stretches of the river addressed in the bill are to endure.

Intent: S.B. 617 imposes a two-year moratorium until March, 1988, on new sand-dredging operations in the Kansas River from Junction City to Lawrence. The moratorium is accomplished by directing two state agencies responsible for granting permits not to do so while the study is ongoing. The bill also directs the Kansas Water Office and the Kansas Department of Wildlife and Parks to conduct a study to determine which parts of the river are suitable for a public recreational corridor. The bill has been amended so that the study will also include economic impacts. The study shall be completed by January 12, 1998.

The bill is premised on the facts that the Kansas River—and its sand—are owned by the public. The bill reflects the concerns that we don't know how much sand is taken from the river or how that sand is ultimately used. Those issues have been addressed in other legislation and are not specifically relevant here. However, it is important to point out that the two-year window in this bill will provide time for agencies at the state and federal level to improve their compliance with monitoring, reporting, and other regulatory concerns.

The moratorium applies to a stretch of the river most of which has never been dredged. Upstream of Lawrence, the river has never been studied by the Corps of Engineers or by the state. It has never been looked at in terms of its recreational potential.

The study has already been authorized by the Kansas Water Authority. The Department plans to conduct the study with existing resources, and it said the study will take approximately two years. The fiscal note is less than \$8,000. **The peanut of the bill is that it doesn't make sense to study the recreational possibilities of the river if new dredging operations are allowed in stretches of the river which have not previously been dredged and which may be in the best stretches of the river for a recreational corridor.**

The bill has two grandfather clauses and an expansion clause: (1) The bill grandfathers in existing dredging operations. (2) The bill allows current dredging operations to renew their permits. (3) The bill permits current dredging operations to move to stretches of the river adjacent to their current operations.

Another change from the original bill is new Section 4. This section names the groups which shall be invited to send a representative to the meetings convened by the Kansas Water Office and the Kansas Department of Wildlife and Parks. The membership is quite balanced and broadly representative of public agency,

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private landowner, industry, economic development, recreational, and natural resource groups.

Finally, the bill has several exceptions in it which permit dredging even in the area of the proposed moratorium when necessary to protect the water intake structures of public utilities, to preserve transportation right of ways, levees, dikes, and other structures necessary to preserve property in or along the Kansas River. The “public utility” language was specifically requested by Western Resources, and the other language is intended to protect private farmland and other property.

Local Support: The bill is supported by resolutions from the city councils of Topeka, Manhattan, and Lawrence. The bill is supported by resolutions from the county commissions of Riley, Shawnee, and Douglas County. The bill is supported by the mayor of Perry in Jefferson County and residents of the unincorporated towns of Newman, Grantville, Medina, and Williamstown. The fact that these local units of government and residents in Jefferson County support the intent of this bill is a powerful statement which discounts the “horror stories” presented by the bill’s opponents.

Additional amendments: The bill was amended in committee so that the moratorium will not extend east of Lawrence. This amendment should satisfy those who are concerned about maintaining the supply of river sand available for various purposes in that part of the state.

Economic considerations: The study will address economic considerations. However, it is important to stress that there is no shortage of sand available from private landowners who own land in the floodplain. The committee has the handout which shows that sand from off-river pits is less expensive than sand taken from the Kansas River. We should encourage this kind of off-river private enterprise, and we should discourage taking sand from a public resource. There is no dispute that economic growth can proceed without sand from the Kansas River. The most objectionable tactic of the opponents is their claim that this bill is about the price of sand.

Relationship to other legislation: Opponents have tried to link this bill to S.B. 621, the compromise measure which establishes the conditions under which sand pits must account for their water losses by obtaining water rights. **The compromise on S.B. 621 was agreed to by the industry.** It is therefore inappropriate at this point to complain about S.B. 621 in the context of the discussion about S.B. 617. The two bills are about quite different things. Because S.B. 621 reinstates a requirement that was omitted only last year, that one year gap must be viewed as having minimal economic impacts. And S.B. 617 does not affect any existing dredging operation or the ability to renew permits or for dredging operators to move to adjacent land.

The Future: The most eloquent testimony on the Kansas River has come from young people who remind us older folks about the importance of preserving our natural heritage. The critical public policy issue at the state level is the importance that Kansans create the rules which affect the Kansas River. Since the Kansas River--and the Kansas River sand--is owned by the public, we should not simply be idle while these decisions which govern our resources are made at the federal level. We need to construct our own vision of what the Kansas River should be for Kansans. This bill, with its broad-based study of recreational and economic issues, gives us time to do that.

From
James Burr
3-27-96

Burns &
McDonald
Gudy

POTENTIAL AREAS FOR SAND PIT OPERATION

Areas which are determined to have high, intermediate and low probabilities for future use as commercial sand pit operations are shown on sand pit suitability maps for each reach. The criteria for establishing the high, intermediate and low probability areas is based on information from sand dredgers and sand pit operators and is subject to future changes in economic and regulatory conditions. Based on current conditions, the criteria for various probability areas is as follows:

- o High Probability Area: Overburden thickness is less than 10% of total alluvial thickness and more than 30 feet of S2 sands exist.
- o Intermediate Probability Area: Overburden thickness is 10 to 25% of total alluvial thickness and 15 to 30 feet of S2 sands exist.
- o Low Probability Area: Overburden thickness is greater than 25% of total alluvial thickness or less than 15 feet of S2 sands exist.

Low probability areas are considered unfavorable for commercial sand pit operations based on available data and are not believed to have significant potential for development under present economic and regulatory conditions.

ESTIMATED SAND QUANTITIES BY REACH

The estimated quantities of available S1 and S2 sands in high and intermediate probability areas by river reach are as follows:

Intermediate Probability Sands (millions of tons)

River Reach:	<u>Turner - Bonner Springs</u>	<u>Bonner Springs - DeSoto</u>	<u>DeSoto - Eudora</u>	<u>Eudora - Lawrence</u>
S1 Sand	24	61	120	101
S2 Sand	<u>61</u>	<u>58</u>	<u>120</u>	<u>180</u>
Total:	85	119	240	281

High Probability Sands (millions of tons)

River Reach:	<u>Turner - Bonner Springs</u>	<u>Bonner Springs - DeSoto</u>	<u>DeSoto - Eudora</u>	<u>Eudora - Lawrence</u>
S1 Sand	2	10	1	7
S2 Sand	<u>10</u>	<u>19</u>	<u>2</u>	<u>30</u>
Total:	12	29	3	37

Combined Intermediate and High Probability Sands (millions of tons)

River Reach:	<u>Turner - Bonner Springs</u>	<u>Bonner Springs - DeSoto</u>	<u>DeSoto - Eudora</u>	<u>Eudora - Lawrence</u>
S1 Sand	26	71	121	108
S2 Sand	<u>71</u>	<u>77</u>	<u>122</u>	<u>210</u>
Total:	97	148	243	318

The estimated quantities of sand are based on a dry density of 90 pounds per cubic foot and do not account for varying amounts of unusable materials which may occur within the sand deposits. Areas which are not available for potential sand pit development because of existing land use are not included in the estimated quantities.

E ROBERT HEDMAN
LAWRENCE, KANSAS

Representative Carl D. Holmes, Chair
Committee on Energy and Natural Resources
Kansas State Capitol
Topeka, Kansas 66612

Re: The Impacts of Sand and Gravel Dredging in Kansas River

I am a research hydrologist retired from the U. S. Geological Survey. I thank the members of this committee for the opportunity to present this summary of my report: *Channel Geometry and Geomorphology of the Lower Kansas River* .

In-channel mining upsets the delicate balance of the river's sediment transport and geometry. Suspended sediment is the fine material in transport and it is mixed with the flowing water. In contrast, sand and gravel are pushed along near the streambed, and for this reason are known as bedload. Suspended load and bedload transport need to be treated separately.

A site on the Kansas River 2 miles upstream from Lecompton was used to analyze the water depth necessary for bedload transport. The computed water depth necessary for initial motion is about 20 feet, and to sustain significant movement it is about 40 feet. Therefore, the elevation of the water surface would have to be well above the level of a 25-year flood and overbank for significant movement of bedload material. These results are consistent with other data that show bedload material of this size, with a channel gradient this low (1.4 feet per mile), can only have significant movement during major floods.

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In-channel mining enlarges the active channel. The size of the channel is then greater than necessary, and the river will attempt to heal the channel. Very little material can be transported downstream to the channel being mined. Therefore, the principal source of replacement bed material is the caving banks. The percentage of sand and gravel in the banks is only about 17%. The remainder (83%) is silt and clay. This indicates the river will attempt to use about 6 tons of the bank material to replace one ton of the coarse material that is removed from the channel by mining, and the 5 tons of silt and clay will move down the river as suspended sediment.

Simons and others (1984), in a study of the Kansas River for the Corps of Engineers stated that sand and gravel dredging appears to be the primary cause of the bank erosion and channel widening in the lower 30 miles of the Kansas River. The volume of material dredged approximates the volume of the portion of the channel that has been enlarged by degradation and bank erosion. Available data show areas within the lower Kansas River which have undergone the most severe degradation are the same locations where extensive dredging has taken place.

It has also been reported that a common complaint is that the material that refills the dredge holes in the lower Kansas River is finer than the virgin material. It has been assumed that this is due to the federal reservoirs upstream, but actually: The hydraulic conditions are generally insufficient to move gravel sizes. Coarse material being mined is from ancient sand and gravel deposits which are coarser than the material now being transported by the river.

Testimony, 03.27.96 to the:
Kansas House Energy and Natural Resources Committee
by: T.J. Hittle - Riley County resident

Thank you for allowing me to present this testimony in support of SB 617.

Over the past few months, residents, businesses, landowners, farmers, and County Commissions from all over the Kansas river valley have seen the wisdom in SB 617. If we can do nothing more than build a better link between our young people, our families, and our communities, SB 617 has been a tremendous success.

Recreation and dredging moratorium petitions on the county and city level have been submitted, debated and supported up and down the Kansas river. This is truly a grass roots campaign.

The people in my home, Riley County, were heard in recent County Commission hearings. During those hearings, the local sand and gravel industry was also heard. Riley County Commissioner Jim Williams stated. "I can't remember anyone bringing a proposal in the form of a resolution to the commission where everyone was totally positive." The resolution passed, 3-0.

Our many local sand and gravel producers made the wise decision to move out of the river and pit mine. There is land available all along the Kansas river corridor for pit mining sand. It has been well documented that there is a virtually unlimited supply of sand. Since their move, the cost of sand has consistently remained well below average state prices/ton.

It is clear that lobbyist Edward Moses doesn't speak for a great many of the Kansas Aggregate Producers. How credible can anyone be when they testified in a recent Senate hearing that "there is a nesting pair of Bald Eagles at almost every dredge on the Kansas river." The experts from U.S. Fish and Wildlife, along with the Kansas Dept. of Wildlife and Parks tell us that there are NO known nesting pairs of Bald Eagles on the Kansas river.

As a lifelong Kansas resident and land owner, I have developed a real love for its people, its wildlife, and its natural beauty. Born and raised in Medicine Lodge, KS, near the Medicine river, my years in a farming family eventually led to Kansas State University and a profession in Horticulture and Landscape Architecture.

As a Kansan that enjoys rivers, fishing, and the wildlife around Kansas rivers, you soon learn about the lack of river recreation in Kansas. There are only three rivers in Kansas that are accessible to the public. Out of those three, only the Kansas river is safely suitable

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for year around recreation. So where do Kansas families go when they want a river experience? Missouri, Colorado, Nebraska, Oklahoma, and Arkansas. Each of those states offer river recreation opportunities and numerous public accesses. That is where Kansans spend their money. Can we get those families to recreate along the Kansas river corridor? YES....with the passage of SB 617

A great many families, farmers, landowners, and businesses in Kansas will benefit. Why do suppose that the Kansas Farm Bureau and the other many great farming organizations do NOT oppose this bill?

