

KANSAS

Wildlife & Parks

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On Point

by Mike Hayden



Water and Rural Economic Diversity

Water is the key to the western Kansas economy. In the 1950s and 1960s when the Bureau of Reclamation built reservoirs across western Kansas, the idea was to harness water to make it readily available for irrigation, industrial, and municipal purposes. The emphasis was on consumption and any water not used was considered waste. Now, as water supplies are being depleted, and the agricultural-based economy has changed, sustainability of water resources is becoming the main concern. As we find ways to achieve sustainability, irrigated farming will continue, although to a more limited, but viable extent. In addition, sustainability will allow for more consistent water levels for recreational use, which is an economic boon to the communities near the lakes.

As I've talked about in recent columns, turning the Circle K Ranch into a wildlife area would favorably diversify the economy of Edwards County and the surrounding area. Diversification of the western Kansas economy is increasingly important. One method toward reaching water sustainability was started almost a year ago in the Prairie Dog Basin around Keith Sebelius Reservoir. The Kansas Department of Wildlife and Parks and the Almena Irrigation District signed a two-year agreement intended to hold the water level in the reservoir stable while all the involved parties gathered the information they needed to chart a long-term course of action. Because of the agreement, no water was removed from the lake for irrigation purposes in the past year. However, because of limited in-flow due to the continuing drought in northwest Kansas, water levels have not risen.

The lake is about 17 feet below what is considered full, or conservation pool. Under the current agreement, KDWP pays a specified annual fee to retain water in the lake until the elevation reaches 2,290 feet mean sea level (msl). Currently, the lake is at about 2,287 feet msl. Once the elevation reaches or exceeds 2,290 feet msl, the district may release water to an elevation no lower than 2,288 feet msl. This agreement is essentially a stopgap effort to hold a minimum pool in the reservoir which can still meet basic needs.

The next step is to find a long-term solution to maintaining the lake level that meets the needs and concerns

of all involved parties. It is a complex situation involving the Republican River Compact with Nebraska, the needs of area farmers, and maintaining a lake level suitable for recreational purposes. As local project supporter Karl Kohfeld said, it has to be a win-win situation for everyone involved.

Kohfeld also commented on the economic importance of the lake, in terms of outdoor recreation. He said that the higher the water, the better it is for the community in terms of economic gain. Local businesses see their profits increase as the water rises because so many more people come to enjoy the lake and adjoining state park. And recreation benefits are not just realized during the summer, since the lake draws fall anglers and winter waterfowl hunters. Kohfeld noted that when the lake gets below 2,293 msl, visitation drops dramatically. In the mid-1990s when the lake was full, it attracted many nonresidents — bass anglers and families from Nebraska and Colorado.

Progress is being made as we seek sustainable water usage in western Kansas. As the agreement between KDWP and the Almena Irrigation District has already shown, diverse and seemingly conflicting interests can reach an agreement that benefits all. Managing our natural resources, and at the same time stabilizing the economy of an area, benefits not only Norton County residents but all of Kansas.

The Kansas Department of Wildlife and Parks, under license from the U.S. Bureau of Reclamation, operates both Prairie Dog State Park (1,150 acres) and Norton Wildlife Area (6,400 acres) on the shores of Keith Sebelius Reservoir. When water levels are sufficient, the lake offers boating, water-skiing, and fishing. The park and wildlife area provide numerous opportunities for wildlife watching and hunting. The park contains a 1.4-mile interpretive nature trail as well as a number of both RV and primitive campsites. Two unique features of Prairie Dog State Park are the historic structures on the property — the last remaining adobe house in Kansas, and a one-room schoolhouse.

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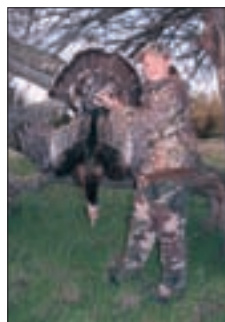
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Front Cover: Bald eagles are nesting in Kansas and becoming more common. Photographer Mike Blair filmed this portrait at a raptor rehab center with a 105mm lens, f/11 @ 1/125th sec. **Back:** Marc Murrell photographed his daughter, Ashley, with her first turkey. He used a 28-105mm lens, f/11 @ 1/125 sec.



Editorial Creed: To promote the conservation and wise use of our natural resources, to instill an understanding of our responsibilities to the land.

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There's No Place Like Home

text and photos by
Michael A. Watkins

wildlife biologist, U. S. Army Corps of Engineers

In a historic moment last summer, the 100th eagle was banded in Kansas. Since the first Kansas nest was documented in 1989, more than 200 eagles have fledged in the Sunflower State, and some of those are returning to nest here.

It was an unusually hot and sticky afternoon for late May. Dennis Dinwiddie, a volunteer tree climber for the U. S. Fish and Wildlife Service (USFWS), had just spent the better part of an hour carefully climbing a bald eagle nest tree along the Kansas River. It was an extremely difficult ascent due to the gnarly nature of the massive cottonwood's trunk and the fact that the nest was 70 feet above the ground.

After resting on a branch for several minutes to catch his breath, Dinwiddie slithered over the edge and into the nest. As his feet disappeared from sight, Dinwiddie said, "There are two pretty good sized chicks up here and they have been eating a lot of turtles!"

That was somewhat unusual, as fish generally make up 50 percent to 90 percent of a bald eagle's diet, depending on the bird and the time of year. Waterfowl are the second most desirable prey species. Bald eagles occasionally feed on small mammals, snakes, and turtles, but this nesting pair had apparently adapted to eating soft shell turtles, plentiful in that portion of the river.

Dinwiddie settled into the nest and began placing each eaglet into a canvas bag. As he lowered the first, Dan Mulhern, wildlife biologist for the USFWS, announced to the small group that had assembled to watch the banding, "We are about to make history. This will be the 100th bald eagle banded in Kansas." This was truly a historic event for our national symbol, and it was some 16 years in the making.

