

Approved 2-3-87
Date

MINUTES OF THE SENATE COMMITTEE ON ENERGY & NATURAL RESOURCES.

The meeting was called to order by Senator Merrill Werts at
Chairperson

8:00 a.m. ~~XXX~~ on January 28, 1987 in room 123-S of the Capitol.

All members were present except:

Committee staff present:

Ramon Powers - Research
Don Hayward - Revisor
Nancy Jones - Secretary

Conferees appearing before the committee:

Tom Stiles, Water Resources Mgr., Kansas Water Office
David Pope, Kansas Water Resources
Marsha Marshall, Kansas Natural Resources Council
Eulalia Lewis, Topeka Audubon Society
Bill Hanzlick, Fish & Game Commission
Ross Sublett, Nature Conservancy

SB 41 - Relating to minimum desirable streamflows

Chairman Werts introduced Ross Sublett to present brief testimony on conservation easements and to answer any questions. Mr. Sublett is to provide the committee with copies of an actual Conservation Easement Agreement from another state. The agreement is a good tool as an alternative to acquisition when an agency works with the landowner. Mr. Sublett said both parties to an agreement must meet their obligations, and he could see no problems with the amendment proposed by Southwestern Bell.

Chairman Werts informed committee members that henceforth any member not in attendance at meetings would be recorded in the minutes as absent rather than excused or unexcused. This procedure will take effect immediately.

Tom Stiles directed his testimony to specific concerns regarding minimum streamflow. (Attachment A). Most streams now being regulated have little problem with flow condition but problems continue with the Arkansas River and Rattlesnake Creek, and evaluation will continue although it may be too late to save these streams. Applications for surface water rights, junior to minimum desirable streamflows, are being received by the Water Office as well as a number of groundwater rights applications. The "ground rule" regarding seniority over minimum streamflow still applies. Depletion of streamflow by conservation practices and over-appropriation are concerns being given continued attention by the agency. Western Kansas will not be considered for establishment of minimum streamflows at this time. Passage of SB 41 will establish minimum desirable streamflow on nine additional streams.

David Pope stated the issue of appropriation of water is based on technical analysis of flow levels and effects of appropriations in effect. New appropriations can be granted where water is available. Groundwater withdrawals from wells in the alluvial aquifer can significantly affect the streamflow. The effect of new wells on the nine new streams under consideration will be carefully analyzed. There is no change in administration of water rights by maintaining an in-stream flow for senior downstream users, water quality and environmental benefits. Mr. Pope feels extensive discussion by water related agencies and public input has established acceptable standards for minimum streamflows. (Attachment B).

Bill Hanzlick stated the Fish & Game Commission endorses the minimum desirable streamflows for the nine new streams. Mr. hanzlick commended the Water Office and Water Authority for their intensive effort with all water related agencies and public input to effectuate this section of the Water Plan. It is felt these nine new streams will provide further protection for fisheries and wildlife and proper administration will continue. (Attachment C).

CONTINUATION SHEET

MINUTES OF THE SENATE COMMITTEE ON ENERGY & NATURAL RESOURCES,
room 123-S, Statehouse, at 8.00 a.m./~~10~~^{XX} on January 28, 1987

Senator Kerr asked Mr. Hanzlick if he could see any connection between minimum streamflow legislation and practices such as terraces and waterways, to which Mr. Hanzlick responded in the affirmative. Senator Kerr's next question was: "Do you see any way minimum streamflow legislation could or could be used to control or discourage the use of terraces or ponds?" Answer by Mr. Hanzlick was negative. The third question of Mr. Hanzlick by Senator Kerr was: "Will Fish & Game Commission in anyway use this legislation to try to discourage use of practices such as terraces and farm ponds which do hold water on the land in order to preserve minimum streamflows?" Mr. Hanzlick answered emphatically no.

Marsha Marshall briefly testified supporting SB 41 that streams should hold most senior rights and are essential to our wellbeing. Preserving these nine streams is an important step for our own integrity. Minimum streamflow control represents the best program of the Water Office and Water Authority (Attachment D).

Eulalia Lewis testified to her interest in conservation, stating that without water or streams we will not have life. Mrs. Lewis feels this legislation is of importance to all citizens.

Committee members were asked to note written testimony of Dean Wilson of the Sierra Club (Attachment E), and Richard Jones representing the Kansas Association Conservation Districts. (Attachment F).

Meeting adjourned. The next meeting will be January 29, 1987.