There are multimillion dollar economic benefits from recreation on and near a healthy, accessible, Kansas river. Some of these recreational benefits include:

- Increased sales of fishing, hiking, riding, camping, photographic supplies, gas, boats, and boating equipment.
- Groceries, restaurant meals, campgrounds, and motel rooms, bed and breakfast reservations, are among many other pro-business benefits.
- After speaking to the Coleman company about SB 617, I can tell you that they are excited to hear that the Kansas Legislature is considering this bill.
- The Kansas river recreational corridor can be a key part of tourism and the regional draw of the nearly 24.2 million recreational paddlers across the nation.
- According to the 1995 USDA National Survey on Recreation and the Environment, over 6.5 million paddlers live in the Midwest alone.
- It is clear that many businesses will reap these benefits.

The educational benefits to our families, children, and schools of a recreational river corridor are many. Some of these recreational benefits include:

- Interpretive canoe trails with labels and guide maps that will lead us up and down the river corridor
- Families and schools all over Kansas can schedule educational one-day field trips and multi-day hiking, canoeing, and riding opportunities along the recreational river corridor.
- We will see a great educational, cultural, and historic link to the counties of Kansas. When you study the history of the Kansas river, you study the history of Kansas.

There is a ground well of support all along the Kansas river corridor. The Kaw is OUR river. If we can't protect the Kansas river from additional damage from dredging while it is being studied for recreation, then what can we protect? From the U.S. Corps of Engineers own study on Commercial Dredging Activities On the Kansas River, they wrote that, "Commercial dredging activities on the Kansas river have had a severe impact on the river's morphology and ecology. Future dredging activities have a high potential to worsen existing problems and to extend the impacts of dredging into previously undisturbed reaches of the river"

We cannot tell our children and grandchildren that we FAILED to protect the Kansas river and that we FAILED to make our state's namesake river accessible to future generations. I hope that you can leave Topeka this legislative session and say, "We did something great for the Kansas. We passed Senate Bill 617!!!"

Thank you!

T. J. Hittle
700 Gillespie drive
Manhattan, KS. 66502
(913) 537-0164

housetes.doc

Jon Held
6343 W 59th Ave
Manhattan KS 66502
913-539-0216

House Committee on Energy and Natural Resources:

I am a consulting Engineer, Farmer, KSU instructor, & Avid Outdoorsman.

Speaking as a canoeist, I'm opposed to river dredging due to environmental reasons.

Speaking as a farmer, I'm opposed to river dredging because I believe its an effective method of stealing land from farmers.

Consider a dredging company asking a farmer if they could remove 1" of his river bank, what answer do you suppose they would get? Dredging allows the company to do this without asking.

Jon J Held

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The University of Kansas

Kansas Biological Survey

March 27, 1996

Representative Carl Holmes, Chairman
House Energy and Natural Resources Committee
Kansas State Capital
Topeka, Kansas 66612

Chairman Holmes, members of the Committee, my name is Edward Martinko. I am the State Biologist and Director of the Kansas Biological Survey. I would like to thank you for the opportunity to provide testimony regarding Senate Bill No. 617.

The recreational enjoyment of the Kansas River is intrinsically linked to the physical and biological health of the river system. The Fish, Wildlife and Recreation Section of the Kansas Water Plan, for example, states that "Although many flowing watercourses can be found in Kansas, only a limited number have significant potential for quality public recreation." The Water Plan goes on to establish safeguards for public health, aquatic and animal life, as well as flood control, water supply storage and recreation. Also, as you are probably aware, Governor Graves has designated the Kansas-Lower Republican as a priority area for water quality planning.

The biological diversity of a river is directly related to the diversity of physical habitats available. The greatest diversity of habitats is represented by a mosaic of mud flats, sand bars, point bars, gravel bars, riffles, and shallow water areas associated with these physical features. At any given location along the river, biological production is proportionally highest in these areas in that they provide habitats for at least 100 or more species of aquatic and semi-aquatic invertebrates, and feeding grounds, nesting and resting areas for a variety of birds, mammals, reptiles and amphibians that can number in the dozens of species depending on the time of year. The fish community uses shallow water habitats as spawning areas, nesting grounds, and refuge.

These considerations account for the fact that approximately 75% of the biodiversity of rivers is supported by this mosaic of habitats with the other 25% of the species living in deep water or open channel habitats. It is this rich biological diversity that provides recreationists with a rewarding experience.

Dredging causes a change in the morphology and hydrology of a river and, therefore, can have a significant effect on in-stream and near-stream habitats. The extent of effects depends on the rate of sediment removal and replenishment. If the rate of removal exceeds the rate of replacement, accelerated erosion occurs and continues until equilibrium within the system is restored. In-stream sand dredging can accelerate erosion of bed material in the vicinity of the dredging pit, causing gradual enlargement of the pit, and deepening and widening of the surrounding channel. The process continues until the hole created by dredging has become filled through a combination of new sediment entering the system and redistribution of substrate material.

The extent of the physical effects resulting from dredging is not easy to estimate. Since hydrology and sediment movement into and through the system are the primary factors regulating morphological process within rivers, anything that affects either or both of these factors will influence the morphological process. For example, dams probably exert the highest level of control over both hydrology and movement of material through our river systems. Land use practices have a significant degree of influence on the amount of sediment reaching rivers from terrestrial sources. Any evaluation of the physical effects resulting from dredging must, at some point, include an evaluation of these and other factors affecting river morphological processes. How the system has already been effected by other factors, including the effects of past dredging activities, must be considered.

Removal operations that cause damage to or loss of small sand islands, sand bars, point bars, mud flats, gravel bars and riffles can result in a cascade of effects throughout the biological community, since 75% of river biodiversity is dependant on these habitats. In extreme situations, bank erosion and sloughing also may occur, adding the dimension of riparian habitat loss as a

possible result of dredging. This not only affects the integrity of the biological system but also would diminish the natural aesthetics enjoyed by recreationists.

The impact on individual species or communities associated with riverine environments can be variable and difficult to predict. Some species are mobile and can migrate in the face of major environmental changes, while others are restricted and highly adapted to specific habitats with a limited ability to repopulate. The community's condition or health at the time habitat changes occur also can influence the magnitude of the impact and potential for recovery. A community suffering from an accumulation of impacts and already under stress may be unable to successfully respond to yet another habitat alteration. Unfortunately, habitat loss and/or alteration has been identified as a primary cause for dwindling populations of some species.

Even though the physical and biological effects of sand and gravel dredging cannot always be precisely predicted, dredging directly or indirectly impacts the most biologically diverse habitats in Kansas' river environments. Because the Kansas River provides exceptional recreational opportunities and provides the habitat that supports a rich diversity of fauna and flora, the State of Kansas should carefully consider limiting dredging to only those segments currently being mined.

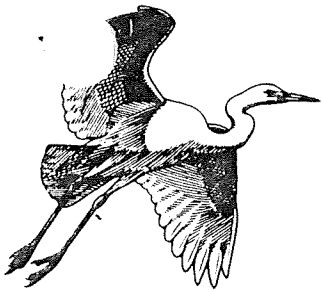
Again, Chairman Holmes, members of the Committee, thank you for the opportunity to provide testimony and I would be glad to answer any questions that you may have.

Respectfully submitted,

A handwritten signature in cursive script that reads "Paul M. Leicht for".

Dr. Edward A. Martinko

State Biologist and Director



Kansas Audubon Council

March 27, 1996
House Energy and Natural Resources Committee
Testimony on SB 617

Thank you for giving me the opportunity to appear before you today in support of SB 617. My name is Cynthia Abbott, and I am here on behalf of the Kansas Audubon Council and the approximately 5000 Audubon members through the state of Kansas.

The Kansas Audubon Council strongly supports the concept of a recreational corridor along the Kansas (Kaw) River. There is currently little public access to this wonderful natural resource and we feel that a recreational corridor would provide increased recreational opportunities here at home for a wide variety of Kansans, including many of our members.

People tend to join Audubon for one of two reasons: they either love birds and bird-watching, or they are interested in the environment and wildlife in general. Our members often relax and recreate by going to natural areas, nature trails, and other publicly accessible places where there are birds and other wild animals. They may be spending a Sunday afternoon near home, or they may be spending a two week vacation a thousand miles away. A 1991 study estimated that at least 80,000 tourists visit Grand Island, Nebraska, simply to bird. According to this study, these birders spend more than \$15 million and provide the area with a cumulative "roll-over" benefit of nearly \$40 million. At a conference I attended about 10 days ago, a recreational market analyst from Texas estimated that birders visiting south Texas annually pumped approximately twice as much into the Texas economy as the entire Texas citrus crop. Simply put, Audubon members and other "ecotourists" tend to go (and spend money) where the birds and wildlife are.

Kansas has the potential for a lot of birds. The Kansas Ornithological Society's 1989 checklist of Kansas birds includes 425 species known to occur within the state. That is almost half of the 920 species known to occur north of Mexico (including Hawaii). Approximately 150 of those 425 Kansas species are waterbirds and a large percentage of the remainder are often found in wooded areas and along creeks and rivers. Rivers, streams and wetlands are among the most productive birding areas in the state.

In fact, given the large number and diversity of bird species that Kansas hosts, and given that rivers and their associated woodlands are the preferred habitat for many of them, a recreational corridor along the Kansas River would have the potential of becoming an attraction for birders across the country. Then some of those travellers who currently zip through Kansas on I-70 might be enticed to spend a day or two enjoying

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our wildlife ... and our hotels, motels and restaurants. In 1991, American birders were estimated to spend \$5.2 billion a year on their hobby, according to a study done by the U.S. Fish and Wildlife Service. Ecotourism is a growing business. Capturing some of this market could provide a real boon for our local economies.

However, if the Kansas River is degraded by additional sites of sand dredging before we even have the opportunity to study the possibility of, let alone develop, a recreational corridor, a good portion of this potential is lost.

In conclusion, the Kansas Audubon Council supports a moratorium on new permits for sand dredging in the Kansas River while a serious look is taken at the feasibility of a recreational corridor along the Kansas River. We urge the Committee to vote "yes" on SB 617.

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

TO: House Energy and Natural Resources Commission
FROM: Steve Montgomery
Secretary, Kansas Wildlife Federation
RE: Senate Bill No. 617
DATE: March 27, 1996

My name is Steve Montgomery. I am testifying in my capacity as Secretary of the Kansas Wildlife Federation (KWF), in support of SB 617. The KWF, an affiliate of the National Wildlife Federation, is a state-wide organization formed in 1950 focused on preserving wildlife and habitat in Kansas for future generations, educating the public and promoting outdoor ethics. Our membership of approximately 4,000 is quite diverse and consists of gun enthusiasts, hunters, trappers, fisherman, campers, bird watchers, bee keepers and gardeners, to name but a few. One of the strengths of our organization is its diversity.

The ongoing Kaw River study by the Department of Wildlife and Parks is consistent with the KWF goal of promoting and preserving access to the outdoors for future generations. The authorization for new dredging activities could conflict with plans the Department may be developing. It is only prudent to allow the Department to complete their study and allow the legislature to review it prior to authorizing new dredging operations on the Kaw. The authorization of such new operations could make the Department study outdated before it is ever completed.

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The continued study of the Kaw ecosystem is essential as it has been documented that the construction of current reservoir system on the Kaw drainage traps 95-98% of all suspended sediment and up to 100% of sand-sized particles (Simons, Li and Associates, 1984), thereby substantially decreasing sediment flow. As sediment flow has decreased from upstream, the consequence of dredging in the lower reaches of the Kansas River has resulted in documented river bed degradation, bank erosion and channel widening. (U.S. Army Corp of Engineers, 1990). The decrease in sediment flow is a recent phenomena in terms of the life of the Kaw River. We are only beginning to learn the impacts of these factors on wildlife and the surrounding geography. If we wish to preserve for future generations a legacy rich in wildlife and Kansas' natural beauty, a sound and studied approach is essential.

Kansans have a proud heritage of conservation. Perhaps this arises from our state's reliance on agriculture and the products the earth provides. Our farmers take pride in being the stewards of their land. In the case of the Kaw River, the riverbed is owned by the State of Kansas, rather than by a private entity. The KWF urges the state to adopt the sound principles of stewardship that have long sustained our state.

Statement to the House Committee on Energy And Natural Resources
27 March 1996

Hello, my name is Caitlin Boley. I'm a junior from Lawrence High School and today I am speaking as a concerned citizen of Kansas. Some of my most valuable experiences during the last ten years have been in Girl Scouting. I belong to Mariner Troop #660 and have been canoeing with the Girl Scouts since 7th grade.