In 1989, the first historically documented bald eagle nest to

fledge young since the turn of the century was established at Clinton Lake (see *Kansas Wildlife and Parks* magazine, January/February 1990). The pair fledged two juvenile birds that were trapped and banded by the USFWS. The eagles were fitted with a standard USFWS aluminum leg band and a purple visual identification leg band with silver letters A and B, respectively. By taking beak, talon, and weight measurements, biologists determined that both juveniles were males.

This initial pair of bald eagles, tracked by the male, E, banded in 1991, have returned to the original nest site at Clinton Lake each year. Bald eagles commonly return to the same nesting terri-

tory each year, and many refurbish and use the same nests.

The pair hatched and fledged 38 young from this nesting territory between 1989 and 2003. Although they returned and displayed incubation behavior in 2004, the eagles did not raise any young. This could be the end of an era for this pioneering pair as they may be at the end of their reproductive cycle.

The good news is, these tenacious adults have raised and fledged a large ratio of male to female offspring over the years. This has been important in establishing a nesting population of bald eagles in Kansas, as males generally return to nest within 100 miles from where they fledged. Females on the other



Wildlife biologists with the U.S. Fish and Wildlife Service began capturing and banding eagles when they first discovered a nest on Clinton Reservoir in 1989. Since then, they have concentrated efforts on banding young eaglets before they leave the nest.



hand, after pairing with a male, will establish a nest in an area close to where the male was raised.

From 1989 to 1993, the USFWS trapped and banded five bald eagles at Clinton Lake, including the adult male. In 1993, they adopted a new approach to banding the juvenile eagles. Mulhern began recruiting volunteers to climb the nest trees. The volunteers lowered the eaglets to biologists who measured and banded the birds when they were

approximately six weeks old. The eaglets were immediately returned to their nests where adults resumed feeding and caring for them. Several experienced climbers have volunteered over the years.

One unique banding opportunity began at a nest in Neosho County in 2002. The nest was located 67 feet above ground in a tree in the middle of a well-groomed pecan grove near the Neosho Wildlife Area. Mulhern and KDWP area manager John



USFWS wildlife biologist Dan Mulhern recruited volunteers to climb the trees when bald eagle nests were discovered. Young eagles are placed in a bag, lowered to researchers on the ground, who then measure and band the birds before they are placed back in the nest. In the left photo, volunteer Joel Brinker climbs to a nest on Perry Lake in 2004. Above, Brinker bags an eaglet before lower it to waiting biologists.

Silovsky recruited the assistance of Westar Energy to donate the use of a bucket truck to access the nest. This has turned out to be a safe and efficient way to band the eaglets annually at this nest site.

The purple visual identification bands attached to each eagle are engraved with silver letters. The color scheme is unique to the Kansas banding operation.

“The manufacturer prints only 18 letters of the alphabet on the bands to make it easier to identify the birds at a distance,” Mulhern said. “For example, we use the letter E, but not F as they could easily be confused when looking through a spotting scope.”

After banding the first 18 eagles, the USFWS began using bands etched with alphanumeric characters such as 2A, with the numbers stacked over the letters. A new sequence of numbers was started at the end of each alpha-

betic series.

A significant event occurred in 1993 with the first return of a banded bird, eagle B. B established a nest at Hillsdale Lake about 28 miles southeast of Clinton Lake. Another milestone was reached in 1994 when B's brother, A, returned and established a nesting territory with a mate at Perry Lake, about 15 miles northwest of Clinton Lake.

Considering that the mortality rate among first-year eagles is approximately 70 percent, it was remarkable that both A and B survived and returned to nest in Kansas.

"This is a very significant

development for Kansas," Mulhern said. "It also demonstrates the importance of protecting the nesting sites of pioneering eagles, as their offspring are likely to return and fill other habitat voids."

B and its mate have produced 23 eaglets since 1993 at the Hillsdale nest site. Since 1994, A has fledged 18 juvenile eagles from the Perry Lake nesting territory. Although only two of B's offspring have been banded, the majority of A's eaglets have been fitted with personal identification bracelets.

Nest banding priorities are established on a number

of criteria, including landowner permission, the availability of an experienced tree climber, age of the eaglets, and location and structure of the tree.

According to Mulhern, "Once we start banding the hatchlings at one nest site, we like to continue every year to establish a history from that particular nesting pair."

During the past 16 years, 101 bald eagles have been banded in Kansas. Two were adults and 99 were juveniles. From this group, the status of 20 birds is known.



USFWS field supervisor William Gill holds an eaglet as Mulhern measures the hallux talon, which helps discern sex. After measurements, the eaglet is fitted with a purple leg band that will allow researchers to identify the bird from a distance.

In addition to the adult male, E, mentioned above, an adult female, 2Y, was banded on the North Fork of the Ninescah River in 1997. Unfortunately, her remains were recovered near the Quivira National Wildlife Refuge in 1999. 2Y died of electrocution on a power line, which is the number one reported cause of death for adults.

Of 59 juvenile male bald eagles banded in Kansas, seven have returned to nest in the state. All have established nests within a 100-mile radius from where they were banded as juveniles. Eagle 3R established a nest the farthest from where it was hatched. It was banded as an eaglet at Clinton Lake in 1999 and established a nest at Ft. Riley, approximately 80 miles to the west, in 2004.

The most significant banded



bird to return after A and B was 3S. This bird was banded as an eaglet in 1999 at the Perry Lake nest and is the offspring of A. 3S is a male and the first banded second-generation eagle to return to nest. 3S was observed in the spring of 2004 at a nest site on the Kansas River.

According to Mulhern, the return of Eagle 3S is further evidence of the growing stability and permanence of the bald eagle breeding population in Kansas.

One female, 2Z, has returned to nest on the Kansas River along with her mate who was also banded in Kansas. In addition,

two other females, H and N, have been identified nesting at Truman Reservoir in west-central Missouri. All three females were fledged from the original nest at Clinton Lake.

So far, the remains of eight banded juvenile eagles have been recovered. Many were collected close to where they were banded, but 5D was recovered in Worthington, Minn., approximately four months after being banded at Perry Lake. This young female had traveled more than 300 miles from the nest where she fledged, which is not unusual for juveniles of either gender.