Guest List

1-28-87

Thomas Sales	Topeka	KWO
Ed Reinert		Ks League ^{women} Voters
Kerry L. Wedel	Topeka	KWO
Richard G. Jones	Salina	KACD
Joe Fairburn	Topeka	KWO
Wayland J. Anderson	Topeka	DWR Bd of Ag
Dave J. Jure	Topeka	DWR KSBK
Ch. Duffy	"	KWO
Kenneth Kern	"	SCC
Don Snodden	"	KDHE
Stephen Hunt	"	KWO
Richard M. Lee	"	Kansas Forest Assoc.
Kevin Davis	"	League of Ks Muniip.
Eulalia M. Lewis	"	Topeka Aud. Society
Barbara Rude	"	Topeka Audubon Society
Tom Taylor	"	KH Gas Service
Richard D. Kready	"	" " "
Ronald Chatter		Ks. Funeral Center
Lisbeth Byer	"	KNRC
Shaun McGrath	"	Sierra Club

January 28, 1987

Testimony of the
Kansas Water Office
to
Senate Committee on Energy and Natural Resources
Senate Bill 41: Minimum Desirable Streamflows

Members of the Committee:

The Kansas Water Office and Kansas Water Authority has worked since 1982 toward the implementation of the section of the State Water Plan dealing with minimum desirable streamflows. These efforts have resulted in streamflow standards being established on nine streams in 1984 and 1985. In Senate Bill 41, minimum desirable streamflow values for nine additional streams are proposed.

Prior to 1984, the state established certain "ground rules" regarding the identification of minimum desirable streamflow values. The Office has consistently followed those rules in recommending minimum desirable streamflows. A major rule called for the Office to evaluate the reliability of established streamflows. The Kansas Water Office has recently initiated its ongoing evaluation of flow and water right conditions on the 18 established and proposed streams listed in Senate Bill 41.

Flow Conditions

Table 1 lists the percent of time over the period October 1, 1983, to September 30, 1985, that minimum desirable streamflow values were met. The table indicates that most streams had little problem with flow conditions. However, the Arkansas River at Kinsley and Great Bend and Rattlesnake Creek show very poor

*Energy
Attach A
1-28-87*

TABLE 1. PERCENT OF TIME MDS WERE MET
OCTOBER 1, 1983 - SEPTEMBER 30, 1985

STREAM	MDS VALUES (CFS)	% OF TIME
UPPER NEDSHO	5	100
LOWER NEDSHO	40-50	89
COTTTONWOOD	10-20	100
MARAIS DES CYGNES	15-25	93
LITTLE ARKANSAS	20	82
INF NINNESCAH	5-50	99
SF NINNESCAH (PRATT)	5-10	77
SF NINNESCAH (MURDOCK)	30-90	98
NINNESCAH	30-100	99
ARKANSAS (KINSLEY)	1-5	43
ARKANSAS (GREAT BEND)	2-10	26
ARKANSAS (HUTCHINSON)	60-100	86
RATTLESNAKE CR	1-10	33
REPUBLICAN	90-250	100
BIG BLUE	65-150	100
LITTLE BLUE	60-150	100
DELAWARE	2-20	100
MILL CREEK	15-45	100
SMOKY HILL	2-15	56
SALINE	2-35	80
MEDICINE LODGE	5-50	99
CHIKASKIA	1-60	99

reliability relative to the established minimum streamflow values at those sites. The South Fork of the Ninnescah at Pratt, the Smoky Hill at Ellsworth and the Little Arkansas River showed fair compliance with the recommended standards. Flow on these three rivers was showing good recovery by mid-1985. 190

The conditions on the Arkansas River and Rattlesnake Creek is indicative of regional groundwater withdrawals around the Big Bend Prairie and strongly suggest further evaluation of the recommended flows is in order. The Kansas Water Office will continue this evaluation on these three sites and report on those minimum streamflow values next year. The condition at these three sites is also a warning not to wait too long before implementing minimum streamflows. In other words, we may have been too late to save those streams. 200
important

Water Right Status

Table 2 lists the number of surface water right applications junior to minimum desirable streamflows which have been filed with the Chief Engineer. The number of rights applied for on each stream, the total quantity of water they may take, the principal use of the water rights and the number of those rights which are on tributaries are listed. Of the 49 water rights, 32 would take water from tributaries. Actual administration of these rights to maintain minimum desirable streamflows will depend on the amount of water they are taking and their location relative to the monitoring gage on the stream.