Most of my canoeing experience has been in Canada, Michigan, and Wisconsin where public access to rivers is provided. This past fall my troop canoed the Kansas River. I was thrilled to find such a beautiful river sitting in my backyard.

The Kaw is an ideal river for canoeing, kayaking, and for nature lovers of all ages. The river's gentle current keeps you moving, but you can control your craft easily. The river's depth slows the current so that it does not move dangerously fast. The abundant sandbars make ideal rest stops for picnicking and observing wildlife. Many people practice low-impact camping on these sandbars.

As a Girl Scout, I have learned the importance of preserving the environment for future generations. The Kansas River and the wilderness along the banks are a unique resource in Kansas because we only have three public rivers. With so few, the need to preserve our rivers for our children becomes

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imperative.

I enjoyed canoeing on a river in my home state and I hope that my troop, other Girl Scouts, Boy Scouts, 4-H and church youth groups will have the same opportunity. Because of the current inaccessibility, not many youth know that canoeing the Kaw exists as a possibility. I hope this changes, because enjoying nature is preferable to sitting in front of a TV, playing video games, or causing trouble.

My other reason for seeing the Kaw River preserved is more selfish, but perhaps you will understand it. I hope to have a family someday. I have been blessed with a beautiful and safe world to live in. I want to give my children the same security. I want to share the pastimes I enjoy now with a family in ten or twenty years. If all the beauty in Kansas has been destroyed because the state wants to make a "little" money while allowing private businesses to make tons (no pun intended), what kind of home will I give my sons and daughters? What kind of person would I be if I didn't care about the world in which I want to raise my children?

Thank you, Representatives, for your time and consideration.

Submitted by: Caitlin Boley
1812 W. 21st Terrace
Lawrence, Kansas 66046

**Testimony In Support of Bill 617
To the Kansas State House
Committee on Energy and Natural Resources
March 27, 1996**

From Mark Maher for : Citizens for the Future of Jefferson County and for Friends of the Kaw

Why should there be a two year moratorium for the granting of new permits for commercial sand dredging in previously undredged reaches of the Kansas River? A sample of reasons follows supporting Bill 617.

1) The United States Army Corps of Engineers requires at least two and probably three or four more measurement cycles (two years between each cycle) before they can assess the effectiveness ON EXISTING ACTIVE PERMIT SITES of their Final Regulatory Report, Environmental Impact Statement, and Monitoring Plan for Commercial Sand Dredging on the Kansas River (published January, 1990 and first implemented February, 1991). Given the millions of dollars of damage caused by the industry before 1988, given the millions of dollars of potential damage that will be caused by as little as one to three feet of additional river bed degradation after that date (from 8 to 15 feet of degradation was experienced in the lower thirty miles), and given the Corps' inability to put the monitoring plan into effect until 2/91 it would be imprudent to expose the undredged reaches to the risk of unacceptable damage by relying on an untested system. Refer to the USACE's 11/95 response to a Congressional Inquiry and to pages c-62-66 of the Corps' FRR and EIS dated January 1990.

2) A critical component of the USACE 's regulatory plan for a continuation of commercial sand dredging on the Kansas River is the annual sand production limit per active site and per 15 mile reach. YET, THE CORPS HAS NEVER VERIFIED THE PRODUCTION FIGURES SUBMITTED TWICE A YEAR BY THE DREDGERS. The Kansas Department of Agriculture's Water Resource Division does not concern itself with determining whether or not a dredger is exceeding USACE permitted maximums. The Kansas Department of Revenue has not verified the production reports which that department receives monthly from permit holders. NO ONE VERIFIES PRODUCTION TOTALS. Until at least one regulatory agency is routinely verifying production totals in accordance with standard accounting practices, no permits should be granted within previously unmined reaches of the river.

3) Approximately 77% of the total sand mined which the dredgers have reported to the USACE since the 1991 implementation of the monitoring plan has been reported simultaneously by the dredgers to KDOR to be sand sold to private consumers (and was subject to the 8 cent per ton royalty assessment). Logically, therefore 23% was sold for public works projects exempt from the royalty assessment (or else the industry was collecting royalties on sand sold for public works in violation of the intent of state regulations in effect since January 1966.

The industry lobbyist has repeatedly used 75%-80%+ as a rough percentage of the total sand produced which is consumed by public works projects. If public works projects (state, county, and municipal) consume 75% of the sand on the average, then 25% of the total produced would be subject to royalty assessment in accordance with KDOR regulations.

If the dredgers have been accurately reporting to KDOR each month since 1991 then they are not accurately reporting to the USACE. The dredgers have reported to KDOR from 1.9 to 2.3

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million tons of sand sold per year as subject to royalty collections, and they have reported from 2.7 to 2.9 million tons per year to USACE as the total they have extracted. If you believe both the industry reports to KDOR and their lobbyist's 75/25 ratio, then the total amount of sand produced from the Kansas River should have ranged between 7.5 and 9.2 million tons per year, roughly two to three times the maximum/yr permitted by the Corps' monitoring plan, and probably well in excess of the demand during moderate growth generated by the slightly less than one million people inhabiting the counties on either side of the river from Kansas City to Junction City. (Interestingly, an industry spokesman told the Senate Federal and State Affairs Committee on 2/14/96 that Kansas River sand was supplying southeast Kansas market demand as well as local demand. As a state, Kansas consumes about four tons of sand per person per year. I have much additional information in this regard which casts further doubt on the reliability of the industry's Kansas River production figures).

The dredgers are misreporting the facts to one or both agencies, or else their representative has grossly and purposefully exaggerated the amount of product needed for taxpayer financed projects. OVER THE LAST 24 MONTHS A COMPARISON OF THE INDUSTRY'S REPORTS TO USACE WITH THEIR REPORTS TO KDOR SHOWS THAT ONLY 10% OF PRODUCTION WAS AVAILABLE FOR PUBLIC WORKS. In either case, it would be irresponsible for the state or any county to grant permits for dredging operations in reaches of the river which have not been degraded by dredging until the Corps, KDOR, other concerned state and federal agencies, industry representatives, and other interested parties can agree on a set of production figures that truly represents what has been taken from the Kansas River since February, 1991. Moreover, the regulatory agencies must implement verifiable quality control review processes to guarantee from year to year the industry's compliance with rules and regulations designed to offer financial protection to non-dredging interests in the Kansas River Valley.

4) Although the Corps intended that the baseline measurements be supplied by the dredgers by 12/31/91, the agency determined the industry had good cause for failing to produce a full submittal until fall of 1993. The second set of monitoring data was due by 12/31/94, however the Corps did not receive the complete set of data until almost a year later, and again determined that any delay was the result of good cause and not subject to sanction. The Corps does not expect to complete an evaluation of the baseline and second set of data until the end of 1996. Given the fact that the collection of baseline data was interrupted by a 100 year flood event, and that the collection of the second set of data coincided with a +/- 25-50 year flood event, Cynthia Annette, KU professor and large river fisheries biologist, and Wakefield Dort, KU professor and geomorphologist concluded that the Corps' 1996 analysis of such information would be almost meaningless from either a statistical or river management standpoint. The Corps itself stated in November, 1995 that it would take them another five to seven years to collect and analyze monitoring data sufficient to derive "reliable and meaningful conclusions...concerning dredging impacts."

We believe that there is good cause to delay permitting commercial dredging operations in previously undredged reaches of the Kansas River for at least the next two years, and more likely, for the next five to seven years.

Submitted by Mark Maher, Rt. 1 Box 333, Perry, KS 66073



STATE OF KANSAS
DEPARTMENT OF WILDLIFE & PARKS

Office of the Secretary
900 SW Jackson, Suite 502
Topeka, KS 66612
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S.B. 617

Testimony Provided To: House Energy & Natural Resources Committee
Presented By: Kansas Department of Wildlife & Parks
March 27, 1996

The Department concurs with the basic premise of S.B. 617 as it was originally understood. That intent was to examine portions of the Kansas River as a recreational corridor. The Kaw is a valuable public resource that offers both recreational potential and opportunity. And there is strong public interest in developing and promoting recreational use of the river corridor.

In cooperation with the Kansas Water Office, the Department has undertaken a recreational study on about 30 miles of the river to identify potential access sites. That portion of the study is scheduled for completion later in 1996. An additional 30 miles would also be reviewed under that study as time permits. The study, as currently being performed, may generate some economic impact information and will encourage public input and review.

In response to S.B. 617, the Department agreed to expand the area of study to include that portion of the Kansas River from near Lawrence to Ogden, Kansas. Identification of potential access sites was to continue as the primary thrust of the study. It was also recognized that additional time and funding would be required to accommodate the larger area of study. The Department's fiscal note estimated increased funding needs at \$7,944.

The Department is concerned that amendments to S.B. 617 have significantly broadened the scope of the study through the requirement of an economic impact study, establishment of a mandated public involvement process, and further extending the study area from Lawrence eastward to the Missouri River.

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The increased scope would greatly increase manpower demands on the Department and require a re-direction of effort from other high priority projects having federal aid and funding commitments. This is not a direction the Department chooses to take. Rather, the expanded study would have to involve consulting contacts. Based on other past studies, the expanded scope of the recreational study could require a funding level of \$75,000 to \$100,000.

Proper funding sources are another concern. The bill note for S.B. 617 identifies the \$7,944 for performing the study as from the Wildlife Fee Fund. This would not be appropriate as the study includes boating, fishing and other general forms of recreation. It is recommended that funding be in thirds with 1/3 from the Boat Fee Fund, 1/3 from the Wildlife Fee Fund and the remaining 1/3 from a general fund of some kind. The same proportion should be maintained if the bill remains in current form, thus requiring the increased funding previously mentioned.

The Department recommends that S.B. 617 be amended by removing the economic impact study requirement, deleting the reference to the entire Kansas River, and rewording New Section 4 on page 3 to encourage participation by interested groups and agencies rather than establishing a formal task force/working committee. These amendments, if accepted, will serve to narrow the scope of the study to a level that can be performed and provide meaningful information.

11-3

(c) Nothing in this act shall prevent sand dredging necessary to maintain operations of existing or proposed water intake structures, provide for utility maintenance or preserve transportation right of ways, levees, dikes and other structures necessary to preserve property in or along the Kansas river.

New Sec. 4. On or before January 12, 1998, the department of wildlife and parks [in conjunction with the Kansas water office shall conduct a study of the development of a recreational corridor in and along the entire Kansas river and access thereto and its impact on the economy and recreation of Kansas and] shall submit to the legislature a report and recommendations based on the department's study pertaining to development of a recreational corridor in and along the entire Kansas river. [their study. All meetings pertaining to the study shall be open to the public and the public may submit testimony.]

delete

leave this in and including the struck language, except omit the word "entire."

delete

[The following organizations and agencies shall be invited to send one representative to provide input in the study:

Various organizations and agencies, including the following, are encouraged to provide input to the study:

- [(a) Division of water resources;
- [(b) state conservation commission;
- [(c) Kaw Valley heritage project;
- [(d) Kansas land trust;
- [(e) all watershed districts draining into the Kansas river;
- [(f) all drainage districts adjacent to the Kansas river;
- [(g) each municipal county parks and recreation department adjacent to the Kansas river;
- [(h) friends of the KAW;
- [(i) Kansas canoe association;
- [(j) Kansas aggregate producers association; and
- [(k) Kansas travel and tourism commission.]

Sec. 45. K.S.A. 70a-102 and 82a-301 are hereby repealed.
Sec. 56. This act shall take effect and be in force from and after its publication in the Kansas register.

KAPA

Kansas Aggregate
Producers' Association

Edward R. Moses
Managing Director

TESTIMONY

by

The Kansas River Sand Producers

Before the

House Energy & Natural Resources Committee

Regarding SB #617 - Moratorium on Dredging
March 27, 1996

Good afternoon Mister Chairman and members of the committee. Thank you for the opportunity to come before you today with our comments on Senate Bill No. 617 concerning a proposed moratorium on sand dredging in the Kansas River. My name is Edward Moses and I am appearing on behalf of the Kansas River Sand Producers.