In most of these cases, it was difficult to determine the cause of death. Most of the dead juveniles probably

Several pairs have returned year after year, using the same nest, after adding some lumber. As a result of the work of volunteers and biologists, many of the young reared in Kansas can be readily identified if they return here to nest.



perished from starvation. After separating from adults but before becoming skilled hunters, young eagles die from starvation more than any other cause. One disturbing band recovery was 3A. It was shot on opening morning of the 2000 Oklahoma deer season, along the Verdigris River near Claremore, Okla. The bird was two years old, and unfortunately the poacher was not apprehended.

A number of historical events have been associated with bald eagle recovery in Kansas, but 2004 was one of the most significant years on record. That year, 16 productive bald eagle nesting territories produced 34 juvenile eagles. Seven bald eagle nests active on the Kansas River reared nine young. Five banded eagles returned, including Kansas' first second-generation banded eagle. All were records for bald eagle activities in Kansas.

Several federal laws protect the bald eagle, including the Endangered Species Act (which also protects threatened species,) the Bald and Golden Eagle Protection Act, and the Migratory Bird Treaty Act. Eagle nest sites are also protected. Anyone who disturbs or harms a nesting pair may receive a \$100,000 fine and/or one-year jail sentence.

Partly because of these stringent laws, the number of bald eagles has increased significantly over the past three decades. When the bald eagle was designated as our national symbol in 1782, biologists believe there were approximately 50,000 nesting pairs in the lower 48 states. By 1960, that number had dwindled to a low of 413 nests. In 2003, the USFWS documented 7,678 productive nesting territories in the



lower 48 states.

On July 12, 1995, the USFWS downlisted the bald eagle from endangered to threatened. There is a current proposal under consideration to remove the bald eagle from the endangered and threatened species list altogether.

"We expect the bald eagle population in Kansas and throughout the Midwest to continue to expand," Mulhern said. "The increase in bald eagle numbers nationwide has resulted in birds returning to regions of the country they apparently abandoned more than 100 years ago."

Over the years, 208 eaglets have fledged in Kansas. Although many of the nests have occurred in the vicinity of large lakes and reservoirs, the number of nests along the Kansas River has increased significantly in recent years. It was one of these new nests that led us to the banding

site on that afternoon in late May.

It took about 20 minutes for Mulhern to measure and band the first eaglet. The 100th eagle banded in Kansas was fitted with purple visual identification band 7V. Approximately 30 minutes later, Dinwiddie also placed 7V's banded sibling, 7W back in the nest.

By late afternoon, Dinwiddie started his careful descent to the ground. Smiles broke out all around as the small group walked across the crop field and headed toward their vehicles. Another successful and rewarding bald eagle banding season had come to an end. One could only wonder where and when eagle 7V and 7W would be seen again. ♡



Wetland Reserve Program

New Options For Old Problems

by Bob Culbertson

wildlife biologist, Emporia

photos by Mike Blair

associate editor/photographer, Pratt

The Wetland Reserve Program pays landowners to return land to its original wetland condition, which is good for the landowner, good for the quality of our water, and good for our wildlife.



toms. Many of these areas that stay wet for extended periods were true wetlands partially drained in years past for crop production. Often, the economics of farming these areas are not favorable due to the heavy clay texture of the soil. Large clods form if the ground is prepared when the soil is too wet, and planting is often delayed.

But now there are alternatives to farming this land, courtesy of the 2002 Farm Bill. Alternatives pay landowners to restore these hard-to-farm areas to natural functioning wetlands.

One such unique and innovative program offers landowners the opportunity to restore wetlands on their property, receive payment for those acres based on the agricultural value of the land, and retain ownership of the land. This may sound too

good to be true, but the Wetland Reserve Program (WRP), administered and managed by the Natural Resource Conservation Service (NRCS), does just that. A quick history of where we have been with wetlands before WRP may shed some light on why this program has become so popular across the nation.

Years ago, wetlands were scorned as wasteland and mosquito breeding areas. Government-funded drainage programs, persistence, and extremely hard work converted millions of wetland acres into productive farmland over the years. It is estimated that more than 50 percent of the wetlands in the lower 48 states have been converted for agriculture and other development.

During the past 25 years, we have learned more about how wetlands function and discovered their value to us and to

The combine crawled along methodically, harvesting the corn crop that had been planted last spring and watched all summer. Now it was finally time to put the grain in the bin. Suddenly the front tires bogged down and before the machine could be stopped, it was stuck! The old bog had trapped the combine again.

This is a common story of landowners in eastern Kansas who farm riverbot-



After application for WRP, the NRCS determines eligibility of the land and conducts an environmental ranking to score the property. A certified appraiser then appraises the property based on its agricultural value. A permanent easement receives 100 percent of the appraised land value and 100 percent of the restoration costs are paid by the NRCS.

wildlife. A wetland acts like a large sponge, holding water and then gently filtering it to remove dissolved chemicals and nutrients. A wetland is so effective in filtering and improving water quality that artificial wetlands have been built to serve as natural alternatives for sewage and animal waste treatment in some communities. Wetland plants, invertebrate organisms and other microbial life utilize many nutrients and pathogens from the polluted water and improve water

quality.

Wetlands also play a role in reducing floods by slowing surface water movement and actually storing water in depressions, river oxbows, and sloughs. The Missouri River serves as an example of improved flood control from restored wetlands. Many wetlands were drained decades ago along the Missouri River and the river has been greatly constricted by flood control levees. After the severe flooding of 1993 along the

Missouri River, many acres of wet cropland were restored and opened to backwater flooding by removing the downstream end of flood levees. Due to private property considerations, floodplain restoration was limited, but approximately 10,000 acres of floodplain were reopened to natural flooding.

In the fall of 1998, serious flooding was expected in the Jefferson City, Mo. area. U.S. Army Corps of Engineer models suggested that existing flood levees at Jefferson City would be topped. Property damage and potential loss of life was expected. When this did not materialize as expected, scientists and engineers realized that the restored wetlands and river floodplain had increased storage capacity upstream and played a major role in the reduced flooding. Although anecdotal in nature, this story illustrates the potential impact of WRP. The economic benefit of this one event would go a long way in paying the cost of acquiring land and restoring the floodplain.