TABLE 2. SUMMARY OF SURFACE WATER RIGHTS JUNIOR TO MDS

STREAM	NUMBER	QUANTITY(AF)	PRINCIPAL USE	# ON TRIBS
NEDSHO	14	1190	IRR	12
COTTONWOOD	0	0	---	0
MARAI DES CYGNES	18	1915	M&I	12
LITTLE ARKANSAS	7	570	IRR	1
NF NINNESCAH	1	20	IRR	1
SF NINNESCAH	1	10	REC	1
NINNESCAH	1	12	IRR	1
ARKANSAS	0	0	---	0
RATTLESNAKE CR	0	0	---	0
REPUBLICAN	1	60	IRR	1
BIG BLUE	0	0	---	0
LITTLE BLUE	2	107	IRR	2
DELAWARE	1	145	IRR	1
MILL CREEK	0	0	---	0
SMOKY HILL	0	0	---	0
SALINE	0	0	---	0
MEDICINE LODGE	0	0	---	0
CHIKASKIA	3	179	IRR	1

A number of groundwater rights have been applied for with the Chief Engineer across the state. Some of these groundwater applications are on hold because of their proximity to streams and the uncertainty of whether minimum streamflows will be put in place. While the number of applications have slowed since the 1970's, they have not ceased.

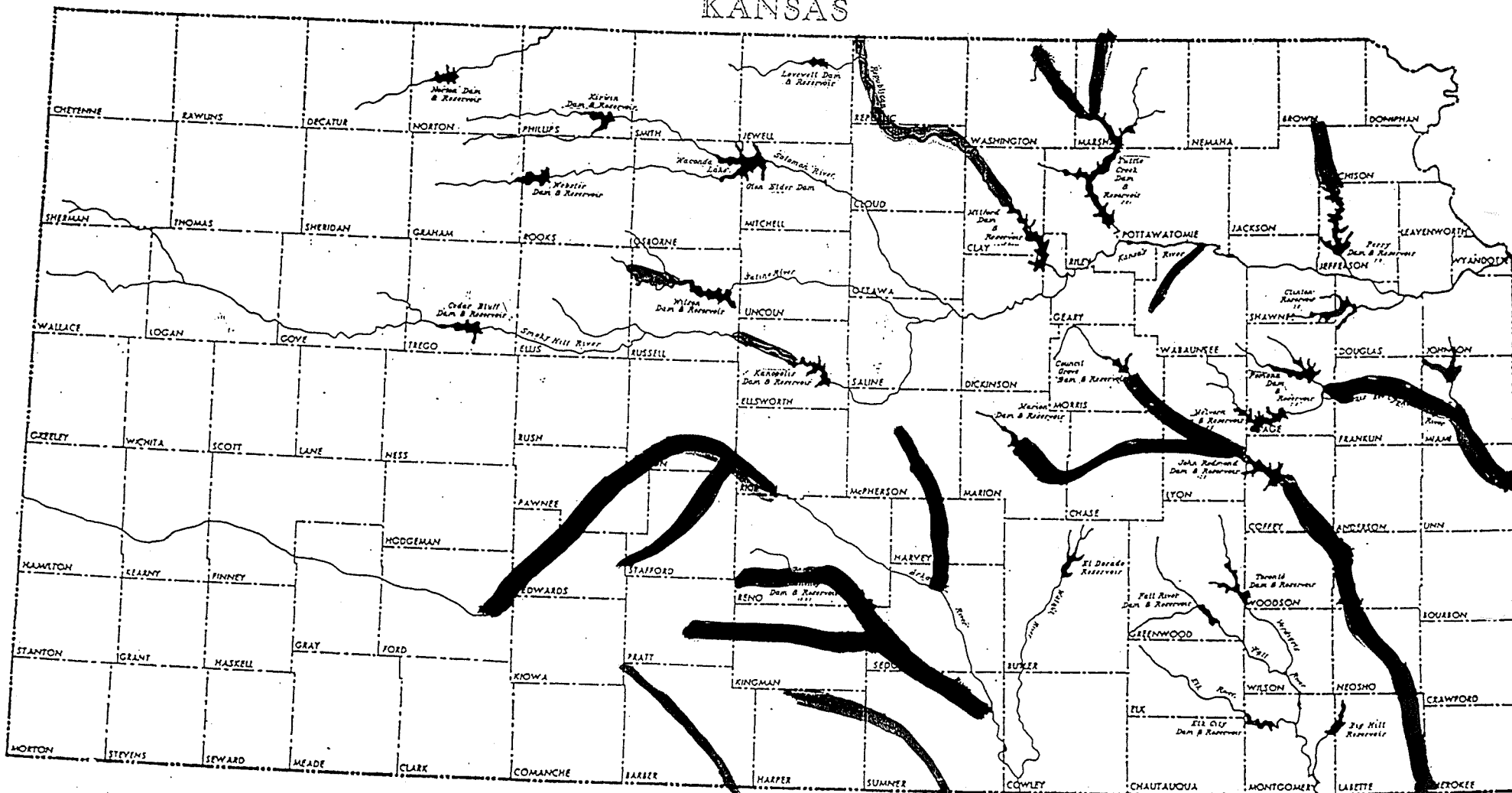
Any action taken in regard to minimum desirable streamflows will pertain to future water rights. Those applied for prior to April 13, 1984, retain their constitutionally protected seniority over minimum streamflows. This has always been a "ground rule" of the state, as dictated by law

