

Approved 1-27-87
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. ~~PM~~ on January 20, 1987 in room 123-S of the Capitol.

All members were present except:

Senator Kerr - Excused
Senator Thiessen - Excused
Senator Yost - Excused

Committee staff present:

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

Conferees appearing before the committee:

Bill Hanzlick, Director, Kansas Fish & Game Commission
Mike Theurer, Chief of Fisheries

The meeting was called to order and committee members were welcomed by Chairman Werts.

Members of the committee were asked to give their attention to a copy of HB 2035, concerning Conservation Districts, which is similar to a Senate bill to be heard in this committee. Introduction of HB 2035 as a Senate bill by this committee was requested by the Chairman in order that the committee might work the two bills together.

Motion was made to introduce HB 2035 as a Senate bill by Senator Feleciano, seconded by Senator Langworthy. Motion carried.

Bill Hanzlick presented outlines of two bills being requested for introduction from the Fish & Game Commission. (Attachments A & B). The first bill proposed legislation which would encourage more involvement in recreational fishing by establishing two free fishing days per calendar year for residents and non residents. The Commission will designate the days in conjunction with National Fishing week.

Motion was made by Senator Daniels to introduce a bill, seconded by Senator Vidricksen. Motion carried.

A second bill requested for introduction concerns fee structure adjustments. The Commission proposed new maximums be established to allow for future license increases as needed. Discussion by the committee followed.

Motion was made to introduce the bill by Senator Langworthy, seconded by Senator Gordon. Motion carried.

Mike Theurer presented an update on the Milford Fish Hatchery (Attachment C). An outline on the construction and operation of the Hatchery was given by Mr. Theurer with emphasis on problems relating to each area. Milford is classified as an intensive fish raising facility, inter-related with the three extensive facilities located at Meade, Pratt and Farlington. The purpose and operation of these facilities was explained.

Advantages of the Milford Hatchery are the ability to stock channel catfish in early spring into fall, sorting and marking of fish are easier and disease treatment is more efficient. Three problems exist that are being addressed at this time. The original roof was totally unacceptable and replacement is underway at the main facility as well as three satellite buildings. A major problem is a nonfunctional alarm system which is critical to the facility to avoid future fish kills. Senator Feleciano initiated a detailed discussion of the problem and action taken to rectify it. The Commission is handling this problem through the State Architect's office, which acts as its agent in dealing with the contractor who installed the alarm

CONTINUATION SHEET

MINUTES OF THE SENATE COMMITTEE ON ENERGY & NATURAL RESOURCES,
room 123-S, Statehouse, at 8:00 a.m./~~p.m.~~ on January 20, 1987

system. Senator Feleciano suggested the possibility of someone from the State Architect's office appearing before this committee to explain a lack of action for two years, or an alternative of addressing a letter to the Attorney General to initiate some proceeding. Mr. Theurer stated that steps taken to avert fish kills since the alarm system has been nonfunctional, include implementing a third shift with staff personnel.

Reduced water quality is the most critical problem at Milford. Explanation was given by Mr. Theurer of the interaction of water sources at the Hatchery and how imbalance in the natural system has caused Ph imbalance, ammonia toxicity and iron in unacceptable amounts. A report from the Biological Survey addressing water quality will be made available to the committee in February. Contracts of commercial fishermen and their interest in rough fish removal was discussed.

Discussion by the Committee dealt with the possibility of aeration as a solution for displacing the iron, treatment of algae and nutrient enrichment, relocation of wells, filters for ammonia, cost transfer due to fish kill and length of time to reduce cost of fish production.

Mr. Theurer concluded his presentation with the statement that a combination of the primary cursory water study, a nonfunctional alarm system and the initial filling of the lake have caused the current problems at the Milford Hatchery.

Meeting adjourned. The next meeting will be January 21, 1987.

Guest List

1-20-87

Mise Meuser
Dorell Montei
Leonard J. Jind
Joe J. Jind
Ayula F. Kovach
Mary E. Gomer
Jerry Hayler
Don Schwack
Bill Hanzlick
Robert Brunster
Brent Frazee
George Stanley
Lob Halper
Shaun McGrath
Leland E. Rolf

Pratt, Kansas
Pratt, KS.
Hartford KS
Meads
KDHE - Topeka
St. John, KS
Ks Wildlife Fed. Topeka
Ks. Indus. Oil & Gas Assoc.
Ks Fish & Game Comm.
Robert Brunster & Assoc. / KF-10
KC Star
Wichita Eagle-Beacon.
Ks Chamber
Sierra Club
DWR-KSBA

Fact Sheet

Free Fishing Days

Prepared by: Kansas Fish and Game Commission

Background:

K.S.A. 32-10A states that no person, except herein provided, may "...attempt to take or take any fish during any portion of the year without first having in possession a license issued to such person.

It is estimated that during calendar year 1985 a total of 550,000 anglers experienced a total of 10,000,000 angler days fishing Kansas waters. Total fishing license sales for 1985 was 298,979.