We wish to commend this panel for convening this hearing to review the vital issues surrounding the safe and proper development of our state's natural resources for both recreational and commercial purposes. However, as we proceed we caution you to look beyond the hyperbolic and inflammatory rhetoric you will hear to the facts surrounding this issue. As we proceed, ask for the science, ask for the engineering and ask for the data! Then as all good legislators do, stop, look and listen before making a decision. If you do so we are confident you will agree SB 617 is a poorly constructed and fatally flawed piece of legislation incapable of meeting the goals of those seeking to protect the Kansas River or those seeking to develop it's mineral resources for all Kansans.

Commercial sand dredging has been an activity on the Kansas River since preterritorial days when material was extracted to provide surfacing for the Santa Fe and Oregon Trails. It has over the years provided a source of economical building materials, utilized by many generations of

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Kansans in the construction of this state. Sand hauled from the Kuehne dredge, not more than one mile from here, was used to construct the very building we are conducting this hearing in today. Kansas River sand is needed to make public roads safe from ice during winter and for the manufacture of computer chips and laser equipment in Johnson and Wyandotte counties. Given this long term contribution to our state, any measure to severely limit commercial dredging on the Kansas River would be ill advised.

The greatest single problem with imposing a moratorium on dredging is; that it would prevent the full implementation of the United States Army Corps of Engineers regulatory plan for the Kansas River. A plan which seeks to restore equilibrium to the river by providing for limited dredging in specific areas of the river. A plan which requires five (5) different approvals and contains many safeguards to protect the environment and provide for the safe extraction of sand. A plan that was developed after 20 years of study and at a cost of \$1.4 million dollars. It is important that the legislature uphold this plan as it reduces dredging activity below Bowersock Dam by permitting dredging activity above the dam, thus relieving aggradation problems behind Bowersock and mitigating degradation in the lower reach. If, through a moratorium, the river is allowed to reach instability the negative environmental impacts could be irreversible. For this reason, more than any other, the Special Committee on Energy and Natural Resources chose to uphold the Corps regulatory plan by refusing to second four separate motions made to ban dredging on the river during it's deliberations last fall.

The nominal purpose of proposing this moratorium has been to provide additional time for the Kansas Department of Wildlife and Parks to complete an "ongoing" study pertaining to the development of a recreational corridor in and along the Kansas River. Before taking action to provide this additional time we think this committee should gather more information on the status of this study. How long has it been underway? Has it been funded by appropriation? When will it be completed? Is it really necessary to ban dredging until it's completion? We have checked both the **State Water Plan** and the Kansas Department of Wildlife and Parks five year recreational plan and have found no reference to this study. However, during this research, we have found where the protection of riparian forests and wetlands have been identified as an issue by Kansas Department of Wildlife and Parks and the State Water Plan. Quoting from page 16 of *Kansas Water Authority; Annual Report to the Governor and 1996 Legislature* "Riparian and Wetland Protection demonstration projects should receive greater emphasis in the Kansas-Lower Republican Basin as part of the Governor's Water Quality Plan for the Kansas-Lower Republican Basin." It would seem counterproductive to adopt a moratorium and force dredgers to destroy riparian forests and wetlands through the development of pit operations. This committee should consider the position of the Kansas Department of Wildlife & Parks on riparian forests and wetlands before approving a moratorium.

You will hear repeatedly today, a whole series of horror stories about the negative environmental impacts and dire consequences regarding continued sand dredging. Once again we ask to stop, look and listen. During the legislative interim study we spent many dollars providing research and answering questions responding to these charges. The U.S. Army Corps of Engineers after spending millions on research, issued a comprehensive Environment Impact Statement and developed the Final Regulatory Plan based on it's findings. All of this time and expense has not assuaged the protests of the environmental community. The Kansas River has been dredged for over 150 years and during this course of time millions of tons of sand have been removed. During this same period it would be reasonable to expect some of these negative environmental impacts to have become apparent by now. We, therefore suggest you conduct your own mini environmental impact study by asking a few questions. Where is the head cutting taking place? Is it taking place at the Victory Sand & Gravel dredge hich has been operating at the same location for the last 75 years. How deep is the headcut there by now? When will the banks cave in at this location? Why are we still waiting? Name the last bridge lost as a result of commercial dredging. These problems have had 150 years to develop. Where are they? Sand & gravel dredging, unlike nuclear power or other, is not a new and unexplored technology. It's impacts, recorded since the time of the Egyptian pyramids, are well known and documented.

If commercial development on the Kansas River truly has a negative affect on the recreational development and environmental assets of the river, then why are such projects as the Oakland Expressway, current flood control projects, and water intake projects exempted by SB617. All of these projects would tend to limit recreation on the river, yet they are not banned. Is it because the real purpose of this bill is to prevent the approval two proposed operations in Jefferson County? If not, then we suggest this bill be amended to include all industrial or commercial activity on the river. It seems inconsistent to set aside 118 miles of river for a recreational corridor by only targeting new dredging on less than one mile of this corridor. If recreational interests are unable to share the river with the dredges, then why are they able to share the river with bridges, weirs, water intakes and all the other myriad of commercial activity currently taking place? Why did they stand silent when the Oakland Expressway was proposed? Why did they stand silent when the new Johnson County weir was proposed? Why did they stand silent when the new bridges at Manhattan were proposed? If they are really friends of the Kaw shouldn't they be friends of all of the Kaw? We think the answer to these questions may be simple. Once again, as so many times in the past, this legislature is being asked to intervene in a local matter at the behest of a few special interests. This matter is still to be decided at the local level. The proper venue for this decision is still in Jefferson county. We are not here today to recommend approval or denial of these specific permit applications. Even, as we speak today, the

eventual approval of these special permits by the Corps and Jefferson County are still not assured. This process should be allowed to continue.

In fact, there is an abundance of river sand available. Western Resources, in their testimony before the Senate Federal & State Affairs Committee, stated they are required to hydraulically dredge or use a drag line 4 or 5 times per year just to keep the water inlets open and free of sand so they can operate their power plants near St. Mary's, Tecumseh, and Lawrence. If the Jefferson County permits are allowed to harvest sand and gravel, it will relieve the build up of sand above Bowersock Dam and assist other commercial interests with their dredging requirements.

And, if we are considering the interests of the few should we not consider the interests of the many? Why should almost one million Kansas, residing in the ten county area adjacent to the Kansas River be forced to pay significantly higher prices for sand & gravel, so recreational interests may enjoy 118 miles of the river instead of 117. One producer, Victory Sand and Gravel, kept a running tally of the number of pleasure craft that passed its locations in Topeka, DeSoto, and Bonner Springs. From the period March 1, 1995 through July 31, 1995 a total of five pleasure craft (three fishermen, one kayak, and one canoe) were sited. When considering these numbers, it certainly seems feasible to us that operators and pleasure craft should be able to share one mile of river from dawn to dusk during the week.

The Corps limited plan has reduced the amount of sand to be extracted from the Kansas from 4 million tons annually to 2.25 millions tons annually. The inability to get sand to the current market has already led to an approximate 33% increase in sand prices in the Johnson/Wyandotte County market. As pit operations in the Kansas River floodplain are economically or physically impossible, sand will have to be imported from a great distance at great expense. Unless the proposed Jefferson county operations are allowed to augment the supply. In Denver, where no new sand & gravel operations have been approved for the last 20 years, sand imported from Wyoming for the Denver International Airport cost as much \$16.00 - \$18.00 per ton. Kansas River Sand currently sells for \$3.00 - \$3.50 per ton in the Kansas City area. An increase in the price of sand, of a magnitude found in Denver, would have an unfavorable impact on the Northeast Kansas community and make businesses and employment in those areas noncompetitive with surrounding areas of the Midwest. Imagine the effect such an increase may have on such industries as Owens Corning Fiberglass, Certainteed Fiberglass, General Motors and the Santa Fe, all businesses that depend on Kansas River sand. Once again, given the economic impacts to residents of Northeast Kansas, it appears both insensitive and uncaring for recreational interests to be unable to share 3200 feet of a 118 mile stretch of river. Especially when it appears the recreational study may, or may not be ongoing; and may, or may not be funded.

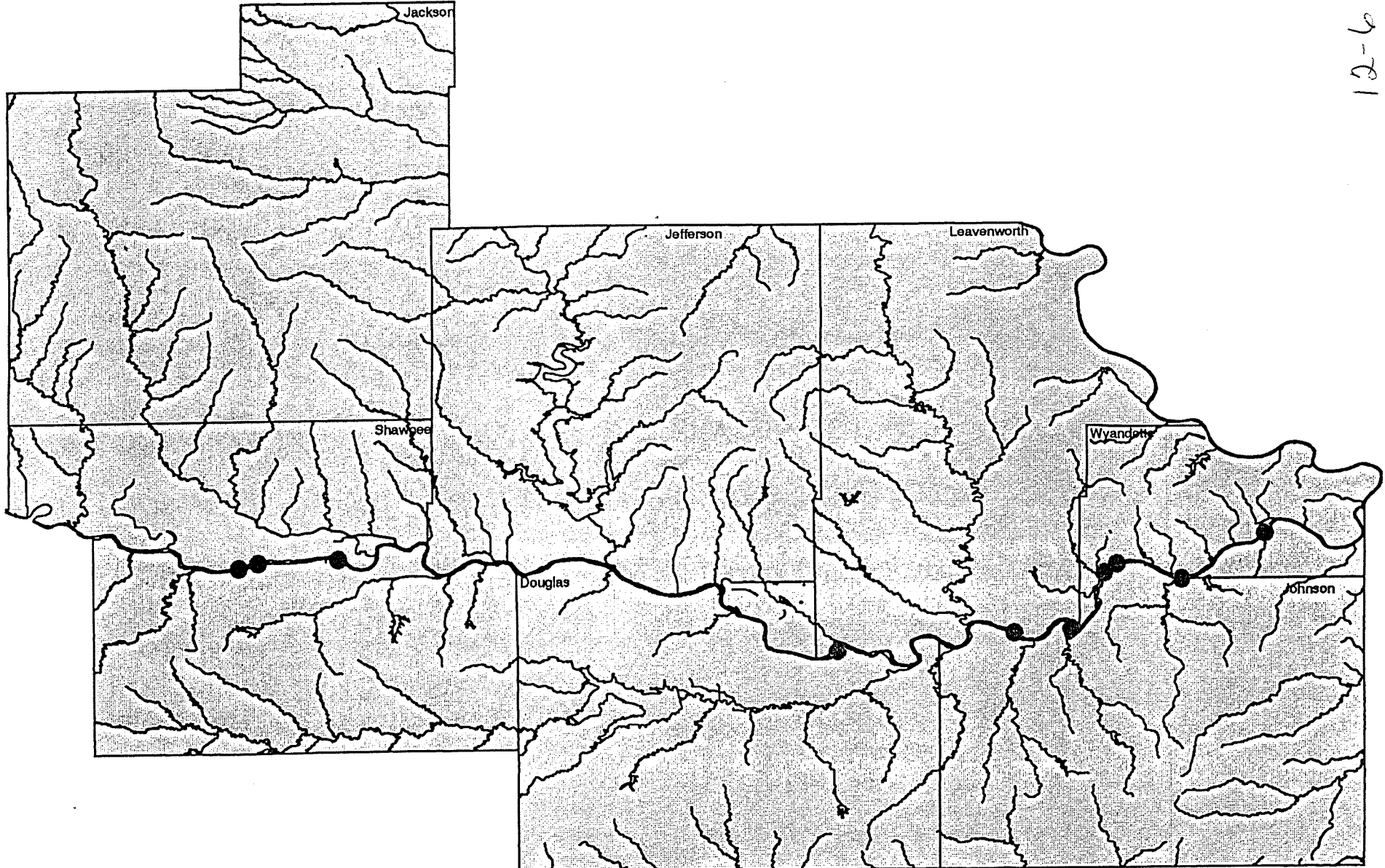
It should also be noted that many Kansas counties and cities are dependent upon the mineral resources provided by the Kaw. Ironically, despite passing resolutions supporting the proposed legislation, the City of Lawrence, Douglas County, the City of Topeka and Shawnee County have not stopped purchasing river sand for use on roads, buildings, and other construction. Sand poor Southeastern Kansas is very dependent upon Kansas river sand as a source of reasonably priced construction materials. Even more Kansans, through the State Water Plan, will benefit from the natural resource provided by the Kansas River. Should all Kansans suffer just because a few recreational interests cannot share?