Location of Minimum Streamflows

When the Kansas Water Office initially designed the minimum streamflow program, there was a question of where to apply it. Since 1984, the Kansas Water Office has examined the flow records of streams in the state and concluded that minimum streamflows would not be logical in western Kansas. The station farthest to the west with a minimum streamflow designation is the Kinsley station on the Arkansas. The results in Table 1 indicate that Kinsley is a marginal site. Therefore, the Kansas Water Office does not recommend any additional streams west of Kinsley be designated for minimum streamflows. Figure 1 shows the location of the existing and proposed minimum desirable streamflow sites. Note that this program is keyed to streams in the eastern two-thirds of the state.

FIGURE 1. SITES OF EXISTING & PROPOSED MDS

KANSAS



MINIMUM DESIRABLE STREAMFLOW

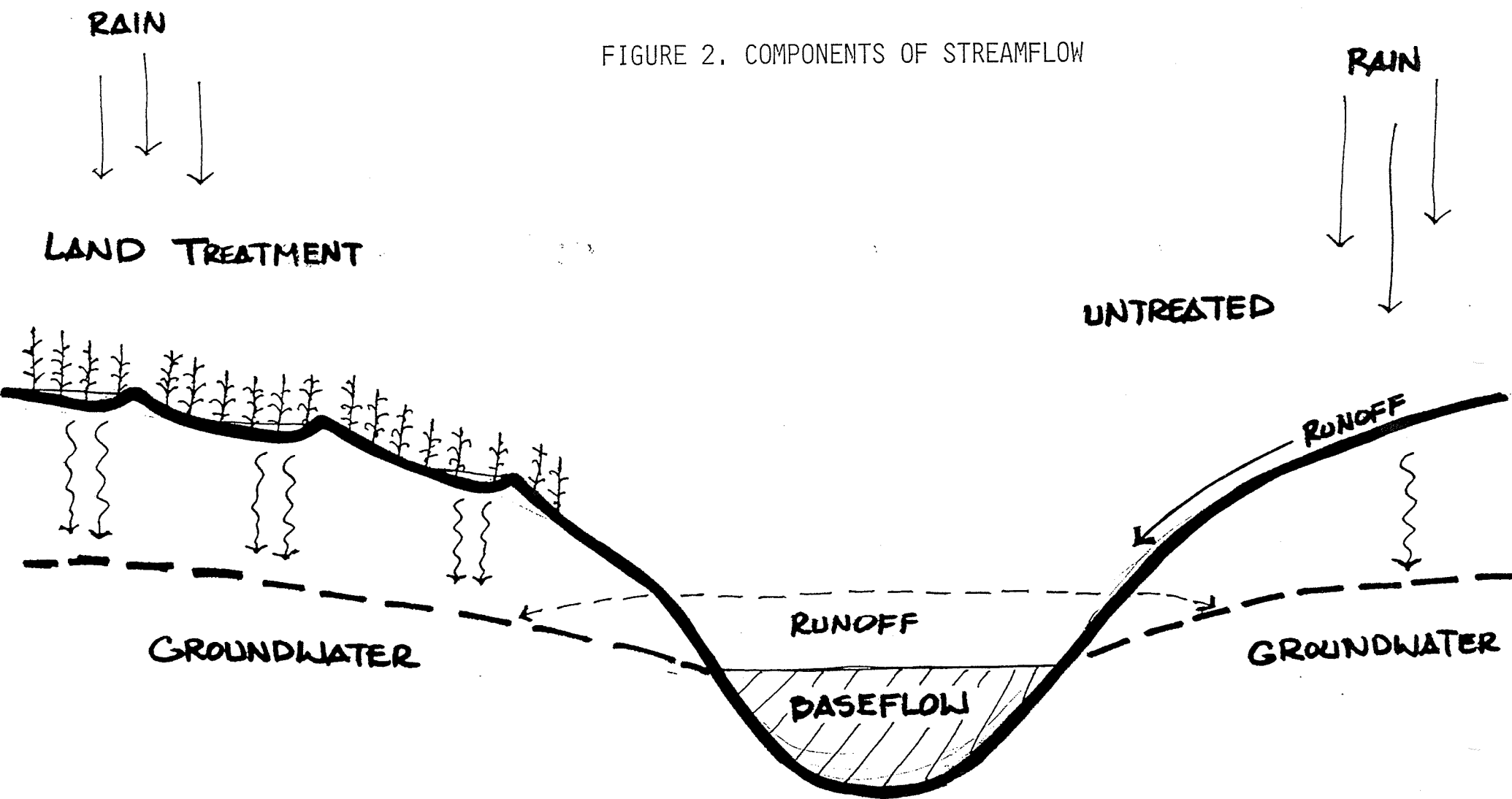
Availability of Water

The Kansas Water Office examines the flow records of any stream for which a minimum streamflow is proposed. Any flow recommendation negotiated by the multi-agency technical committee is expected to be present most of the time. Minimum desirable streamflows are keyed to the Appropriation Act, they prevent over-appropriation. Over-appropriation occurs during baseflow periods. It is not logical to set a minimum streamflow so high that it naturally cannot be maintained. The general "ground rule" is the flows should be present about 85 percent of the time.

Depletion of streamflow by conservation practices continues to be a concern. Streamflow is composed of two components, runoff and baseflow (Figure 2). Baseflow originates from the groundwater and predominates during extended dry periods. Runoff comes from rainfall and is much larger than baseflow. Conservation practices hold the water from precipitation on the land, thereby reducing the runoff component to the stream. In western Kansas, this effectively eliminates streamflow. However, the flows in western Kansas have always been marginal and there is no desire for the state to establish minimum streamflows out there.

In eastern Kansas, the conservation practices work to hold the runoff from storms on the land and induce increased percolation of the water into the ground. This water then

FIGURE 2. COMPONENTS OF STREAMFLOW



reappears as baseflow during dry periods. Thus, conservation practices act to increase surface water supplies at the time when water rights exert their most significant impact. Additionally, effective use of rain lowers the need to draw upon supplemental water supply sources such as streams and aquifers.