One of the responsibilities of the state fisheries program is "to allow public benefit and appreciation of aquatic wildlife by providing the public with aquatic wildlife use opportunities and other related educational and recreational activities." Success of the program may be stated in terms of more people being involved with recreational angling.

Proposal:

Enact legislation which would encourage more involvement in recreational fishing by establishing two free fishing days per year.

Recommended Legislation:

An act permitting the Kansas Fish and Game Commission to designate two days annually to allow fishing without a license.

Sec. 1. The Kansas Fish and Game Commission may designate by resolution two days per calendar year during which residents or nonresidents may fish without first securing the license required under K.S.A. 32-104. All other laws and regulations of the Commission applicable to fishing within this state shall remain in effect during said designated days.

Sec. 2. This act shall take effect and be in force from and after its publication in the Kansas Register.

Fiscal Impact:

There would be no immediate negligible impact upon the passage of this legislation.

ATTACHMENT A

1-20-87 *WJG*

Benefit Summary:

Free fishing days represent an invitation to out-of-state anglers to fish Kansas. It is also an invitation for Kansas residents who have not recently fished to become reinvolved with sport fishing and its many benefits. It is also an opportunity a "non-fishing" parent has to take their children out for a day of fishing at a minimal cost.

During free fishing days tackle manufacturers and sporting goods stores do better business. Participants purchase food and gas, stay in motels, and circulate dollars benefitting local communities.

The Fish and Game Commission hopes to attract new anglers who in turn will purchase future licenses which generate more revenues which translates to a brighter angling future.

Free fishing days work because every one benefits.

Kansas Fish & Game

HEADQUARTERS
BOX 54A, RT. 2, PRATT, KS 67124



(316) 672-5911

MEMORANDUM

TO: Bill Hanzlick, Director

FROM: Mike Theurer, Chief of Fisheries //, +

DATE: August 15, 1986

SUBJECT: Statute and Regulation Research Relating to Creation of Free Fishing Days

Basic authority concerning license requirement may be found under K.S.A. 32-104. This states no person, except as hereinafter provided, may "... attempt to take or take any fish during any portion of the year, without first having in possession a license issued to such person, as hereinafter provided, for the calendar year in which such hunting, trapping or fishing is done." This statute is then sectionalized, and scattered through these sections are the exception for licenses. These are indicated on the attached pages, highlighted in yellow and asterisked in red.

It appears to me that a free fishing day or days would constitute an exception under the license requirement law, and as such the basic law (K.S.A. 32-104) should be amended by addition. Suggested wording is outlined below.

The Kansas Fish and Game Commission may designate, by resolution and by acting upon and entering this resolution in a lawfully convened session of the Commission, two (2) days per year in which residents and non-residents may fish without first procuring a fishing license.

All other laws and regulations regarding method of take, size, creel and possession limits and other associated rules and regulations remain in effect during the designated period.

The above wording is patterned after the Oklahoma statute allowing the establishment of free fishing days. I have attached a copy of this statute and also the accompanying resolution.

Just recently we have canvassed the surrounding states questioning if they have established free fishing days, and if so, when these are to occur. States and responses are listed below.

MEMORANDUM
Page 2
August 15, 1986

Colorado--none

Nebraska--none

Oklahoma--a Saturday and Sunday in June (designated by the Oklahoma Commission as the last two weekend days of National Fishing Week hereafter).

Missouri--one day in association with a fishing day proclamation from the Governor (the day this year was June 7, 1986).

It appears to me that the surrounding states which do have free fishing days are variable in establishing these days, and it will be next to impossible to maintain consistency with neighboring states. Therefore, I would suggest establishing our day(s) independently from the surrounding states. Further, I recommend that we establish two free fishing days and that these two coincide with the first two weekend days of National Fishing Week and be used as a promotional kick-off for the National Fishing Week. I further recommend that we adjoin with Kansas tourism interests and encourage the Kansas Park and Resources Authority to likewise establish free park-use days during this same time period.

To complete this package, I would suggest that it be forwarded to our attorney, Jonathan P. Small, for his review and further suggestions. If you have any questions or you wish me to forward it to Jon, please inform me.

sb

Attachments

FREE FISHING DAYS—SOME THOUGHTS

The Sport Fishing Institute pursues a course of husbanding more and better sport fishing opportunities. Under proper management of our renewable fisheries resources, sport fishing opportunities can expand and flourish in this country. The rewards of sport fishing are both diverse and generous. Most *SFI BULLETIN* readers can readily recall days of their youth spent afield with their folks and/or friends in unflinching pursuit of some finny quarry. The conversation, companionship and equality of purpose engendered by such days on the water, are perhaps reward enough to keep the SFI program humming. But the nutritional contributions and enormous economic activity generated by sport fishing have become further catalysts for our continuing and expanding efforts. The full range of benefits associated with fishing often last a lifetime, and youngsters who have never been exposed to sport fishing have been, in a very real sense, deprived of a lasting enrichment in their lives.