Wetlands also provide prime habitat for breeding, nesting, feeding, and cover for invertebrates, insects, amphibians, reptiles, waterfowl, songbirds, and mammals. Approximately 5,000 plant species, 190 species of amphibians, and a third of all native bird species depend on wetlands. Wetlands are truly a wealth of biological diversity. The Kansas Department of Wildlife and Parks has identified wetlands as a critical wildlife habitat for Kansas wildlife.

With this increased knowledge and appreciation for wetlands in hand, policy makers enacted regulations in the 1970s (Clean



The top photo shows riverbottom farm land prone to flooding and erosion. The bottom photos shows work done after the land was entered into the WRP program. The riverbank will be stabilized, and permanent wetlands that will attract migrating waterfowl, as well as provide valuable habitat for other wildlife, will be created.



A wetland acts like a sponge, holding water and then gently filtering it to remove dissolved chemicals and nutrients. Wetlands are so effective in improving water quality that artificial wetlands have been built to serve as sewage treatment for some communities.

Water Act) that gave jurisdiction to the U.S. Army Corps of Engineers to regulate wetland draining and conversions. Additionally, the 1985 Farm Bill included a provision known as “Swampbusting.” This regulation mandated that any landowner who participated in the farm program could not drain a wetland and produce an agricultural crop on that land and still receive federal farm payments. These regulations did protect some existing wetlands from being drained, but there was still a need for restoring wetlands and offering alternative uses of wetlands that provide economic incentives to the landowners.

During the early 1990s, the Wetland Reserve Program was authorized by Congress to help fill this niche. This also coincided with historic flooding on the Mississippi and Missouri Rivers in 1993. This flooding created monumental problems along

these rivers, and landowners realized that WRP might help them retire some land that had become even more difficult to farm.

The WRP program has been available in Kansas since 1994. Currently, 129 properties are enrolled, covering 12,600 acres. Interest in Kansas has not been overwhelming, but it has been surprising to many since WRP requires the granting of an easement to the United States. The Natural Resource Conservation Service is the holder and manager of those easements.

The goal of the WRP program is to restore wetland vegetation and hydrology on agricultural land that is too wet to economically farm. Most of the eligible land for WRP lies in the floodplains of larger rivers and streams, but playa lakes and rain-water basins that are farmed in the western portion of Kansas are prime lands also. Southeastern

Kansas leads the state in applications, and most of the WRP easement sites are located in the Neosho River and Marais des Cygnes River floodplains.

After a landowner applies for WRP, the NRCS determines eligibility of the land and conducts an environmental ranking to score the property. The highest environmental scores from across the state are chosen to provide the most wetland benefit for the dollar spent. A certified appraiser then appraises the property based on its agricultural value and makes a report to NRCS. From this report, an offer is made to the landowner. If the landowner accepts this offer, then the process continues with a legal survey of the property, further restoration planning, and easement approval. A permanent easement receives 100 percent of the appraised land value, and 100 percent of the restoration costs are paid by NRCS. A 30-year

easement receives 75 percent of the appraised land value, and only 75 percent of restoration costs are paid by NRCS. Landowners have the choice of which easement is right for them. When the easement is signed, recorded, and the landowner has been paid, restoration can begin.

Wetland restoration is as varied as the Kansas landscape. In general, the philosophy in Kansas has been to maximize water and make the site as wet as feasible. The hydrology is maximized since historical flooding frequency and duration have been changed in many areas due to flood control reservoirs, river levees and other alterations of the watershed. Low-level dikes are often used to impound large areas of water at depths of a few inches to 18 inches. Some depths will exceed 2 feet, but shallow water is king on WRP.

Another technique is the restoration of depressional landscapes or gilgai, meaning "little waters." These are small, temporary wetlands ranging in size from about 100 square feet to more than 2,000 square feet with depths of 2 to 12 inches. These are important in a wetland system since they warm quickly in the spring and provide food, mainly insects, for early migrating birds. They are also crucial to frogs, salamanders, and snakes as homes and breeding sites.

In some sites, diversions of surface runoff and subsurface tile have been used to dry the site for crop production. These diversions can be intercepted to allow the natural hydrology to flow into the site. Drainage tiles are generally crushed or plugged.

This prevents the natural hydrology from leaving the site. One landowner could not determine how a natural oxbow area was drained. After thorough study, it was found that early settlers had constructed subsurface drainage nearly 10 to 12 feet deep. Amazingly, this was done with the use of mules, slips, and extremely hard work.

Vegetation restoration is dictated to a large degree by water depth, the period of inundation, and soil type. Most of the wetland units occur on tight Osage soils. Farmers sometimes refer to these soils as "Nooner Soils" – too wet to farm in the morning and too dry to farm after lunch. But these tight soils hold water like a bathtub and make great wetlands. Many of these are

managed as moist soil units, and the vegetation is a mix of sedges, rushes, millets, and smartweeds. Burning, mowing, and disking may be used to manage the wetland vegetation at prescribed times. In other locations, trees will become the dominant vegetation, and over time, hardwood forests will develop to support a variety of oaks, maples, hickories, walnut, pecan, hackberry, and other species.

A program rule calls for 70 percent of the site to be restored to the historical vegetation. But how does one determine the historical vegetation? Our ancestors developed some very useful maps when they conducted the first official land survey in the 1860s, showing areas of forest and grassland. These are the

The goal of the WRP program is to restore wetland vegetation and hydrology on agricultural land that is too wet to economically farm. Most land eligible for WRP lies in floodplains of rivers, but playa lakes and rainwater basins in the west may also qualify.



maps NRCS uses to determine historical vegetation. As one would expect, areas of woodland were limited but did exist, especially along the river systems in eastern Kansas.

Generally, woodland restoration on WRP occurs by natural regeneration or natural succession. However, planting trees and nuts has been used to help speed the process adjacent to bare riverbanks or other sites where the landowner wants to upgrade the woodland seed stock available from Mother Nature.