Given the reasons described above it would seem ill advised for this committee or the legislature to adopt such a moratorium at this time. There is no clear consensus on what the recreational advantages of placing the dredging moratorium on the river might be. We support a study of the recreational aspects of the Kansas River but only if it is funded and its goals are clearly outlined. This bill is narrowly constructed to prevent two new dredging operations. This is a local matter which should be decided in the local arena. We urge this legislature and particularly the House Energy and Natural Resources Committee to reject this bill for what it is - a narrow minded attempt to prevent two dredgers from permitting their operations. And, as a consequence, upset a plan carefully drafted by the U.S. Army Corps of Engineers to use commercial dredging as a tool in the management of the Kansas River, while providing a positive economic impact to the Northeast and the Southeast Kansas communities. We truly believe the abundant resources of the Kansas River can be **shared** by all Kansans in many ways.

We thank you for your time and attention today.

Location of Kansas River Dredges - 1995

12-6



- County Boundaries
- Hydrology
- River Dredge Locations

Map Produced by the State of Kansas Data Access and Support Center
Kansas Geological Survey

N
Map not drawn to scale

TABLE 7
FY 1997 Recommended State Water Plan Fund Allocations

STATE CONSERVATION COMMISSION

PROGRAM	FY 96 APPROPRIATION	FY 97 REQUEST	FY 97 TRANSFERS	FY 96 CARRYOVER	FY 97 RECOMMENDATION
1. WATER RESOURCE COST SHARE PROGRAM	\$ 5,200,000	\$ 5,500,000	\$ 5,200,000	\$ 0	\$5,200,000
2. MULTIPURPOSE SMALL LAKE	\$ 500,000	\$ 1,645,395	\$ 800,000	\$ 0	\$800,000
3. NON-POINT SOURCE POLLUTION CONTROL	\$ 2,000,000	\$ 2,800,000	\$ 2,200,000	\$ 0	\$2,200,000
4. WATERSHED DAM CONSTRUCTION	\$ 855,000	\$ 1,200,000	\$ 1,000,000	\$ 0	\$1,000,000
5. RIPARIAN & WETLAND PROTECTION	\$ 100,000	\$ 150,000	\$ 100,000	\$ 0	\$100,000
6. WATERSHED PLANNING	\$ 45,000	\$ 155,000	\$ 50,000	\$ 0	\$50,000
7. AID TO CONSERVATION DISTRICTS	\$ 1,006,457	\$ 1,008,892	\$ 0	\$ 1,008,892	\$1,008,892
TOTAL	\$9,706,457	\$12,459,287	\$9,350,000	\$1,008,892	\$10,358,892

KANSAS WATER AUTHORITY COMMENTS

- | | |
|---|---|
| <p>1. Water Resource Cost Share Program funding should begin to move from conservation compliance toward water quality protection above the lakes identified in the <i>FY 1997 Annual Implementation Plan</i>. Particular emphasis should be given to areas above Tuttle Creek and Perry lakes. A portion of these funds should also be used to expand the western Kansas irrigation initiative cost-share support for higher efficiency irrigation systems.</p> | <p>project should be completed during Fiscal Years 1997 and 1998. FY 1998 funding should reflect completion of the project which provides 1.7 million gallons per day (MGD) as opposed to the original 2.5 MGD design.</p> |
| <p>2. Within the Multipurpose Small Lake Program, the Little Sugar Creek</p> | <p>3. Expanded Non-Point Source Pollution Control work plans should be emphasized in targeted areas of the Kansas-Lower Republican, especially above Tuttle Creek and Perry lakes. Additional emphasis should be placed on the other priority areas identified within the <i>FY 1997 Annual Implementation Plan</i>.</p> |

TYPICAL RIVER BASIN



1-4'
TOPSOIL & SILT



COARSE SAND
& GRAVEL

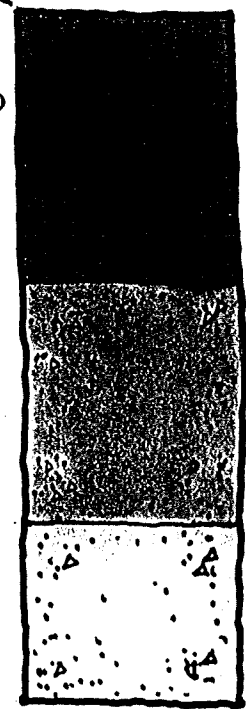
ARKANSAS RIVER BASIN

10-14'
SILT & FINE SAND

8-12'
FINE SAND

16'
MEDIUM SAND TO
COARSE SAND

10'
COARSE SAND
& GRAVEL



KANSAS RIVER BASIN

FACTS TO CONSIDER WHEN HEARING THE SAND AND GRAVEL DREDGING DEBATE

LEGISLATIVE:

- The bill (S.B.. #617) was previously considered during the interim committee sessions for **two full days** by the Special Committee on Energy and Natural Resources Committee. **Four attempts** were made to draft legislation and all four attempts **failed** for lack of a second.
- Although turned down by a river dredging moratorium Special Committee, the bill was introduced in the **Senate** and assigned to the Federal and State Affairs Committee (a highly unusual Committee to hear such a bill). It was **discussed once** for a total of **one hour** and passed out of Committee on a very close vote of 6 to 4.
- S.B. #617, with an **amendment** attached, (exempting two pending permit applications) **passed** the Senate but was recalled for reconsideration.
- S.B. #617 passed out of the Senate with the **amendment deleted**, on the reconsideration vote, and is now in the Energy and Natural Resources Committee of the House.
- The bill, in its present form, **targets just two companies** from receiving consideration for their applications while **exempting all other** activity on the river.
- **Permits** are issued to sand and gravel operators on an annual basis by the Kansas Division of Water Resources.

ARMY CORPS OF ENGINEERS:

- **The Army Corps of Engineers**, the Federal agency responsible for the integrity of the river, hired **independent consultants**, at a cost of \$1.4 million, to conduct a study of the Kansas River to determine if dredging at selected sites on the River could be beneficial. The findings of that study clearly show **dredging could be beneficial**.
- The **Corps** stated in their study they **do not support a moratorium** to do further studies.
- The **Corps** is awaiting an **indication from the State** before they issue a permit.

COUNTY ISSUE:

- **The issue**, if rejected by the Legislature and approved by the Corps of Engineers **ultimately lies in the hands of the Board of County Commissioners - Jefferson County** who have the responsibility and authority to issue permits on a case by case basis. One area in the County may have harvesting operations while other areas may not be permitted.
- The County is **awaiting a resolution** from the State Legislature and the Army Corps of Engineers.

COMPROMISE:

- **Numerous compromises** have been offered by the applicants. As an example: agreeing to a moratorium if the two pending applications were exempted from the legislation; securing the dredge to the river bank on weekends to allow pleasure craft a complete opening in the area; redesigning our booms so pleasure craft could pass under them without obstruction during our times of operation during the week; park land near the applicants site; access points to the river maintained by the applicants and many more. **None have been considered.**

COMPETITION:

- The area where the two permits are pending is near the Lawrence, KS market. Presently, that market is being served by only one sand and gravel operation thus effectively creating a **monopoly**. One of the applicants, Penny's Sand and Gravel has a plant just below the Bowersock Dam, an area exempted in the proposed legislation, which they use to supply their ready-mix concrete business and sell the excess. **The other applicant, Victory Sand and Gravel, wishes to have an opportunity to offer competition in that market area.**
- Sand coming into the Lawrence market is about **\$1.00 more per ton** (30% more) than sand in other areas where there is competition. The reason for the higher price is **transportation cost** to bring the sand to market from locations farther away.
- **Commercial users** of sand and gravel would welcome another sand and gravel operation so they could **lower their costs** and ultimately the cost to **their customers**.
- One of the applicants, Victory Sand and Gravel, is the only **independent producer** west of Bonner Springs on the Kansas River. **All other producers** are owned by someone **associated with a ready-mix concrete business**. Because they are independent, Victory Sand and Gravel has only their customers in mind, not an associated business.

ECONOMIC DEVELOPMENT:

- A sand and gravel facility creates **new jobs** for an area and offers above average wages. The local and regional trucking industry benefit because they are called upon to load and deliver product. The end user benefits because there is a source in closer proximity to the project and thus **lower costs** offered through competition.

RECREATIONAL USE:

- One producer, Victory Sand and Gravel, kept a running talley of the number of pleasure craft that passed its locations in Topeka, DeSoto, and Bonner Springs. From the period March 1, 1995 throught July 31, 1995 a total of five pleasure craft (three fishermen, one kyack, and one canoe) were sited. When considering these numbers, it certainly seems feasible to us that operators and pleasure craft should be able to share one mile of river from dawn to dusk during the week.

WILDLIFE ISSUES:

- Production facilities, far more expansive than sand and gravel operations have been built along the river for centuries. History shows they have **helped, not harmed**, the environment. Take as an example, Western Resources (KPL) has generating facilities near Tecumseh and Lawrence, Kansas. Both are positioned directly on the river and **offer habitat** for all types of wildlife including deer and bald eagles. Sand and gravel operators attract fish to areas where product has been harvested. The presence of fish draws the birds of pray. The birds of pray attract other wildlife and the ecological system continues to work.

ENVIRONMENTAL IMPACT:

- The river is a **renewable resource**. After harvesting an area, the natural flow of the river carries sand from upstream and **replenishes the area harvested**. Bank erosion on the river is not caused by dredging. It is caused by the river seeking a different channel which cuts into the bank and causes sluff. Sand and gravel operators work more toward the center of the river and the channels, thus helping direct the river in a way that won't eat away at the banks as quickly.

ABUNDANT RESOURCES:

- There is an **abundance of river sand** available. Western Resources, in their testimony, stated they are required to hydraulically dredge or use a drag line 3 or 4 times per year just to keep the water inlets open and free of sand so they can operate their power plant near Lawrence. If Victory Sand is allowed to harvest sand and gravel, it will **relieve the build up** of sand above Bowersock Dam and assist Western Resources with their dredging requirements.

COMMERCIAL DREDGING - vs. - PIT OPERATIONS:

- Studies and expert testimony have proven time and time again that **dredging** sand and gravel from the river is **far less intrusive than** opening and operating a **pit**.

SPECIAL NOTE:

- Despite **opposition** to the proposed legislation, the City of Lawrence, Douglas County, the City of Topeka and Shawnee County **have not stopped purchasing sand** for use on roads, buildings, construction or the many areas where the product is needed.

Kansas River

Eastern Douglas County

Boating Hazard Warning

My name is Joe Hyde. I live at 1605 West 27th St. in Lawrence and my home phone is 842-2834.

Sorry this letter is so long. But I think you're somebody who needs to be warned about something and you may want this information.

Do you take boat rides east of Lawrence down the Kansas River? Or do you sometimes launch a boat at Eudora, on the Wakarusa River, then go down the Wakarusa 1 mile to its mouth and take the Kansas River back upstream to Lawrence?

If you do either of these trips now, your life is in danger. An industrial hazard has appeared on the Kansas River between Lawrence and Eudora.

Last October, a commercial sand dredge went in 2 miles east of the Oak Street river access in North Lawrence. (See map) You can't see the dredge from the Oak Street boat ramp. It's not until you get down to the end of the long straightaway east of Lawrence and head north in that big curve there - that's where you first see it.

I consider this device extremely dangerous to the public safety - especially right now because hardly anybody knows it's there. There's never been a dredge in this curve before. It was put on the river without any public warning given to the boating community. It was put in after the weather turned cold last fall, after most people had quit boating the river for the season.

If you're heading downstream from Lawrence, the dredge comes off the curve's right bank and runs from right-to-left across the water in front of you, threatening your best and natural route downriver. Anyone taking a boat through this curve could easily hit the dredge anytime it's on the river.