One excellent means of increasing public awareness of the many benefits of family fishing excursions, and one fully endorsed and promoted by the Sport Fishing Institute, is the annual Free Fishing Days concept. At least three states (Oklahoma, Pennsylvania and Illinois) have now initiated such programs.

A rationale for Free Fishing Days appeared in a recent edition of the Illinois Department of Conservation's *Outdoor Highlights*. This sage statement entitled "Why Free Fishing Days?" is reproduced below in its entirety.

Why Free Fishing Days?

That's a question we've heard from time to time since the announcement that June 7-10 will be Free Fishing Days in Illinois. On those four days anyone can fish Illinois waters without having a fishing license. That includes all public waters in the state, private waters if the angler obtains permission from the owner, and is for residents and non-residents alike. The only requirement is that participants must obey fishing laws that govern the sport of fishing.

But why Free Fishing Days?

Some people have speculated that it is a measure to help bait shops and sporting goods stores. Others have guessed the Department of Conservation wants to increase the number of persons visiting state parks throughout the state. A few have suggested it is a way to give some business to fishing guides and tackle manufacturers.

All are partially correct, but the best guess, and the one that is the most correct, is that it is a public relations gimmick dreamed up by the Department of Conservation. That's exactly what it is.

But it goes beyond being *just* a public relations gimmick.

It's the State of Illinois' way of telling the public that if they are going fishing, to give Illinois a try. It's an invitation to out-of-state anglers to put a hook in our waters. It's an invitation for persons who may have been anglers a few years

ago to give it a try again, and a chance to introduce non-anglers to the sport of fishing at a minimal cost. It's also a means that will enable a non-fishing parent to take the kids out for a day of fishing.

That's a little bit of why we say it's a public relations gimmick, but there's more.

It's also the Department of Conservation's way of saying that Illinois has some of the best fishing to be found anywhere. It's no secret that Illinois has been handicapped the past two to three decades by an outdated fish hatchery system, and that many Illinois anglers began fishing other states that could offer better fishing.

That's all changed, however. With the construction and operation of the new Sand Ridge Fish Hatchery, plus the increased production of the renovated Little Grassy Fish Hatchery, the continued support of the Spring Grove Fish Hatchery, and the innovative creation of spawning and rearing ponds by fisheries biologists, Illinois today is stocking literally millions more fish of many more species into the waters that dot the state.

Those millions of fish mean Illinois can compete with fishing areas throughout the United States. No longer do anglers have to drive hundreds of miles for good fishing; Illinois anglers can fish, with minimal expense, near their home. The dedicated Illinois angler—those that fish our waters regularly—already know that statement is true.

During Free Fishing Days the tackle manufacturers and sport and tackle stores stand to do better business. Other businesses will profit, too. Participants will buy gas and food, stay in motels and hotels, and they will circulate dollars that will benefit entire communities.

The Department of Conservation hopes to attract new anglers during Free Fishing Days—anglers that will purchase licenses that will generate revenues which will go toward raising more fish for our lakes and streams. That translates to even better fishing in the future.

But the real winner—the persons we think Free Fishing Days really is designed for—are the new or renewed angler. Those persons will benefit the most because they will have been introduced to one of the most popular activities of all time—the sport of fishing. Once they're hooked on fishing they become part of the Department of Conservation's family of boosters.

We suspect our angling readers would have been on the lakes and streams of Illinois this June 7-10 whether we had Free Fishing Days or not. We hope each of them will take the opportunity to introduce at least one of their non-angling friends to the sport.

Why Free Fishing Days? Because everyone benefits!

STATES THAT HAVE CELEBRATED
FREE FISHING DAY(S)

<u>State</u>	<u>Contact</u>	<u>Number</u>
Arizona	Joe Janisch	(602) 942-3000
Arkansas	Scott Henderson	(501) 223-6300
Idaho	David Hanson	(208) 334-3792
Illinois	Mike Conlin	(217) 785-8271
Michigan	Pat Merrick	(517) 373-6714
Minnesota	Dick Hassinger	(612) 296-6157
Missouri	Jim Fry	(314) 751-4115
New Jersey	Bob McDowell	(201) 637-4125
Oklahoma	Kim Erickson	(405) 521-3721
Pennsylvania	Del Graff	(814) 359-5169
South Dakota	Bob Hanten	(605) 773-3384
Wisconsin	Ron Poff	(608) 266-2176

Date: September 1, 1986

Fact Sheet

Fee Structure Adjustment

Prepared by: Kansas Fish & Game Comm.

Background: The 1978 session of the legislature gave the Commission authority to set license and permit fees by rule and regulation within a framework established by statute (KSA 32-164-6). With the license increase effective Jan. 1, 1987, several of the license fees will have reached their maximum.

Proposal: It is felt that this procedure has worked well for everyone involved and new maximums should be established to allow for future license increase by rule and regulation.