One question that often arises is “What can be done on the WRP property once the easement is signed and the restoration is complete?” A thorough understanding of the easement is very important to the landowner interested in WRP. The easement purchases all rights to farm, drain, dredge, manipulate vegetation, alter water depths, graze, harvest any products, divert water, or build any structures. The landowner retains access rights and rights to undeveloped recreational uses such as hunting, fishing, and trapping. All other rights and uses of the land are under the control of NRCS, the easement holder.

However, management of the enrolled WRP property is a shared partnership. Land-owners can work through the local NRCS district conservationist to manage water levels and vegetation by applying for Compatible Use Permits. This permit allows the landowner to apply a specific practice on the land that will benefit the wetland. For example, it may be beneficial to burn native grasses that have been planted



Once an easement is signed, the landowner retains access rights and rights to undeveloped recreational uses such as hunting, fishing and trapping.

around the wetland as a buffer, and a Compatible Use Permit would be issued to allow the landowner to carry out this activity.

Rod Egbarts, retired WRP coordinator in the Salina NRCS state office who administered the program for the last six years, points out that the easement process takes time to develop.

“It is not uncommon for 18 months to 2 years to pass between the time a landowner signs an application and we see earth movers out on the land moving soil and restoring the wetland conditions,” according to Egbarts. “There are numerous steps that must be completed to perfect an easement, and all of them take time. The environmental ranking process, appraisal, legal survey, survey for restoration planning, construction plans and permits, legal review of the easement, and finally, beginning the actual restoration, requires time and

patience,” he continues. “But in the end, the wait pays off with dividends. When the rains come and the new wetlands fill, the ducks and shorebirds find the new habitat, sometimes almost magically, and the waiting, dreaming, and planning are worth all the effort.”

In 2005 and beyond, NRCS hopes to acquire additional easements on lands where the wetlands can be restored to benefit both landowners and the public. The landowner gains a financial incentive by selling an easement to the Department of Agriculture and having the wetlands restored by NRCS.

The public gains from the benefits of a functioning wetland – cleaner water, reduced flooding, and creation of a rich, diverse habitat for wildlife.

Numerous resources are available to provide additional information about WRP and other wetland programs in Kansas. Your local NRCS office can provide brochures and a video entitled “Wetland Reserve Program.” The home page of NRCS in Kansas, www.ks.nrcs.usda.gov, is a source of information, and your local district conservationist will help you get started with the application process. ♡

Bob Culbertson is a KDWP wildlife biologist who works with NRCS in its Emporia office and has assisted district conservationists, technicians, and landowners with WRP since 1994.



Wipers For The Future

Joe Tomelleri illustration

by Darik Schneidewind
fish culturist, Milford Fish Hatchery

photos by Mike Blair
associate editor/photographer, Pratt

An innovative program at the Milford Fish Hatchery allows the department to produce the popular striped bass hybrids, or wipers, from domestic striped bass broodstock.

Few Kansas game fish rival the size and power of striped bass. Stripers are popular angling quarry wherever they are stocked. Reaching weights in excess of 30 pounds, stripers are important large predators. Due to a lack of natural reproduction, striped bass

populations in Kansas must be maintained through stocking programs. While good populations of stripers have been established in several Kansas reservoirs, extreme summer water temperatures are hard on them, and these populations are difficult to maintain.

Fortunately, a striped bass hybrid offers an ideal alternative. Fertilizing eggs from striped bass females with sperm from white bass males creates a fast-growing, hard-fighting hybrid that tolerates warm water. These fish, commonly known as wipers or palmetto

bass, are growing in popularity with Kansas anglers. Like stripers, wipers rely on culture and stocking to maintain a Kansas presence, but KDWP biologists consider their production well worth the effort.

The Milford Fish Hatchery is taking the lead in producing wipers for Kansas impoundments. Milford is one of only a few places in the nation that maintains domestic striped bass broodstock solely for spawning purposes. While some Kansas impoundments have wild striped bass populations, their biology and sparse populations make it difficult to capture enough of them for hybrid production. Striped bass held in captivity at the hatchery provide a readily accessible egg source.

Culture of the striped bass and its hybrid is performed throughout the United States. Most of this production utilizes wild broodstock collected as stripers swim upstream to spawn. Currently, Milford is the only place that produces fish on a large scale with captive broodstock. There are a few places where captive broodstock is used for production, but these are primarily small-scale research facilities.

Before Milford began maintaining striped bass broodstock, the only source for striped bass and wipers was through fish trades with other states or commercial growers. Trades with other states were usually based on surplus fish, leaving Kansas at the mercy of up and down production seasons. And trades pose the risk of accidental introductions, as happened when white perch were stocked with striped bass in Wilson and



The wiper is a hard-fighting, fast-growing, and aggressive hybrid that is very popular with anglers.

Cheney reservoirs. To avoid these problems, the striped bass brood stock program was initiated at the Milford Fish Hatchery in 1993.

The first step was establishing the striped bass broodstock. Fry were stocked into hatchery production ponds at a rate of 100,000-200,000 per acre. Production ponds were free of other fish and managed for dense zooplankton, which fed the striped bass fry. Fry remained in the ponds for about

30 days, growing into 1- to 3-inch fingerlings. Then they were transferred to culture tanks inside the hatchery.

These fingerlings were trained to eat a pelleted feed, or dry diet, growing to an average length of 4 inches during this period. Then they were moved outside to raceways, where they remained year-round. The raceways are 4 feet deep, by 8 feet wide, by 100 feet long, with a constant flow of water. Since adult stripers cannot tolerate temperatures above 75 degrees, water temperature was regulated in the summer by mixing supply lake water and well water. Protective nets were placed over the raceways to prevent predation by herons and raccoons.

Broodfish continued to grow in the raceways for several years. Striped bass females do not sexually mature in the wild until age four, so the first spawning attempt occurred in 1997. Spawning has continued annually since then. Culture and rearing of striped bass broodstock was fairly simplistic, but



Producing the striped bass hybrid in Kansas was a problem historically because of the difficulty in obtaining wild striped bass females. To overcome this, Milford Hatchery biologists began developing a domestic broodfish program in 1993.

spawning proved much more challenging. Much information existed on spawning techniques with wild fish, but spawning domesticated broodstock was mostly uncharted territory. Learning continues to this day, and techniques and treatments are refined each year. The following generally describes the current spawning process.