A sand dredge has four basic parts that concern boaters:

1. A **hydraulic dredging barge** (it looks like a houseboat)
2. A **sand pipe** (a long 1-ft. diameter tube)
3. A **low-clearance pontoon bridge**
4. **Steel mooring cables**

Hit any one of these parts and your boat could swamp (fill up with water and sink). That's

because your boat is an object riding on a river, on moving water. If your boat stops suddenly, the moving water will keep flowing under your now-stationary boat. If your boat gets turned sideways to the current, the water flowing under it will "grab" your hull and try to roll your boat out from under you. The faster the current moves and the lower your boat's gunwales ride above the water, the easier your boat can swamp.

The dredging barge carries a large-diameter steel pipe called a siphon. This siphon is jammed into the riverbed. A powerful pump on board the barge then sucks sand off the riverbed - just like a big soda straw sucks pop off the bottom of a cup. The barge pumps this sand and water mixture back across the river through a 1-foot diameter tube called a sand pipe.

After crossing the river, the sand pipe goes up and over the riverbank. The sand pipe ends at a processing plant, where the sand/water mixture is separated, the sand is sorted by grade, then piled up and sold to buyers.

Between the barge and its "home port" riverbank, the sand pipe lays just above the river surface, its weight supported by steel bridging and pontoon tanks. This is the sand pipe/pontoon bridge.

When the sand pipe bridge is on the river, you'll see many long openings between its pontoon tanks. From a distance these openings almost beg you to duck down and let your boat drift under the sand pipe. Whatever you do...**DON'T TRY TO SNEAK YOUR BOAT UNDER THAT SAND PIPE!**

A kayak could probably make it, and it might even be fun. But try it with any other boat and you might not be able to get under without hitting some part of the dredge structure. By the time you're close enough to realize this it could be too late. You might be so close to the dredge that you won't have enough time, power or maneuvering room to escape.

At a distance the dredge will look like a straight-line hazard running across a river. Actually it's U-shaped. The pontoon bridge "bellies out" downriver because the current pushes against its

upstream side.

Anyone heading downstream toward a dredge who is unaware of this U-shape could be tempted out of curiosity to inspect the pontoon bridge at close range by bringing their boat in closer using a standard mid-channel approach.

Don't do that.

If it is stretched across the river and you approach it mid-channel, the dredge can net you like you're a hooked fish. You'll drift past the two upstream ends and get trapped in the bellied-out area. Once in there, steering hard toward either bank will only run you into the angled walls of this big river boater "seine net".

If you're not familiar with this curve 2 miles east of Lawrence, it has some interesting natural features you may want to know about before taking your first trip through it. Features common to all river curves, actually, but interesting nevertheless. (At least, they are to me. And since I'm the one writing this letter I'll tell you about them. If they bore you, please accept my apology.)

At "normal" river levels (say, from 1,000-to-10,000 cubic feet per second) the river channel is narrower in this curve than it is in the straight-away above. Because the water gets "squeezed" through this narrow area it speeds up, flowing considerably faster than it does in the straight-away above.

The river runs south to north through the curve. High wind is often a hazard here due to the state's prevailing westerly breezes that get "compressed" between the curve's tall right bank and the left bank's tall trees. (On rivers, wind gets funneled between the banks and speeded up, just like happens in cities between tall buildings.)

If a fair south or southwest breeze is blowing when you enter the curve heading downriver (north), a much stronger wind will push you from astern. The tail wind and the accelerated current in the narrower channel will combine to carry you downstream at a faster speed. You must overcome or finesse both these natural forces to pass the dredge safely.

If a fair north or northwest breeze is blowing when you enter the curve heading downriver, you will encounter a stiff head wind while simultaneously getting pushed from astern by the faster current. The wind direction and water flow will

thus oppose one another, generating a hazardous boating condition: Namely, if your boat gets sideways, the head wind can wedge itself under your hull and lift your boat on its north side while the accelerated river current is "grabbing" your hull and pushing your boat downstream on its south side. Your boat could be rolled up steeply that its south gunwale could dip underwater and your boat would swamp. It might even capsize (turn completely upside down).

Again, the Kansas River makes a left-hand turn in this curve. As the water mass enters this left turn, its momentum carries it toward the right bank. Consequently, water "rubs" along the right bank everywhere, forming intense eddies that lay close along the right side throughout.

Since the channel is narrower here, the water actually accelerates as it flows through the curve. As the water side-slips across the riverbed toward the right bank, up-thrusting currents called "boils" swirl to the surface almost the whole width of the river. These boils and the right bank's eddies create random currents that pivot your boat without warning.

So even if no wind is blowing at all, the river's natural currents hamper your ability to maintain a steady course and heading through this curve.

For the last 135 years - since Kansas statehood - river boaters have coped with this and similar left-turning curves by holding off the right bank a discrete distance and generally taking a right-of-center route through the bend. Most unfortunately for the future of safe public boating between Lawrence and Eudora, a commercial sand dredge will now come off the right bank and stretch across the water surface, blocking this common sense boating route.

When the dredge is on the river working, the only way to get your boat past it (short of dragging or lining around) is to steer through a gap - *if one exists* - between the dredge and one of the riverbanks. Because the river channel in this curve has only two riverbanks, only two boating gaps are possible. Both could be life-threatening.

Sitting in your boat looking downriver at the dredge, you may spot a gap at the dredge's right end - an open spot between the riverbank and where the sand pipe begins angling upward. If you decide to try this right end gap, keep a sharp

eye out for driftwood snags coming off the right bank. Snags may also be sticking up out of the water or laying barely underwater all along the right bank.

In this curve, the right half of the channel is where the water is deeper and the current stronger. At higher water, large trees get floated along the right bank. This drift often hangs up and collects on and along the bank. If a snag is plugging the dredge's right gap or partially plugging it, or if a snag is blocking your safest approach line to the gap, passing the dredge on its right end could be difficult if not impossible.

The bad thing is, you will need to hug the right bank just to hit that gap. (You don't want to get hung up trying to sneak under that sand pipe, do you?) But with the right bank's eddies and compressed wind pushing you around, you could strike the right bank or a snag, bounce off and sheer back into the river where the swift tail current would carry you straight into the dredge's pontoon bridge or a steel mooring cable.

So you want to try the left side instead? Right? OK, let's go.

Keep in mind that in this curve the left side of the river is the shallow side. During high water, suspended sand grains get washed into a long area of slow current that forms on the curve's inside arc. In this "almost-eddy", our planet's gravity can pull these suspended sand grains down toward the riverbed. This is what formed the big, gently sloping sandbar that lays on the curve's inside arc. (Enjoy it while it lasts. The physics I've just described to you also explain why the dredge is going across the river: it wants to take out that sandbar.)

Still in your boat heading downstream toward the dredge, you have now decided to try the left gap - the gap between the barge and the sandbar.

To approach this gap safely you must hug the sandbar fairly close to avoid striking the barge. But this sandbar is on the shallow side, so the river gets shallower the farther left you go. Somewhere along your approach to the dredge's left gap you may run into water too shallow to take your boat through.

What then?

The accelerated current in the curve will be pushing you from astern even in this shallow

water. The tail current will make boat handling difficult. Every time your bow meets the sandy riverbed, the tail current will swing your stern around. And every time this happens, it will change your boat's heading.

Also, in shallow water your boat's propeller, oars or paddles will not reach deeply enough into the water for efficient propulsion. Compressed wind may be blowing you around as well.

Therefore, if you try passing the dredge on its left end and you encounter water too shallow to get a boat through, you must immediately choose between:

Curtain #1: Steering hard left and deliberately running aground, jumping out of your boat short of the sandbar's waterline then wading across a riverbed of unknown depth. (Remember now, the dredge has been here before you, sucking huge volumes of sand off the riverbed at various spots along the sandbar's edge. If the water is muddy when you jump out of your boat, where are the drop-offs into those deep dredge holes?)

OR

Curtain #2: Steering hard right, away from the sandbar toward the center of the river where the water depth is adequate...but where the accelerated tail current, the compressed wind, the "boils", the barge and the bellied-out sand pipe bridge lay waiting.

All of which brings us to the steel mooring cables:

The dredging barge gets around on the river by reeling itself back and forth across the channel on long mooring cables. These 1- to 2-inch diameter steel cables come off each end of the dredging structure and run back to both banks where they are wrapped around live tree trunks or connected to some other solid ground anchor.

After the barge pulls itself into the river channel and picks a work station, the mooring cables hold the entire dredging structure stationary in the powerful cross-current. As you move closer to the dredge in your boat, keep a sharp lookout for these mooring cables. The cables may be swinging in the air, hanging low out across the river. But they will also lay just under the surface where they're invisible.

During dredging operations the cables are stressed and under variable tension. They can lay slack then get pulled tight as a banjo string. *So they sometimes hop up and down through the air,*

and jump up and down in and out of the water.

People sitting in boats have a low-angle view of incoming hazards. So on your very first trip downriver, you may learn the hard way that these rust and silt-covered mooring cables blend perfectly with the riverbank's muted background shapes and colors.

At the dredge's left end, at least one mooring cable must connect to the lower part of the barge's hull (to better stabilize it). But the left side of the river in this curve doesn't have a tall bank nearby like the right side does. The sandbar offers nowhere high up for a mooring cable to run UP to. So on the dredge's left end the mooring cables must run *LOW through the gap between the barge and the sandbar*, and then lay all the way across the sandbar toward the far left bank before finding a tree stout enough to wrap around.

So at the dredge's left end a low-clearance mooring cable (or two) will be there always. For any boat powered by outboard engine, this cable could function like an aircraft carrier's arresting cable. And again, since the barge will be moving around as it works, and since its pontoon bridge will be under constant stress from the river's cross-current and compressed wind, the mooring cable through this left gap will likely be hopping up and down like a braided steel jump rope.

The worst of it is, even if you're carefully looking for the dredge's mooring cables you may not see them until you're very close. It's not practical for the dredge owner to have these long, superheavy mooring cables re-anchored every time the barge goes into action. So please be advised that mooring cables are now out there - somewhere in that curve - at all times. You must be very watchful of them.

Constructed of braided strands of high-tensile steel wire, any one of these long cables is strong enough to swamp, overturn or damage a boat, or sweep a person out of your boat into the water. It won't matter whether you hit the cable or it hits you.

Like people everywhere in the nation, many Kansans go boating in low-light conditions during early morning or early evening hours and at other times when visibility across the water is reduced by haze, fog, rain, snow, smoke, sleet or blowing dust.

(My personal favorite is the white, fluffy seeds of cottonwood trees. Thousands of these cotton ball-

size seed puffs drifting through the air in front of your canoe like slow-motion soap bubbles is one of the most inspiring - and distracting - sights in nature.)

Many fishermen, waterfowl hunters and other outdoor enthusiasts actually prefer to go boating in low-light or stormy conditions. Increased wildlife activity during those periods is probably the main reason why. And the thing about living in Kansas, even if boaters try to avoid foul weather and windy days the weather can change so fast that navigation conditions deteriorate during the trip and the boater is forced to continue.

So once they put on the river and get away from Lawrence and Eudora, boaters between these two towns now run the risk of encountering a cross-channel dredge without seeing it at all until it suddenly appears laying dead ahead.

When the water, its surrounding air, or the combined temperature of both are cold or even cool, people who get their bodies wet in boating accidents almost always suffer some effects of hypothermia. The seriousness of this life-threatening condition depends on how low the temperature is plus the person's exposure time.

Drownings follow boating accidents so often because people who get immersed in cold water rapidly lose muscle and brain function. This is especially relevant here because immediately downstream of this dredge, just above the mouth of Mud Creek, a cluster of large dead trees now lays snagged on the riverbed. Any boater or boat passenger who gets dumped in the river at the dredge could be carried by the swift current straight downriver into this big snagfield.

The plain fact is, this commercial dredge will be a "Do or Die" snap quiz of the Kansas public's boat handling skills. When leaving the Oak Street access, boaters won't even know if the dredge is on the water until they get 2 miles farther away from the Lawrence Fire Department Water Rescue Unit. If the dredge is on the river anywhere - even tied up along the right bank - any person entering this curve in a boat who doesn't know a dredge is there is in peril. And if the dredge IS out on the river, a trip through the curve won't be much safer even if people do know it's there.