Recommended Legislation: Amend KSA 32-164-6 with new maximums as follows.

Recommended Increases in License Maximums

<u>License/Permit Type</u>	<u>Current Maximum</u>	<u>Jan. 1, 1987 Price</u>	<u>Recommended Maximum</u>
Resident Hunting	\$ 10	\$ 10	\$15
Nonresident Hunting	50	50	75
Resident Fishing	10	10	15
Nonresident Fishing	30	25	35
24 hr Fishing	2	2	5
Resident Furharvester	15	15	25
Nonresident Furharvester	400	250	750
Resident duplicate Hunt/Fish/Furh	3	3	5
Nonresident duplicate	5	3	10
Resident Furdealer	200	100	200
Combination Hunt/Fish	20	20	30
Nonresident Furdealer	400	200	750
Cont. Shooting Area	10	10	15
Resident Mussel Fishing	200	25	200
Nonresident Mussel Fishing	400	100	400
Game breeder	15	10	25
Live Rabbit trapping	15	10	25
Rabbit Shipping	200	200	400
Collecting Permit	10	5	25
Disable Veh. permit	5	3	15
Resident Big Game permits	100	Various	100
Nonresident Big Game permit	400	Various	400
Field Trial (Birds)	25	20	50
Field Trial (furbearers)	25	20	50
Comm. dog training	25	20	50
Hound trainer/breeder running	25	20	50
Water Event	50	20	50

Fiscal Impact: There would be no fiscal impact with the passage of this legislation.

Benefit Summary: By being able to set license fees by regulations, it is felt the license buyer has more direct input in the regulatory process with the required public hearings. The agency may chart its own destiny and tends to assume more of the consequences of a license increase.

32-164b. Authority for commission to set fees by rule and regulation; schedule. (a) Except as otherwise provided in this section, the Kansas fish and game commission is authorized to adopt rules and regulations fixing the amount of fees for the following items subject to the following limitations and subject to the requirement that no such rules and regulations shall be adopted as temporary rules and regulations:

Resident hunting license—not less than \$5 nor more than	10 ←————	<u>\$15</u>
Nonresident hunting license—not less than \$25 nor more than	50 ←————	<u>75</u>
Resident fishing license—not less than \$5 nor more than	10 ←————	<u>15</u>
Nonresident fishing license—not less than \$15 nor more than	30 ←————	<u>35</u>
Twenty-four-hour fishing license—not to exceed	2 ←————	<u>5</u>
Resident furharvester license—not less than \$10 nor more than	15 ←————	<u>25</u>
Nonresident furharvester license—not less than \$50 nor more than	400 ←————	<u>750</u>
Resident duplicate license or permit (hunting, fishing, furharvesting)—not to exceed	3 ←————	<u>5</u>
Nonresident duplicate license or permit (hunting, fishing, furharvesting)—not to exceed	5 ←————	<u>10</u>
Resident fur dealer license—not less than \$50 nor more than	200	
Combination resident hunting and fishing license—not less than \$10 nor more than	20 ←————	<u>30</u>
Nonresident fur dealer license—not less than \$50 nor more than	400 ←————	<u>750</u>
Controlled shooting area hunting license—not less than \$5 nor more than (to be same as resident hunting license)	10 ←————	<u>15</u>
Resident mussel fishing license—not less than \$25 nor more than	200	
Nonresident mussel fishing license—not less than \$50 nor more than	400	
Game breeders permit—not less than \$2 nor more than	15 ←————	<u>25</u>
Live rabbit trapping permit—not to exceed	15 ←————	<u>25</u>
Rabbit shipping permit—not less than \$25 nor more than	200 ←————	<u>400</u>
Collecting for scientific and exhibition permit—not to exceed	10 ←————	<u>25</u>
Disabled persons vehicle permit (lifetime)—not to exceed	5 ←————	<u>15</u>
Resident big game hunting permit—not less than \$10 nor more than	100	
<i>Provided, That the commission may establish different permit fees for each class of big game animal within such limit.</i>		
Nonresident big game hunting permit—not less than \$30 nor more than	400	
<i>Provided, That the commission may establish different permit fees for each class of big game animal within such limit.</i>		
Field trial permits (game birds)—not less than \$10 nor more than	25 ←————	<u>50</u>
Field trial permits (fur-bearing animals)—not less than \$10 nor more than	25 ←————	<u>50</u>
Commercial dog training permit—not less than \$10 nor more than	25 ←————	<u>50</u>
Hound trainer-breeder running permit—not less than \$10 nor more than	25 ←————	<u>50</u>
Water event permit—not to exceed	50	

(b) From and after January 1, 1987, the fee for a landowner-tenant resident big game hunting permit shall be the amount equal to $\frac{1}{2}$ of the fee prescribed by law or rule and regulation for a general resident big game hunting permit.

(c) The fees prescribed for firearm permits shall be the same as the fees for archery permits.