Raceway water is maintained at 58 degrees through the winter and the spring spawning season. Thirty to 45 days before spawning, the broodstock are switched from the pelleted diet to a live forage fish diet, which aids in egg development. When the walleye hatching season is completed in late April or early May, spawning of the striped bass broodstock begins. Typically, 12 females are used during each spawning round. The number of rounds performed depends on statewide stocking requests for hybrids.

Each female is checked for eligibility prior to selection. Eligibility is determined by a sample of eggs removed via

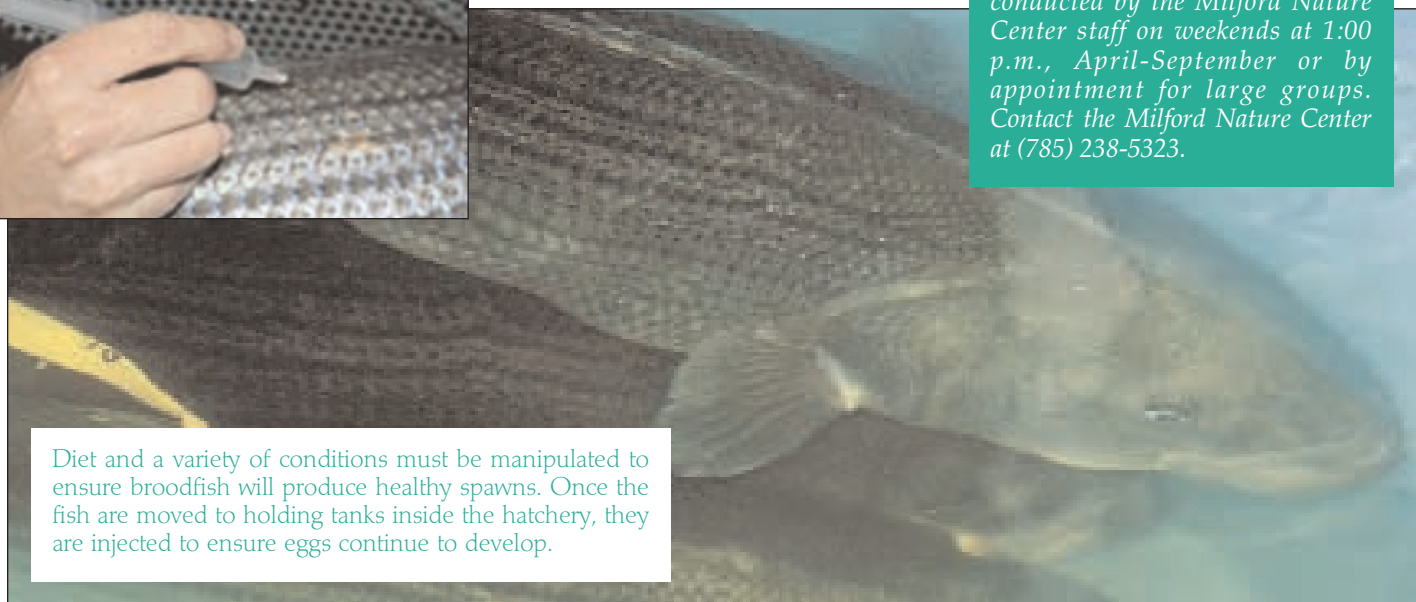
catheter. Eggs are placed under a dissecting microscope for evaluation. Eggs must show some signs of development and must not be completely opaque for the fish to be an eligible candidate. Checking eligibility increases the chance that a female will reach ovulation and produce viable offspring. After selection, the 12 eligible females are loaded onto a transport vehicle and taken inside the hatchery. Here, they are gradually tempered from 58-degree raceway water to the 66- to 68-degree water maintained in the hatchery spawning tanks. Circular tanks allow constant water flow. Lighting, disturbance, and handling are minimized to reduce stress. Too much stress can cause fish to abort the eggs or to have incomplete development.

After three days to acclimate to their new surroundings, the broodfish are injected with human chorionic gonadotropin (HCG) so eggs will continue to develop. Each fish is injected according to its body weight. Eggs fully develop approximately 18-30 hours after injection, requiring round-the-clock

evaluation by hatchery biologists. Small egg samples are compared under a microscope with a detailed pictorial of egg ripeness to estimate time of ovulation. Ovulation occurs when the eggs are fully developed and will flow easily from the fish when pressure is applied to its belly. Fish that are flowing freely are spawned immediately.

Timing is critical. Once the eggs are released from the ovary, the blood flow and oxygen supply are cut off. Quality deteriorates minute by minute, until after 30 minutes, the eggs are overripe and will not fertilize. Timing ovulation is very subjective, as only very subtle changes occur during the last four hours of egg development. Spawning a fish too soon or too late will result in poor or no fertilization of the eggs. Typically, only 50 percent of the fish reach ovulation and spawn successfully.

The Milford Fish Hatchery and adjacent Nature Center are open to the public during business hours. Business hours are 9:00 a.m. to 4:30 p.m. Monday-Friday and weekends April-September, 1:00 p.m. to 5:00 p.m. Tours inside the hatchery are conducted by the Milford Nature Center staff on weekends at 1:00 p.m., April-September or by appointment for large groups. Contact the Milford Nature Center at (785) 238-5323.



Diet and a variety of conditions must be manipulated to ensure broodfish will produce healthy spawns. Once the fish are moved to holding tanks inside the hatchery, they are injected to ensure eggs continue to develop.



Timing is critical once the female stripers have been injected. Eggs are sampled around the clock by hatchery biologists. Samples are examined under a microscope and compared to photos so that time of ovulation can be estimated. Ovulation occurs when the eggs are fully developed and will flow freely from the fish. At this time, fish must be spawned immediately, and the eggs fertilized with milt from a white bass male. Hatching jars keep eggs rolling in circulating water until they hatch.



for only two minutes, and once milt is activated by water, its motility lasts only 30-60 seconds.