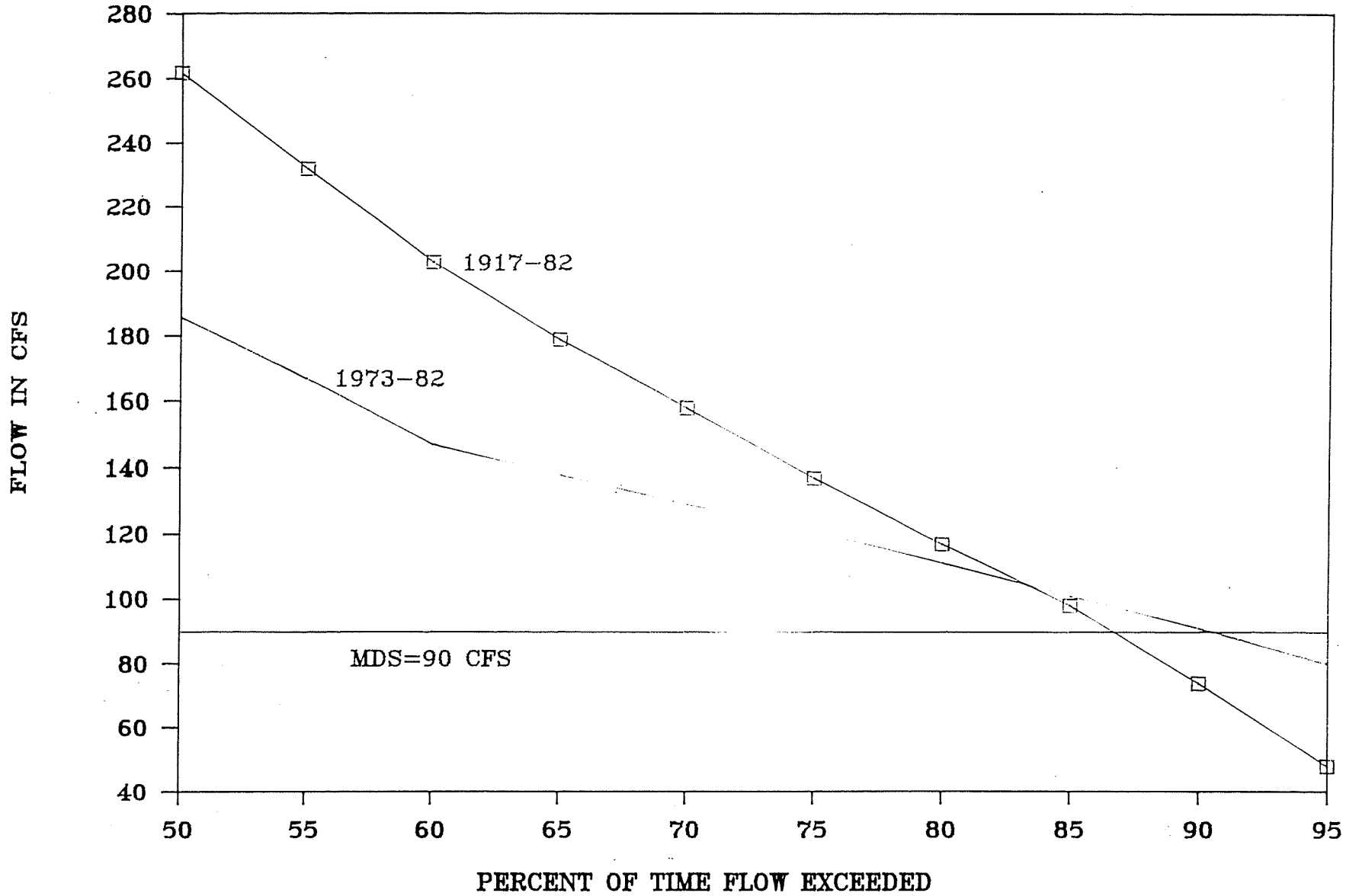
Figure 3 is an analysis of flow on the Republican River at Clay Center since 1917 and over the last ten years. Significant depletion by conservation practices can be seen in the runoff component (50-60 percent). However, the recent record breaks from the depleted trend and approaches the long-term condition, surpassing it at the 83 percent level. At the 85-95 percent levels, indicative of baseflow, recent flow conditions have exceeded the long term. The minimum streamflow recommendation of 90 cfs was established at the 87 percent level, but was met 91 percent of the time over the last ten years. It is the opinion of the Kansas Water Office that conservation practices have redistributed the high flows occurring along this river as runoff to enhance the baseflow condition over the long term. This baseflow enhancement, as well as more effective use of rain, is a complementary water management strategy to minimum desirable streamflows.

Summary

The flow recommendations in Senate Bill 41 represent a well thought-out approach to propose initial minimum streamflow values. They may need adjustment over time, but the underlying

"ground rules" dictate that a prudent methodology has been applied. There is no benefit in delaying adoption of these flows. The state's best evaluation of these flows takes place in the field. The Kansas Water Office recommends the passage of Senate Bill 41.

FIGURE 3.
OCTOBER FLOW DURATION
REPUBLICAN RIVER NEAR CLAY CENTER



STATEMENT OF DAVID L. POPE
CHIEF ENGINEER
DIVISION OF WATER RESOURCES
KANSAS STATE BOARD OF AGRICULTURE

TO SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES
SENATE BILL NO. 41
JANUARY 28, 1987

Chairman Werts and Members of the Committee, thank you for the opportunity to comment on Senate Bill No. 41 pertaining to the establishment of minimum desirable streamflows for the nine new rivers and streams listed in the bill.

If the legislature enacts legislation establishing these minimum desirable streamflows, it would be the responsibility of the Chief Engineer to withhold from appropriation that amount of water deemed necessary to establish and maintain, for the identified watercourse, the desired minimum streamflow. In other words, our office would be required to determine whether or not there was sufficient water available for appropriation in excess of the amount of water deemed necessary to satisfy the existing senior water rights and the minimum desirable streamflow requirements. In those cases where additional water is not available, additional permits for the appropriation of water would not be granted. If water is available a significant portion of the time, new appropriations would be granted, however, these appropriation rights would be junior to the minimum desirable streamflow requirements.

These proposed minimum desirable streamflows would not affect the holders of existing senior water rights with a priority date on or before April 12, 1984, provided they are operating in compliance with the conditions of their permits during times of streamflow administration.

Any such junior appropriation (i.e. one with an application filed after April 12, 1984) would be subject to regulation during periods of low flow and

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would not be allowed to divert water if such diversion would cause the minimum desirable streamflow to not be satisfied.