(d) For the calendar year 1986, the fee for a twenty-four-hour fishing license shall be \$2. The fee for a furharvester license for a resident citizen under 16 years of age shall be the amount equal to $\frac{1}{2}$ of the fee prescribed by law or rule and regulation for a resident furharvester license.

(e) For the calendar year 1987: The fee for a general resident deer hunting permit shall be \$30; the fee for a general resident antelope hunting permit shall be \$35; the fee for a general resident elk hunting permit shall be \$75; the fee for a general resident turkey hunting permit shall be \$20; the fee for a nonresident turkey hunting permit shall be \$30; the fee for a nonresident landowner deer hunting permit shall be \$50; the fee for a nonresident landowner antelope hunting permit shall be \$60; and the fee for a nonresident landowner elk hunting permit shall be \$250.

History: L. 1978, ch. 152, § 14; L. 1981, ch. 174, § 2; L. 1982, ch. 175, § 9; L. 1985, ch. 131, § 3; L. 1985, ch. 134, § 3; L. 1986, ch. 149, § 4; L. 1986, ch. 151, § 1; Jan. 1, 1987.

WELCOME MILFORD FISH HATCHERY

hatchery facilities, located at Farlington, Pratt, and Meade, utilize pond culture (an extensive system) for species of fish or fish sizes not conducive to intensive culture.

This hatchery uses two separate water sources: surface water from the borrow lake below the dam and well water from three production wells in the area. Water temperatures can be controlled much better with the availability of both surface and ground water.

The Milford facility is designed to supply base annual production of the following species: walleye, largemouth bass, smallmouth bass, spotted bass, and channel catfish. The sizes of the various species to be reared range from fry to intermediates (eight to ten inches), depending on size requirements for the management programs.

The State of Kansas and its citizens can take great pride in this new facility. The Milford Fish Hatchery was built for and is financed by the state's licensed anglers. It is to these and future generations of Kansas anglers that the facility is dedicated.

WHY IS THE WATER SO DIRTY?

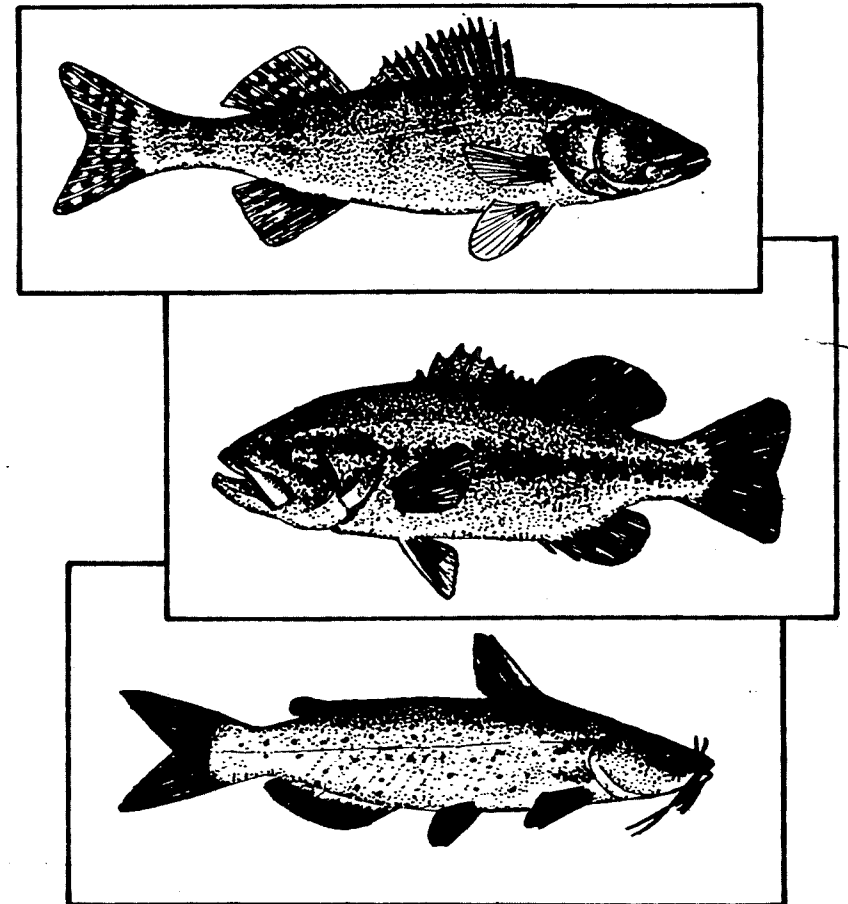
The murky water conditions in the raceways are caused by nutrient-rich water from the borrow lake, further enriched by waste materials in the raceway and a chemical reaction in the well water due to iron content. Neither condition is critical but will require evaluation to determine the exact treatment necessary to clear the water.

WHAT ABOUT THE DEAD FISH?