To calculate the number of eggs collected by volume, eggs are sampled from each fish because egg size varies. Typically there are about 450

At ovulation, a biologist manually strips the eggs by applying pressure to the female's abdomen, starting behind the pectoral fins and progressing toward the urogenital opening. Eggs flow freely and are collected in a pan of water. Milt from wild white bass males is stripped into the pan at the same time, while the eggs and milt are gently stirred with a feather to increase fertilization. Eggs will accept milt

eggs per milliliter. A female may produce more than one million eggs, depending on the size of the fish. Specially designed hatching jars keep the eggs rolling until the fry hatch. During incubation, dead eggs are removed and live eggs are enumerated so that the hatching success percentage and number of fry can be calculated. As the fry hatch, they swim up out of the jar and into a common trough that

empties into a fry holding tank. The newly-hatched fry are not fully developed and continue to develop in the holding tank for the next nine days.

Wipers comprise the bulk of fry produced in the striped bass broodstock program. Spawning techniques are the same for producing pure stripers, except that eggs are fertilized with milt from broodstock striped bass males. Spawning results for the early years, 1997-2001 were poor, producing an average of 156,000 wiper fry with a 5 percent hatch rate. A refinement of spawning techniques in 2002 has allowed significant progress since then. Average results for the years 2002-2004 are 2.25 million wiper fry and a 30 percent average hatch rate.

Currently, wipers are stocked at many lakes throughout the state, where they quickly provide angling opportunities for trophy-class fish while helping control forage species. Cheney, Milford, Marion, Webster, and Sebelius reservoirs are well-known for excellent wiper fishing. All these lakes have large numbers of wipers and big fish. But smaller reservoirs and even community lakes are also benefiting from home-grown hybrid production at Milford Hatchery.

The striped bass broodstock program is an important addition to our fisheries management efforts. Its development has proved very challenging, and it is an ongoing process. Results of the most recent spawning seasons indicate that the program has turned the proverbial corner and will continue to improve and provide popular sport fish for the anglers of Kansas. ♡

Full Circle



text and photos by Marc Murrell
manager, Great Plains Nature Center, Wichita

A daughter graduates from hunting observer to participant, making her father proud.

It seems like only yesterday that I cradled my newborn daughter and realized how blessed I was. Hours old, Ashley would look up at me with that out-of-focus stare. I wondered what was going through her young mind but knew exactly what I was thinking. I couldn't wait to share with her the joys of hunting and fishing. I'd rock her to sleep whispering to her all the fun things I had planned.

When Ashley was 3 1/2, she tagged along on dove and early teal hunts. I packed enough snacks and juice drinks to feed a kindergarten class. Ashley was content to eat, drink, play in the dirt and ask questions.

"Why don't we shoot that bird, Daddy?" she asked, pointing to a northern harrier.

It's difficult to explain the law to a 3-year-old, and my efforts drew a brief blank stare before

she resumed making mud pies.

As Ashley's attention span increased, we graduated to bigger game. Although snacks were still important, she began to pay more attention to the details of the hunt. At 7 years old she belly-crawled alongside me to get into position on a turkey hunt. She was at my side when two jakes put on a spectacular gobbling and strutting show. She witnessed the show become a

solo act when my gun boomed.

"He's a flopping mess!" Ashley said of our next turkey dinner.

A year later, Ashley was the first to spot three does 150 yards away as they emerged from the timber. I picked out the biggest doe and fired.

"Did you miss?" Ashley asked sarcastically when she looked up and the deer were gone.

I wasn't sure, and her vote of confidence didn't help mine. I was relieved when we found the doe had dropped from sight in its tracks.

When she was 9, we attended a weekend hunter education class together. She made me proud and missed only one on the 50-question test.

"How many did you miss when you took it, Daddy?" she asked on the ride home.

"That was too long ago to remember," I joked, and added I was sure I missed more than one.

Armed with a Hunter Education card and a patch she pinned to her bulletin board, we anxiously waited for the spring turkey season. We agreed that it would provide an ideal first hunt for her.

I offered to take her out of school for opening morning, but she was adamant about NOT missing school. I should have recorded that statement for later use. We planned an afternoon hunt during the youth turkey season. The weather was fine when we left home, but a cold front blew in and had dropped the temperature dramatically by the time we arrived at our hunting spot. I told her we could just ride around in the truck and look for turkeys.

"Let's go try it for awhile," she

said gamely.

We took shelter from the cold wind against a big cottonwood tree. She sat between my legs and I laid her gun to our side. I called without much hope of being heard over the wind, but I knew we were on a travel pattern. After an hour, Ashley started to shiver. I hugged her and asked if she wanted to quit. She said, "10 more minutes."

Seven minutes later, I saw several hens approaching. I gave Ashley her gun and got her positioned for a shot, hoping the 10 hens had tom escorts. Soon, three big gobblers followed.

I whispered instructions, trying to ensure Ashley knew which bird we were after. When the gobbler trio separated enough for a clean, 25-yard shot, I told her to shoot one on the left. At the sound of Ashley's 20 gauge, all 13 birds retreated with nary a feather missing.

I wasn't surprised since she was shaking badly. I tried to console her although she didn't need it.

"That was cool. They were RIGHT THERE!" she exclaimed.

Our next encounter came along the Arkansas River on a beautiful, calm morning. We hadn't been out of the truck 10 seconds when we heard the first gobbler sounding off from his roost. More gobbles told us he wasn't alone. Ashley nestled into position in front of me, and we waited.

"Even if you don't kill a turkey, this is what I wanted you to experience," I said referring to the gobbles resonating from the river bottom. "Next to whistling duck wings, there's not a better sound."

Together, we counted more

than 100 gobbles before the birds flew down. The toms were quieter on the ground, but it sounded like I had a couple interested in my soft yelps and clucks.

I readied Ashley with her gun propped on her knee. Seconds later a mature tom in full strut stepped into her shooting lane and approached the decoys.

"Put the bead on the bottom of the neck and shoot," I whispered as the bird came out of full strut alarmed by our movements.

"Shoot him!" I whispered again with urgency as the bird slowly walked away.