In some cases, groundwater withdrawals from wells in the alluvial aquifer along streams can significantly affect the streamflow. Therefore, it will be necessary for us to analyze the effect of new wells on these streamflow requirements in order to determine whether new wells should be allowed, and if so, at what distance to the stream. Groundwater - surface water inter-relationships are normally quite complex and vary from one stream system to another. The Division has spent a considerable amount of time developing administrative policies and procedures to deal with the issue and is currently receiving input from the Groundwater Management Districts so that such procedures are as workable as possible for streams within the Districts.

In essence, the minimum desirable streamflow program does not change the way the water rights are administered, except to leave a certain portion of streamflow, when available, in the stream for in-stream flow purposes, rather than to allow that water to be appropriated for new consumptive uses. In addition to the environmental and water quality benefits associated with this in-stream flow, it should make it easier to protect existing water rights, such as domestic rights for livestock watering. Said another way, once a stream has been dried up or severely depleted, even regulation of junior upstream water users may still not make it possible to provide an adequate supply of water for senior downstream users. However, if we can maintain some limited amount of water in the stream, this problem can normally be overcome.

The Division of Water Resources, Kansas State Board of Agriculture, has had an opportunity to provide input into the development of the proposed minimum desirable streamflows through an interagency technical committee working closely with the Kansas Water Office. The proposal for minimum desirable streamflow

standards on the nine new stream reaches contained in Senate Bill No. 41 is the result of extensive discussions between the water related agencies and has resulted in the best consensus of opinion between those agencies, taking into consideration extensive public input at the public meetings and hearings, as to what those minimum desirable streamflows should be. The Division is satisfied with the process that took place in order to set those minimum desirable streamflow values which are being brought before the legislature for approval this year.

Thank you very much. I would be happy to answer any questions the Committee might have.

KANSAS FISH & GAME COMMISSION
PERSPECTIVES ON STATE WATER PLAN/MINIMUM DESIRABLE STREAMFLOWS (SB 41)

Testimony presented to the
SENATE ENERGY AND NATURAL RESOURCES COMMITTEE

January 28, 1987

The Kansas Fish and Game Commission endorses Senate Bill 41. The flow values that appear in this bill are the result of a tremendous amount of inter-agency cooperation, flow needs assessments, public review and comment. We appreciate the opportunity to provide input and in assisting the state in proper water management for the benefit of fish and wildlife resources.

The bill includes flow standards for nine streams adopted through past legislative sessions along with recommendations for nine new ones. We support continuation of all the previously adopted levels along with the endorsement of minimum desirable streamflows for the nine new streams.

We commend the Kansas Water Office and the Kansas Water Authority for their persistence and dedication to this section of the State Water Plan. It is an exhaustive task to gather pertinent information from sister water agencies, mold a diversity of opinions and recommendations into a product that is acceptable to all the principle decision makers involved and yet temper the whole effort with desires of a broad spectrum of public interest. Each specific monthly flow level presented for each stream is the product of biological and hydological research, intensive negotiation sessions among state agencies and considerations from numerous and related water issues. These final monthly flow values reflect a compromise from all the water agencies involved. None gained everything they desired but everyone can accept and support the results. The primary reason for this is that we feel that in most cases, these flows will provide the necessary protection for the fisheries and other wildlife that they are designed to protect, yet remain practical enough to allow proper administration.

Benefits of legislation:

Establishment of flow values on streams provide a target value for use in water appropriation. In the past water has been appropriated until it was

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gone and then all uses suffer. Aside from protecting a stream's aesthetic value, fish and wildlife habitat preservation is included. Additionally, water quality standards are more easily met by municipalities where flow is present. A stream with at least some flow is more efficient in delivering water to meet water rights than a dewatered one which requires much water used to "prime" the channel. Farmers and ranchers living along streams will benefit over the long term by having water available for watering livestock and other agricultural uses.

Agency actions for implementation:

The Kansas Fish and Game Commission provides state of the art instream flow modeling results to the Kansas Water Office at no expense to state general fund revenues. This service will be continued through already existing financial resources.

Kansas Natural Resource Council

Testimony concerning SB 41,
Minimum Streamflow

Presented to the Senate
Energy & Natural Resources Committee

By Marsha Marshall
January 28, 1987

I represent Kansas Natural Resource Council, a nonprofit public interest organization which advocates sustainable resource policies and practices. Our organization has supported minimum streamflow legislation since the first rivers were designated in 1984. In my view, minimum streamflow represents the best program initiated by the Kansas Water Office and Kansas Water Authority.