All hatcheries experience some disease problems which result in fish mortalities. Dead fish are more apparent at Milford because they're visible in the raceways until removed. In pond culture, they die and sink to the bottom or are consumed by birds or animals.

HOW MANY FISH WILL MILFORD RAISE NEXT YEAR?

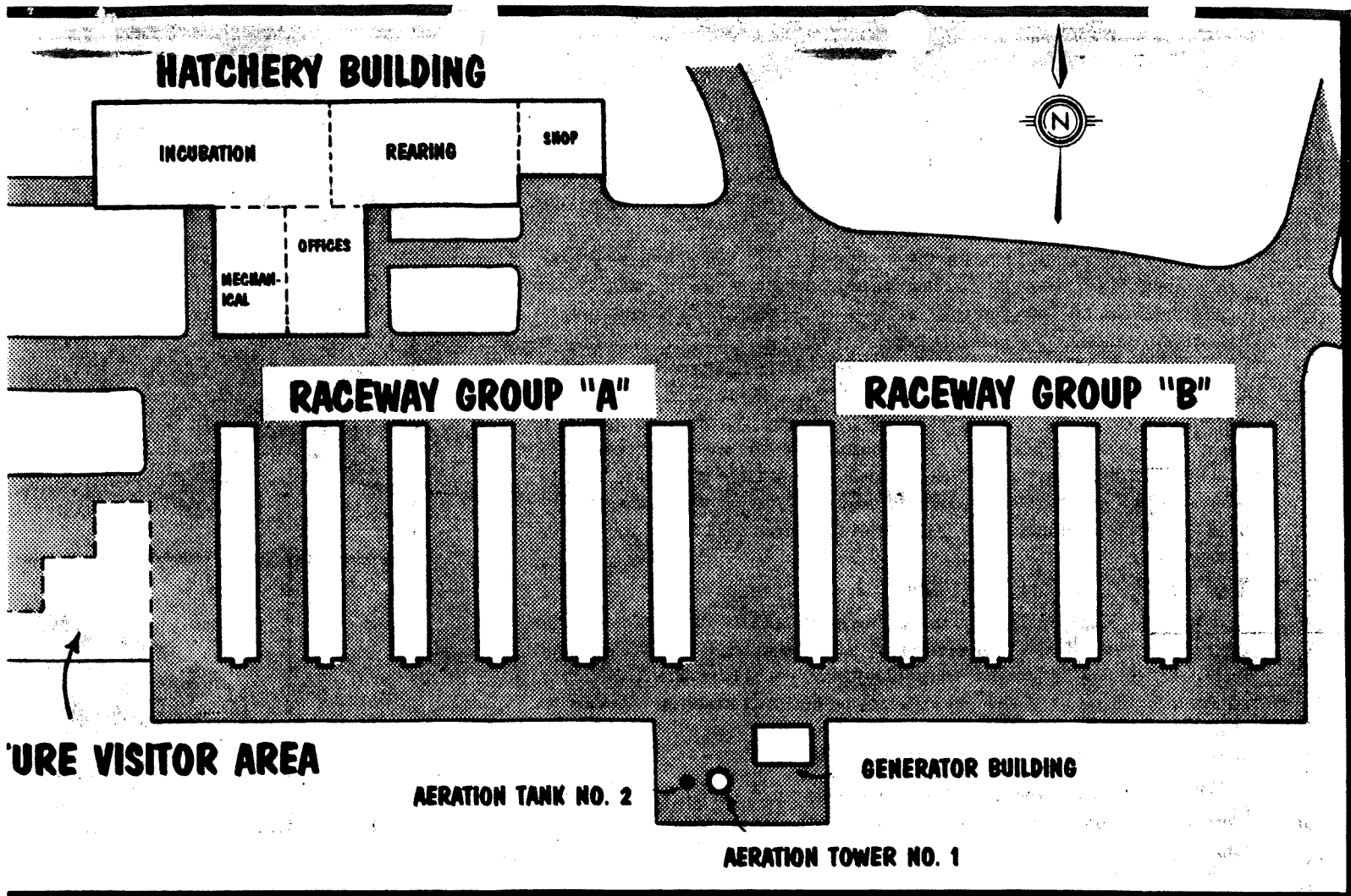
Well, that depends upon the demand generated by Fish & Game field biologists who not only assess angler preferences but determine the suitability of state waters for each fish species. Production quotas are then allotted to all hatcheries, including Milford.



“FISH KANSAS”

KANSAS FISH & GAME COMMISSION

ATTACHMENT 2
1-20-87
Sherry



ve fish hatchery; its primary objective is the rearing
 0,000 anglers. Visitors may see the facility 8:00
 vs and 9:00 a.m. — 4:00 p.m. weekends. No
 There are as yet no visitor facilities available, and
 are still under construction and raising fish, too.
 this hand-out for details, and excuse the hatchery
 rking to improve the Kansas sport fishery.
 hery began in 1977. In the 1981-82 session of
 as passed authorizing the agency to issue revenue
 The bonds are paid back by a \$3 hatchery punch
 the bonds are paid for, the \$3 punch will be
 punch began January 1, 1983, and is scheduled
 early retirement date is due to a very competitive

construction bid and a bond refunding issue. These two cost-saving maneuvers reduced a 10- to 15-year bond issue to an eight-year collection period.