Please spread the word about this dredge among

your boating buddies right away, OK?

It's true that sometimes people understand stuff better if they read it. If you think a boating friend might realize the danger better by reading about it instead of hearing about it, please feel free to make copies of this letter. I'm guessing each copy might run you around 30 cents apiece. That's cheaper than a funeral.

I canoe the Kansas River a lot. To me, an industrial device placed across the path of boaters like a steel picket fence is too dangerous a thing to be allowed on any river. But this dredge east of Lawrence isn't sitting on just any river. It threatens all through-traffic boating on a designated publicly navigable stream in a 9-mile section served by two state-built boat ramps with improved parking lots.

From last October (when it first appeared on the river) through this February the dredge operated using a permit held by Mr. Dave Penny of Lawrence (the owner of Kaw Sand Company). At the Douglas County Commission's February 21 meeting, Dave Penny asked the commissioners to renew *in his name* the conditional use permit (CUP) that allows commercial dredging at this site.

The dredge that is actually mining the curve, though, does not belong to Dave Penny, however. It belongs to Mr. Bill Penny of Lawrence (the owner of Penny Concrete, Inc.). The two gentlemen are brothers. Through a permit transfer/site leasing agreement between themselves, Bill Penny and Dave Penny are both profiting from the sale of sand dredged from this curve.

I attended the February 21 commission meeting to publicly oppose renewal of this permit. Commissioners Mark Buhler, Jim Chappell and chairman Louis McElhaney listened politely as I repeated my boating safety and environmental security concerns regarding this dredge. Then, without waiting to look at the evidence photos I brought that show the spectacular damage dredging has done to the river below Bonner Springs, the commissioners voted 3-0 to extend for 5 years Dave Penny's permit to mine the curve.

If Bill Penny operates a dredge in this site for another five years, by February 21, 2001 he will

have legally taken from the Kansas River channel enough sand to make a pile 6 ft. tall, 125 ft. wide and 7 and 1/2 miles long.

Let me put that another way: If Bill Penny's 5-year sand pile is turned upside down (cut into the ground, in other words), and then cut lengthwise into three equal pieces and those three 6-ft. piles were placed end-to-end, they would form a second Wakarusa River low-water channel between Clinton Lake and the town of Eudora.

The removal of this much sand from the Kansas River 2 miles east of Lawrence will alter the river's physical structure and impact its ecosystem not only in the curve itself but west upstream clear to Bowersock Dam, and east downstream as well.

During the February 21 Douglas County Commission hearing, it came up in open discussion that Bill Penny is now about to install a *second sand dredge on the Kansas River channel between Lawrence and Eudora.*

The dredge I am warning you about here, in the curve 2 miles east of Lawrence, sits just above the mouth of Mud Creek. The second Bill Penny dredge will sit in the river immediately below Mud Creek. His second dredge will come as close as a half mile to the dredge in the curve.

Many northeast Kansas fishermen recognize the river channel area around Mud Creek's mouth as being one of the finest river fishing holes in the state. In fact, Mud Creek's mouth is the destination of many river boating trips taken in eastern Douglas County.

Once word gets out and experienced boat fishermen hear about the Bill Penny dredge in the curve, they'll avoid it like the plague. They go to Eudora and use the Wakarusa River access as a "back door" route to the Mud Creek fishing hole. Every one of these boaters will soon be threatened by a second Bill Penny dredge that will run across the Kansas River just below Mud Creek's mouth.

Got that?

Brother Dave, meanwhile, has been seeking a conditional use permit to install a commercial sand dredge in the Kansas River channel...*at Eudora.*

Dave Penny's proposed dredge will sit in a 1-mile long site that brackets the Eudora bridge across the Kaw. Dave Penny's dredge will come off the

river's south bank (the deep, swift side of the river) and stretch across the channel so it can suck up that big sandbar on the north bank (the inside bank sandbar of that left turning curve).

Last year, when I first learned of this plan, I wrote the Army Corps of Engineers a letter of objection. While studying the site map for this operation, I saw that Dave Penny's dredge will threaten through-traffic public navigation *on two rivers at the same time*.

Dave Penny's barge, sand pipe bridge and steel mooring cables will threaten boaters on the Kansas River channel north of Eudora exactly like Bill Penny's dredge does in the curve 2 miles east of Lawrence. That's one river. The second river boaters will be threatened on is the Wakarusa River.

The Wakarusa gets involved because the sand processing plant Dave Penny wants to build will sit on the Kansas River's south floodplain at a place east (or downstream) of the Wakarusa River's mouth. What this means is, the sand pipe from Dave Penny's dredge will have to run east away from his dredging site for almost a mile, and then somehow run across the Wakarusa River in the vicinity of its mouth.

If he lays a low-clearance sand pipe bridge and steel mooring cables across the Wakarusa River channel, that act will threaten boaters and likely shut down all public access to the Kansas River.

If he anchors a sand pipe flat on the riverbed in the shallows near the Wakarusa's mouth, it will change the hydrology enough to create new shallow areas that will cause new buildups of driftwood.

If he suspends a sand pipe high above the Wakarusa, or builds a permanent bridge over the Wakarusa, at high water the structure it will not only endanger boaters but it will trap large driftwood and create massive new snags - perhaps even channel-width logjams that will restrict and/or threaten all boaters using the Wakarusa River channel after the river drops.

I complained about this way back last year. And I haven't heard one single word back from the Corps.

But in late February of this year, shortly after the Douglas County Commission voted 3-0 to extend Dave Penny's permit for the site 2 miles east of Lawrence, a member of the Douglas County Planning Board told my friend Sam Segraves that the Army Corps of Engineers has

already approved Dave Penny's federal mining permit application. This would be a federal action preceding the as-yet-unknown outcome of the democratic process in Douglas County - a democratic process which supposedly has not met to publicly consider Dave Penny's dredging plan.

All legitimate scientific study points to the horrendous environmental damage done by commercial dredging. In view of its many impacts, this kind of mining is opposed by the Kansas Department of Wildlife & Parks, the Kansas Department of Health & Environment, the United States Environmental Protection Agency, the Department of the Interior's National Park Service and the U.S. Fish & Wildlife Service. Every university department in the United States that offers environmental and ecological studies is opposed to commercial dredging. Every recreational boating group and private conservation group is opposed to the practice as well.

In some states, in-stream mining has been totally banned. In Kansas today, dredging has devastated the Neosho River due to relentless removal of that stream's gravel bars - areas of fantastic aquatic productivity which have now been destroyed for all time by in-stream mining. As river fishermen know, gravel bars are dead-certain places to catch fish due to the constant swirl of baitfish, aquatic insects and other prey items like crawdads that hang out at gravel bars.

What the Army Corps of Engineers is ignoring and what the Douglas County Commission fails to respect is that even in today's modern world Kansans habitually go outdoors. And when they do they frequently head for a river.

It must be those childhood memories of a tiny red and white bobber twitching on the surface then dunking out of sight that keeps tripping our trigger as we get older. Whatever it is, in the United States fishing is now, and always has been, the Number One outdoor recreation pursued by Americans. Everybody, it seems, goes fishing. How does this fact relate to the Kansas River in eastern Douglas County? Easy.

The Kansas Department of Wildlife & Parks recently conducted a statewide survey to find out exactly where it is Kansas citizens like to go fishing. The survey found that only a third of the state's anglers prefer the big federal lakes (there are 24 in Kansas). By an overwhelming margin

most Kansans prefer to go fishing in:

#1 - RIVERS and CREEKS

#2 - FARM PONDS

The huge federal impoundments finished in dead last place.

That majority of Kansans are NOT some lower class of citizens who are too poor or ignorant to buy \$20,000 high-tech bass boats. The majority of Kansans prefer places like the Kansas River east of Lawrence.

Studies of river systems have confirmed what even the poorest-educated fisherman knows intuitively. Rivers are at least 10 times better producers of fish than the oxygen-poor, terrain-poor deep lakes are. Rivers are quiet, peaceful places to be around. Rivers allow more intimacy with nature during the fishing experience. Rivers are far and away more mysterious and fascinating places to catch fish.

Do the majority of Kansans see their local rivers as priceless resources? I think so.

In case you didn't know it, Kansas state law and a recent Kansas Supreme Court ruling says the Kansas River is a publicly navigable stream. That means all citizens have the legal right to boat this river any hour of the day or night, any day of the year, in any weather or river level they choose.

Freedom to navigate is why the Kansas Department of Wildlife & Parks spent thousands of tax dollars building the Oak Street access and Waka-rusa River access. Eastern Douglas County has a cultural history of recreational boating. Generations of Kansans have boated the river here beginning long before our statehood 135 years ago.

Nature puts enough hazards on rivers as it is. But boaters expect that and take great pride and satisfaction in learning how to cope with natural boating hazards. Even on a steady, "user friendly" stream like the Kaw, tactical boat handling remains one of every trip's greatest pleasures.

But what will happen now? What will dredging do to this popular boating area now?

I'm no expert of human nature, but I think that very soon now so many boaters will be so scared of these dredges that they'll quit boating the river in eastern Douglas County. From the day each one quits, fewer people will care about the river as a place to visit, touch and respect.

From Bonner Springs east to the river's mouth at

Kansas City, the channel has now lost so much sand from commercial dredging that the riverbed elevation has dropped almost 30 vertical feet. The water depth is generally what it was before dredging began - except that now the river flows through a widened, collapsing-walled 50-foot deep canyon.

Below DeSoto the river is now an industrial drainage ditch. The riverbed is mostly an exposed stony cobble - the river's "bedrock" layer. This bony environment is unsuitable for catfish reproduction because the cats can't dig nesting holes in submerged riverbank soils. *At spawning time there are no stable riverbank soils to be found.* The catfish people catch in Johnson and Wyandotte Counties are fish that were spawned and raised in the undredged reaches of the river farther upriver, in places like eastern Douglas County. The fish then migrated downriver to Kansas City where they were caught.

Over the years, Bill Penny and Dave Penny have done many good deeds for the people of Lawrence and Douglas County. They are extremely intelligent people who could be adding to that history by "spreading the wealth" of sand mining over a wider segment of the local population.

Pit mining was once a crude occupation. No longer. Nowadays there is "ground repair phase" pit mining. What this kind of surface mining can do is truly amazing. The Pennys and all the other companies can mine for sand without threatening boater's lives.

Modern pit mines sit away from creek and river channels. Generally, anywhere past a stream's *uncontrolled flow* 100-Year Flood waterline is a decent enough place to start digging. (The thing to avoid is digging a pit mine so close to the stream channel - or in line with its projected course change - that high water would flow into the pit, cut into the floodplain between the channel and the pit, and MAKE the stream change course.)

The lakes left behind by modern pit mining can be beautiful things. Using information gained by exploratory core testing, sub-surface aggregate deposits are located and mapped. Before mining even starts the pit is designed and industrially bonded with the intention of removing the aggregate deposit AND leaving behind a very interesting body of water once the deposit finally plays out.

Depending on its individual design, a MODERN pit mine lake can have curved shorelines, shallow edgewater areas similar to wetlands, leading out to stair-step drop-offs (which are fabulous fish-holding areas), bottom contours in the pit's deepest areas, submerged structures placed on the bottom especially as fish cover, surrounding land plantings of trees and shrubs, concrete boat ramps (or maybe *no* boat ramps), green space for picnic areas and social events - the whole nine yards.

Modern pit mines can be valuable and productive environments. In one sense they could restore the Kansas River valley's original habitat that was lost when European immigrants drained the flooded ox-bows and marshy channel scars for agriculture and other human development.

Monster sand and gravel deposits lay buried in the Kansas River floodplain its entire length, left there over previous millennia as the river channel meandered back and forth from bluff to bluff. To give you an idea of the size of these deposits, almost the entire city of Lawrence as it now stands was built with concrete and asphalt made with sand taken out of ONE pit mine - the now-abandoned water-filled pit that sits east of the Kansas Turnpike's East Lawrence Interchange. That crude hole in the ground is an old-fashioned pit mine, not an example of the park-quality "designer lakes" we can get if we insist on modern pit mining.