The issue that you will decide in deliberating upon this bill is whether or not these streams in Kansas have a right to existence in some viable form. The concern, I suppose, is that the time honored doctrine of first in time, first in right, is being tampered with. It is true that in passing this legislation, we are defining limits to that prior appropriations doctrine as it is practiced, saying that all future appropriators in this area will have rights junior to the minimum flows of these streams. I want to note, however, that if the prior appropriations doctrine were strictly followed, then these streams would enjoy the most senior of rights, for they existed long before the first Kansas water use permit was issued.

Many Indian treaties reflected the important legacy of rivers and streams, promising lands for "as long as the rivers shall flow and the grasses shall grow." Those two conditions were viewed as essential to the human spirit; without them, there could be no reason to remain in a dying land.

Water in Kansas is a public trust, and preserving nine rivers through passage of this legislation is an important step in recognizing and appreciating our relationship with these streams. We cannot afford to compromise their integrity, for in doing so, we impair our own.

I urge your favorable consideration of this bill.



TESTIMONY PRESENTED TO THE
SENATE ENERGY AND NATURAL RESOURCES COMMITTEE

ON SENATE BILL NO. 41

BY

DEAN WILSON
JANUARY 28, 1987

I am a member of the Sierra Club, Topeka Audubon Society's Board of Directors and a member of their Conservation Issues Committee, Kansas Wildlife Federation's Conservation Issues Committee, National Wildlife Federation, Kansas Canoe Association (past president, past chairman of legislative committee), and Riley County Fish & Game Association. I am not speaking for these organizations, but, I do have a good feel for what the public feelings are on this legislation. I have followed this part of the Kansas Water Plan for the past 3 years -- from the public meetings, formal hearings, and the Kansas Water Authority's final meetings.

Minimum Streamflows can be viewed as a water right granted to a stream to protect it from over appropriation. With this in mind some farm groups claim that senior water rights are effected. The "first in time - first in right" doctrine is not effected by this legislation. Since the minimum streamflow is junior to existing rights, it only affects future rights along the designated rivers.

Farm organizations argue that minimum streamflows threatens agriculture practices for stream water. We can look at our dry Western Kansas streams to see who has caused much of the problem in the first place - Agriculture.

I hope that with all the public input into this legislation, that you vote with the public. Having received all the information on this bill during your committee hearings, when the bill is voted to the full Senate, I hope you will educate your fellow Senators as to what this could mean for our Future Kansas generations.

Dean W. Wilson
3509 SE Highland Ave.
Topeka, Kansas 66605
913-266-6591

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SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES
January 28, 1987

Testimony on Senate Bill No. 41 - An ACT concerning water;
relating to minimum desirable streamflows.

I am Richard Jones, Executive Director of the Kansas
Association of Conservation Districts.

The Kansas Association of Conservation Districts represent
the 105 county conservation districts in Kansas. Conservation
districts provide assistance to landowners and operators for the
protection and improvement of their soil, water, plant and animal
resources. Conservation districts are governed by a five member
board of supervisors made up of local farmers and ranchers.

The Kansas Association of Conservation Districts urges the
implementation of the State Water Plan for the prudent
development and management of the state's water resources. A key
management provision of the State Water Plan is the section on
minimum desirable streamflows. The Kansas Association of
Conservation Districts supports the concept of minimum desirable
streamflows and the passage of Senate Bill 41 to wisely
appropriate water in the state.

It has been suggested that minimum desirable streamflows
conflict with the state's continued promotion of conservation
practices on the land. This perceived conflict between
management programs is not correct.

In western Kansas, rainfall totals only about 20 inches and
runoff is almost nonexistent, less than one-half inch. Since
western streams only sporadically flow, conservation practices do

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not exert a detrimental effect on flows. These practices halt the runoff originating from storms. The runoff retained on the land increases crop production, induces some groundwater recharge and leads to less dependence on underlying aquifers for irrigation water supply.

In eastern Kansas, rainfall exceeds 30 inches with dramatically higher runoff. Conservation practices slow this runoff, providing flood management and water quality improvements. There may be a minor reduction of water quantity from evapotranspiration and crop production. Nonetheless, streams generally flow longer because runoff has been held back and has seeped into the groundwater which provides water to the stream during dry periods. These baseflows constitute the surface water supply for all users, whether city, irrigator or fish.

In summary, it is the view of the Kansas Association of Conservation Districts that the impact of conservation practices on streamflow are complementary management techniques which enhance baseflow periods and lower the demand for supplemental water supplies. The Kansas Association of Conservation Districts supports the passage of Senate Bill 41.