The hatchery construction contract was for \$3.3 million. Associated equipment and furnishings added \$1.2 million for a total cost of \$4.5 million. Current yearly operation costs run \$150,000.

The Milford Fish Hatchery is a true state-of-the-art facility. It employs the state's first warmwater "intensive system" (there are only four in the U.S.), in which eggs are hatched in small containers and grown in concrete raceways. Each raceway is a concrete trough 100 feet long, eight feet wide and three feet deep, where the environment and disease potentials can be carefully monitored and controlled. Fish here are raised in much the same manner as cattle are raised in a feedlot — by crowding them together and taking very good care of them. This system provides for optimum efficiency and maximum fish production. The other

Kansas Fish & Game

HEADQUARTERS
BOX 54A, RT. 2, PRATT, KS 67124



(316) 672-5911

MILFORD FISH HATCHERY

Topics Addressed:

- 1) Water supply/demand
- 2) 1985 production
- 3) 1986 production

The water supply data was taken from work accomplished by the Biological Survey this past summer and relayed to us in their report dated August 8, 1986. Water demand was determined based on number of fish requested, programmed rate of flow per raceway and total water requirements. Production figures (only those fish hatched, reared or over wintered) for Milford for 1985 and 86 were derived from original daily stocking records and original stocking forms (by lake).

WATER SUPPLY & DEMAND

The yield (water supply) from the borrow lake is 9.415 cubic feet/second or 4,225.7 gallons per minute. 52.4% of this yield is from surface inflow (weep well system) and the remainder 47.6% from direct ground water input from the aquifer adjoining the lake.¹ Assuming that evaporation and transpiration loss is negligible, approximately 4200 g.p.m. is available for hatchery use which enables the lake to maintain a stable water level. Borrow lake level is influenced by the reservoir water level.

Water demand for the upcoming over winter season is based on a switch from lake water to well water occurring within the next month (dependent upon differences of temperatures between lake and well water). We plan to operate on a total of 2,000 gallons per minute of well water until such a time in the spring when lake temperature exceeds well water temperature.

We will over winter 150,888 channel catfish intermediates now weighing 18,687 pounds for stocking from May-July, 1987. They will be held in 5 raceways for a total water demand of 1,000 g.p.m. Channel catfish fingerlings totaling 450,000 will be held in 5 additional raceways for a total water demand of 1,000 g.p.m.

Summary of Over Winter Program - 1987

Channel Catfish Intermediates	150,888
Channel Catfish Fingerlings	450,000
Total No. Raceways Required	10
Flow Rate/Raceway	200 g.p.m.
Total Water Demand	2,000 g.p.m.

If required an additional 500 g.p.m. well is available.

In the spring (probably April) we will switch to lake water when the lake temperature exceed well water temperature. As the channel catfish reach stockable size they will be shipped off the hatchery.

The required flows vary by season and daily as fish are added to and removed from the system. A raceway of fish will weigh more each day due to growth, require more food and demand more space, give off more waste and require more oxygen.

In the simplest form if 24 raceways were operated with a flow of 300 gallons/minute, (maximum capacity) total water demand would equal 7200 gallons per minute, and would eventually drain the lower lake. Once the O₂ injection is installed 24 raceways with a flow of 200 gallons per minute would have a total installed raceways with a flow of 200 gallons per minute would have a total water demand of 4800 gallons per minute and would exceed water supply by 600 gallons per minute thus dropping the lake level. Due to the continuous stocking program (multiple stockings) we should never reach the maximum weight of all fish and all raceways are not dedicated to channel catfish production.

1985 Milford Hatchery Production^{4,5}

Channel Catfish		
Fingerlings	TOTAL LISTED	84,792
- 800 (other hatcheries)		- 5,800
- <u>5,000</u> (Commercial purchase)	production	<u>78,992</u>
Intermediates	TOTAL LISTED	119,055
-31,430 (commercial purchase)		
-20,017 (other hatcheries, salvages, etc).		- <u>60,447</u>
- <u>60,447</u>	production	<u>58,608</u>
Smallmouth Bass		
Fry	production	116,280

1986 Milford Hatchery Production

Channel Catfish		
Fingerling	production	20,296
Intermediate	production	97,856
Walleye		
Fry	production	12,303,508

The current inventory of channel catfish on the facility is:

<u>SIZE</u>	<u>TOTAL LBS.</u>	<u>NUMBER/LB.</u>	<u>TOTAL FISH</u>
Greater Than 10"	6767.5	3.34	22,605
8"-10"	3782.75	7.13	26,971
6"-8"	5820.25	10.09	58,726
Less Than 6"	2317.00	18.38	42,586
	<u>18687.75</u>		<u>150,888</u>

As of 10-23-86.