The sand in Douglas County is ours, not Kansas City's. We don't have to raid neighboring counties for sand like Kansas City is. We can embargo our sand resource and use it for the long-term maintenance of our EXISTING constructions. We can also take a far more conservative approach to expanding the size of our towns. We can do both without destroying the Kansas River.

Our own local sand companies (the Pennys) will spend more up front making fair offers to buy safely-situated floodplain acreage. That or they can lease mineral mining rights to that acreage. But in the floodplain pit mines fill with ground water once operations begin. So the Pennys (or whoever) can use the exact same dredging equipment in pits that they use on rivers. They can also have the same good workers helping them do the same necessary job. Most important, they can earn the same profit margin they earn now.

And the best part? At the very most, sand customers will pay no more than a 6% increase per ton of delivered sand. *The Corps of Engineers*

1990 Study on Commercial Dredging said so.

To give it to you straight out, we can stop killing the river and start pit mining the floodplain. Modern pit mining can work better because it's more conservative. It will save the Kansas River for our future generations who will need that sand left in the riverbed so it can act as a natural filter of human-added pollutants.

If pit mining is slower, that will only slow down the invasion of cities into the rural areas. Putting the brakes on Lawrence will definitely make life in Douglas County quieter and better as the years go by.

What sane person wants to live in a high-speed dump like Johnson County? They wanted "growth" so damn bad - Boy, did they get it! Now they've got nothing but streets, traffic lights, strip malls, too many people, too much noise, air and soil pollution out the wazoo.

And what happened? Rich Kansas Citizens are now flocking to Douglas County, buying 10 acres and building \$500,000 mansions in the country. Why? Because rural Douglas County is still pretty. But to keep all the perks and conveniences they're used to, these immigrants need lots of concrete and asphalt. They'll destroy any river for its sand because that's what Kansas City did. They're willing to have boater's lives threatened on the river.

Get real, bubba! Wealthy Kansas City and Topeka immigrants are on the run from the urban problems they've helped create. You're just a smelly river boater, a fisherman, a duck hunter, a birdwatcher or a canoeist. You're nobody to rich people fleeing to the next Promised Land. Your safety on the water means nothing to them!

If you hope to save yourself, save the Kansas River and protect the quality of life here, sometime about right now would be a damn good time to let an elected politician hear your words. If you keep your mouth shut, dredgers will put down another 9 miles of the Kansas River like a truck-hit dog, and you or somebody you know might get taken down with it.

You be careful, now. During the next 5 years in this curve 2 miles east of Lawrence, and even farther all the way down to the Johnson county line, I sure hope that you and your boat passengers don't drown or get injured by dredging equipment on the Kansas or Wakarusa Rivers.

Carl Holmes
Kansas House of Representatives
Room 115 South
State House
Topeka, Kansas 66612

RE: Sand Dredging on the Kansas River

My name is Dr. Cynthia Annett and I am a University professor specializing in fisheries management, statistics, and the ecology of large river systems. I was formerly a Research Fisheries Biologist with the United States Fish and Wildlife Service working on the management of sportfish in large rivers. I am also the owner of a farm in Jefferson County on a tributary to the Kansas River.

The largest Blue Cats, weighing in over a hundred pounds, came out of the Kansas river earlier in this century. Now Blue Cats are seldom caught that reach even half this size. The State record Channel Catfish was caught on rod and reel from the Kansas River. Catfish used to be commercially fished from the Kaw. This is an important fishery, and a valuable resource to the State.

One third of the sport fishermen in the state of Kansas fish on rivers and streams. 60% of anglers in this country live in urban areas. Urban fisheries have been shown to reduce juvenile crime, increase property value, and provide real economic benefits to cities. While I worked in the State of Arkansas, the State legislature considered spending money on developing urban fishing programs rather than jails. The Kansas River flows through Manhattan, Topeka, Lawrence, and Kansas City. These are urban fisheries that have tangible benefits and should be protected and enhanced.

It has been said that sand and gravel dredging benefit fisheries. This is a flawed argument. The study conducted in the late 1970's by my predecessor, Dr. Frank Cross, did show a local increase in habitat diversity and hence in local fish species diversity in dredged areas of the lower Kaw below Bowersock dam in Lawrence. This was due to the exposure of coarse bottom substrates such as gravel and cobble. An area with a mixture of sand, gravel, and cobble habitats will have a higher species diversity. There is, however, a major flaw in using these results to promote dredging to benefit fish. The flaw is that coarse bottom substrates are only exposed when sand is removed faster than it is replenished.

If dredgers remove sand faster than the rate of replenishment, as has happened in both the Kansas City and Topeka areas, then the underlying cobble will be exposed. However, this is a dubious benefit because it comes at a high cost. That cost is due to the increased bank erosion, increased river channel gradient, and subsequent channel widening that occurs. According to reports by the Army Corp of Engineers, this is exactly the conditions that they are trying to avoid. These degraded

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conditions are not beneficial to the overall fish community in the Kansas River.

Dredging does not benefit the big Blue Cats and Channel Cats when they nest in the banks. Catfish dig caverns in banks for nest sites and remain in them for weeks to care for their eggs and young. Increasing bank erosion and destabilizing the channel will not help nesting catfish. Loss of shallow water habitats associated with sand bars will not help young catfish that seek these areas as nursery grounds.

We have already seen a loss of big Blue cats from the river. We have already lost at least seven species of fish from the Kansas River. These species depended upon river bottom habitats and are affected by the changes caused by dredging. We have already lost 9 species of mussels from the mainstem river.

Freshwater fish are the most vulnerable of the vertebrate species. We are facing the loss of one third of our freshwater fish fauna in this country, and about a third of freshwater fish in the world.


The Mississippi River Basin, of which the Kansas River is a part, has the most diverse temperate freshwater fish fauna in the world. The Kansas River alone used to contain almost 80 species of native fishes. The lower Mississippi drainage is the temperate freshwater fish equivalent of the tropical rain forest. And yet the Kansas River continues to suffer from human impacts, and is degraded to the point that it is considered one of the ten most endangered rivers in the United States.

Rivers with a high level of biological integrity provide humans with benefits that have tangible monetary value. The organisms living along the riparian zone and in the river act to purify the water, provide food and recreational opportunities, and help to stabilize the banks.

The most cost effective way to restore the biological integrity of the river is to maintain reaches in relatively undisturbed conditions. These reaches then act as a source of plants and animals to recolonize degraded areas. The river in Topeka and Kansas City will be improved by the organisms that live in the undisturbed reach above Lawrence. Without this source of colonists, we will see a continued degradation of the biological integrity of the entire river.

It is my professional opinion, after 15 years of research on large river fisheries issues, that there is no convincing evidence that the disturbances caused by dredging on the Kansas River will benefit the fisheries or the biological integrity of the river. Small scale local benefits are offset by long-term and large scale degradation. The Kansas River has important and valuable fish resources that should be weighed against any benefits achieved by opening new river reaches to degradation.

Sincerely,



Cynthia Annett, PhD
Assistant Professor, Fisheries

KANSAS DEPARTMENT OF AGRICULTURE
Division of Water Resources

TO: Rep. Carl Holmes,
Chairman

DATE: March 27, 1996

FROM: Wayland Anderson, *W.A.*
Assistant Chief Engineer

RE: Additional information
relating to Sub for SB 621

This memo serves to provide additional information to questions raised by members of the committee during the hearing on Sub for SB 621 on Monday, March 25, 1996.

Question 1

How does evaporation from irrigation compare with evaporation from newly exposed alluvial aquifer like what would occur with sand pits?

Answer

This comparison varies depending upon three factors: 1) the amount of annual precipitation received, 2) the amount of evaporation from a free water surface, and 3) the crop water requirement. The attached table, generally compares the net evaporation from a 40-acre sand and gravel pit and the net irrigation requirements for a 40-acre irrigated tract at three Kansas locations, Wyandotte, Sedgwick and Finney Counties.

It is important to note that the daily net irrigation requirement for crops irrigated occurs only during the growing season, while evaporation from a free water surface, such as water in a gravel pit, occurs year around.

Question 2

How do other states treat sand and gravel pits which expose the groundwater table to evaporation?

Answer

The states of Nebraska and Missouri do not directly regulate groundwater, therefore, they do not regulate sand and gravel evaporation. Oklahoma reports they issue permits to sand and gravel operations based upon the allocation of a maximum of 2 acre foot/surface acre of land ownership. New Mexico reports they issue permits for such activity just like any other beneficial use. Factors such as impact upon streamflow, groundwater, surface water and conjunctive use is considered.

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Evaporation from exposed groundwater is very important in New Mexico. Colorado also considers evaporation from gravel pits. In 1989, the Colorado legislature passed legislation, which requires any gravel pit which exposed groundwater to the atmosphere after December 31, 1980 to replace all out of priority depletions of groundwater. This essentially involves a complete engineering study.

Question 3

How much water is used in Kansas for all the beneficial uses?

Answer

The Division of Water Resources Water Use Report Summary for 1994, the most recent year available, indicates the following:

SUMMARY OF ALL COUNTIES
 BY TYPE OF USE AND SOURCE

<u>Use</u>	<u>Ground</u>	<u>Percent</u>	<u>Surface</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>
Irrigation	3,850,724	91.9	192,713	36.5	4,044,437	85.7
Municipal	192,337	4.5	222,336	42.0	414,673	8.7
Industrial *	83,786	1.9	65,158	12.3	* 148,944	3.1
Stockwatering	26,201	0.6	196	0.0	26,397	0.5
Cont. Remediation	12,665	0.3	0	0.0	12,665	0.2
Hyd. Dredging	12,125	0.2	9,191	1.7	21,316	0.4
Recreation	12,087	0.2	38,684	7.3	50,771	1.0
Domestic	85	0.0	3	0.0	88	0.0
Water Power	0.0	0	0.0	0	0.0	0.0
Art. Recharge	<u>0</u>		<u>0</u>		<u>0</u>	0.0
	4,190,010 AF	88.7	529,281 AF	11.2	4,719,291 AF	

* Industrial Use includes 2,391 acre feet for evaporation, as reported to the Division of Water Resources by sand dredgers on their 1994 water use reports. This volume, 2,391 A.F. does not account for the abandoned pits scattered throughout Kansas, since such extraction activity began. There are in excess of 5,000 A.F. of water permitted for industrial use for evaporation from sand pits.

It is important to keep in perspective that while the actual volume of water "lost" to evaporation resulting from sand and gravel dredging is a relatively small portion of the water put to beneficial use in the State, in those local situations which are considered fully appropriated, allowing several hundred acre feet of evaporation to occur without the ability to shut the use off during periods

Rep. Carl Holmes, Chairman

March 27, 1996

RE: Clarification of comments made relating to Sub for SB 621

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of dry weather, presents a serious threat to other water users. Therefore, this evaporation should be subject to the regular permitting process.

In Conclusion

While it is true the current level of sand and gravel dredging in most of the State represents a small portion of the water put to beneficial use, the demand for sand and gravel will only increase. This will result in expansion of existing pits and opening of new sites for as long as the product is needed. By "grandfathering" in those producers currently in place, and requiring permits for future sites, it will enable the state of Kansas, through the Chief Engineer, to continue to manage the water resources of the state for the benefits of its residents.

WJA:dv

C:\WJA\HOLMES.MEM March 27, 1996

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COMPARISON

<u>Location</u>	<u>S & G Pit Evaporation</u> 40 Acres - Pit Size			<u>Irrigation</u> 40 Acres - Corn		
	<u>Net Evaporation Inches</u>	<u>AF/year</u> (Gallons)	<u>AF/day/year</u> (Gallons)	<u>Net Irrigation Inches**</u>	<u>AF/year</u> (Gallons)	<u>AF*/day/90days</u> (Gallons)
Wyandotte Co.	5	17 (5,539,467)	0.05 (16,292)	7.0	23 (7,494,573)	.26 (84,721)
Sedgwick Co.	22	73 (23,787,123)	0.20 (65,170)	10.7	36 (11,370,636)	.4 (130,340)
Finney Co.	48	160 (52,136,160)	0.44 (143,374)	14.5	48 (15,640,848)	.5 (162,925)

* Assumes annual net irrigation requirements would be pumped in an average of 90 days.

** Gross irrigation requirements generally range from 12 to 24 inches per acre across the state from east to west.