1987 Milford Hatchery Production Plans (*Tenative)

Channel Catfish	
Fingerling	450,000
Intermediate	300,000
Largemouth Bass	
Intermediate	125,000
Walleye	
Fry	25,000,000

*dependent upon water quality & management section fish demand.

We are converting to a new record system, making it more precise, factual and designed for a computer format. We intend to have a new stocking request and production assignment recording system in place by next January.

The system will record fish requested, hatchery assignments for the rearing, and the fish stocked based on the request. Monthly notices will be generated to the hatcheries and managers advising them of upcoming stockings for the month. The new recording system will insure accurate, up to date fisheries stocking and production figures.

REFERENCES

1. Horwick, Gregory L. Kansas Biological Survey Report dated August 8, 1986.
2. _____. Milford Hatchery Report, period October 13-17, 1986.
3. Kramer, Chin & Mayo, Milford Fish Hatchery Schematic Design, January, 1981.
4. _____. 1985, 1986 Fish Stocking Forms, Fisheries Division, Kansas Fish & Game Commission.
5. _____. 1985, 1986 Fish Stocking Request and Fish Stocking Record. Kansas Fish & Game Commission.

MILFORD FISH HATCHERY

November 17-28, 1986

Fish Rearing and Transfer

No major projects were in progress during this period. Station personnel modified demand fish feeders to allow better adjustment of the feeding mechanism. A tour was given by Verl Stevens to five representatives from Thailand who were being sponsored by the Kansas Department of Agriculture, Marketing Division. Feed storage areas were also fumigated for feed eating insects.

The John Redmond rearing pond was drained and 1148 (3.7/lb.) largemouth bass were shipped to MILH for clipping. These will be hauled to Glen Elder Reservoir during the week of 12/1/86.

Farlington shipped 29,440 and channel catfish (39.32/lb.--750 lb.) to the station on November 21, 1986.

Channel Catfish Inventory 1986

<u>Raceway</u>	<u>No. of Fish</u>	<u>No. lbs.</u>	<u>No./lb.</u>	<u>YR. Class</u>
2	115,288	2454.5	46.97	1986
3	77,605	2870	27.04	1986
4	32,255	1764	18.29	1986
5	115,874	3730	31.07	1986
6	42,586	2317	18.38	1985
7	30,146	2981.75	10.11	1985
8	110,205	3008	37.0	1986
9	28,584	2838.5	10.07	1985
10	26,971	3782.75	7.13	1985
12	75,278	448	167.49	1986
<u>Totals</u>	654,792	26,195	x=25	----

Fish Mortality and Health

Fish loss has stabilized at an acceptable level. Where necessary, treatments for parasites were made and losses have declined. Mortalities for the week of November 15-21 were: 1986 Year Class 109 and 1985 Year Class 108.

Water Quality

Fish removal from the water supply lake by the Agency's Commercial Fishing Contractor, Eugene Behrend, began Friday, 14 November. Behrend and crew have used gill netting and seining to capture the dominant nonsport fishes. Through Sunday, 23 November the nonsport fish catch has consisted of:

<u>KIND</u>	<u>WEIGHT</u>
Big Mouth Buffalo	40,139
River Carpsucker	1,555
Small Mouth Buffalo	1,141
Gar	821
Carp	650
Drum & Gizzard Shad	20

Most of the buffalo catch has been transported alive by means of semi-trailer tank trucks to New York for trade in the Oriental and other ethnic markets.

Removal rate of bottom and filter feeding types of fishes now exceeds 400 lbs. per surface acre and is expected to reach 100,000 lbs. total before the operation is completed. The objective of this fish removal effort is improvement of seasonally stressed water quality.

MILFORD FISH HATCHERY

December 15 - 26, 1986

General Operations

During the week of December 15-19, 1986, Charles Helms (Meade) and Kevin Becker (Pratt) assisted Cecil Hazlett with the installation of low pressure air and oxygen lines in the incubation and start tank rooms. The contractor also started replacement of the roof. Fifteen tons of Super Sweet feed was received in bulk form. The commercial fishermen continued netting operations for fish removal from the supply lakes.

Fish Rearing and Transfer

No fish were transferred on or off the station during this period.

Fish Mortality and Health

Total fish mortality during this period was 450. There have not been any significant disease infections as heavy losses.

Water Quality

Water quality in the raceways is satisfactory for fish health and growth. Differences in water quality from the upper to the lower end of the raceways is what can be expected.

Fish removed from the Milford Hatchery Water Supply Lake by the contracted commercial fishermen through December 28:

- 72,280 pounds bigmouth buffalo
- 1,110 pounds carp
- 2,061 pounds river carpsucker
- 1,309 pounds gar
- 8 pounds drum

Netting effort by the contractor will continue through December 31, 1986.

Report Date: December 30, 1986