To make the moment even more confusing, another tom stepped into her shooting lane at a mere 7 yards.

"Shoot that one!" I said excitedly, and Ashley tried to get her bead on him as he slowly followed the other one away from us.

"Shoot!" I repeated several times.

When her gun finally sounded, it startled me. Both birds flew off unscathed, and Ashley was definitely upset when she realized she had missed again.

"He wouldn't hold still," she said with her eyes welling up with tears.

"It's not a big deal," I told her as I hugged her.

We shared KrispyKremes and chocolate milk on the pickup tailgate and the disappointment vanished as we chatted and enjoyed a perfect spring morning. We hunted once more without success that spring then started looking forward to the 2004 spring season.

Ashley was anxious to prac-

tice shooting prior to her second season. I attached a fiber optic bead on her shotgun barrel to help her aim, and the results were dramatic. She was accurate on the turkey target out to 25 yards. Her twin 5-year-old brothers, Brandon and Cody, thought it was pretty cool and busied themselves counting the holes in the turkey head silhouette after our practice sessions.

The first trip of the 2004 season found us within a couple hundred yards of last season's close encounter. I had cut the branches from the base of a cedar tree, creating a perfect hide. Ashley was much more confident this year, and she was more intent on the hunt.

With decoys set, we chatted and laughed as it began to get light. Then I noticed a bird roosted too close.

"Look up there," I said as I moved her head in the direction of the silhouetted gobbler less than 100 yards away.

"He may have seen me," I admitted.

We heard several gobblers from the trees to our left while I tried to keep track of the roosted bird. When I glanced back, he was gone. I caught a glimpse of him gliding in our direction and told Ashley to get ready. The bird landed 50 yards out and stood there looking around. I was calling to the tom when all of a



sudden, three jakes joined him. As if someone said, "GO!" they started at a fast walk toward the decoys. As the four birds neared shotgun range, they skirted wide of our decoys, moving fast enough that Ashley couldn't keep the shotgun barrel on them. The birds were now off to our right, and Ashley, without any instruction, had turned and was ready.

The birds came back around the decoys closer. I told Ashley to wait and shoot the one in the back whenever she was ready. She tracked that bird and patiently waited for a clear shot. She fired, and the bird crumpled.

"I got my first turkey, I got my first turkey, I got my first

turkey," Ashley repeated with tears once again filling her eyes.

I had a few in mine, too, as we hugged, kissed and slapped high fives.

"Look at his big ol' fan, Dad," Ashley said as it blew in the breeze.

For the next 20 minutes we admired the bird and rehashed every detail of her first successful turkey hunt. The sun had just peeked over the horizon, and Ashley was patient as I burned three rolls of film documenting the moment.

Ashley had come full circle. She had gone from listening to tales of hunts to being an observer and finally a participant. A part of my life had come full circle, too. I had always

looked forward to passing on my love of the outdoors to my children and Ashley is the first of three. Ashley is a bit of a hero to her brothers, and they eagerly wait for their turn.

Ashley may continue to hunt as an adult or she may not. But if she doesn't hunt, it won't bother me. Nothing can steal my memories from our outdoor experiences. And if they happen to fade or the details get sketchy as I grow old, I'll get out some of the 108 photos I took, and remind myself just how special it is to share the joy of the outdoors with your daughter. ♡

Setting The Best Trap

by J. Mark Shoup
associate editor, Pratt

Best Management Practices is a research program that will provide trappers and wildlife managers information about which new trapping devices are most effective and humane.



Mike Blair photo

In *Kansas Wildlife & Parks* magazine's July/August 2005 column entitled "Trapping Matters" (Page 39), I wrote that "a common misconception is that trapping is just plain inhumane." To counter this misconception, I made a number of assertions:

- what is commonly referred to as a "steel leghold trap" thought to break bones is actually designed to harmlessly restrain an animal by the foot;
- trapping is tightly-regulated;
- trapping is a valuable wildlife management tool;
- properly selected traps do, in fact, minimize or eliminate injury; and
- long-term, unbiased scientific research supports these assertions.

Last January, I had the opportunity to observe this research — called Best Management Practices (BMPs) for trapping in North America. I traveled with KDWP furbearer biologist Matt Peek and one of his hand-picked trappers, Bill Wilgers, (selected

for his skill in capturing bobcats) to check a study trap line north of Clay Center.

This research employed three different trap types targeting bobcats. (The Sterling MJ 600, the MB 650, and the size 1.5 Victor padded-modified were used this year, but more than a dozen other trap types have been tested on Kansas bobcats in previous years.). As many as 18 traps of each type (54 total traps) were set and checked on this line every day for 21 days.

This was the 20th day, and we caught two bobcats, which is considered a good day. I observed that neither animal appeared to be in pain or particularly distraught. One lay reposed in the sun while I snapped a picture. In both cases, the foot of the cat was held by the trap just above the pad, and the skin was not broken. From this brief experience, it appeared that BMPs were working, but I still wanted to know why, and exactly what BMPs are.

BMP research is a cooperative effort funded by the International Association of Fish and Wildlife Agencies (IAFWA). The project was undertaken to collect valid scientific data that would help wildlife managers, trap manufacturers, and trappers develop and promote the most humane tools and techniques possible. If these ends could be met, wildlife managers and trappers could then assure the general public that the best traps and technology available were being employed in U.S. trapping programs.

But the books could not be cooked on this: a system of solid checks and balances eliminating all possibility for bias had to be developed, or the study would be a failure, no matter the results. Statistical legitimacy, not philosophical bias, was a must. Thus, biologists and statisticians, with input from trappers, developed a "double-blind" system for the BMP studies.

Each trapper would be accompanied by a technician (usually a



Matt Peek photos

New traps developed for BMP include features such as padded jaws, rounded thicker jaws, and offset jaws. Chains include swivels and springs to absorb shock. The goal is to develop traps that are effective on target species without causing injury.

university wildlife student) throughout the study. (On the day I followed, Peek filled the role of technician.) The technician would record data and ensure that the trapper followed protocol, which was designed to eliminate trapper bias. For example, the trapper would pick the locations for trap sets, and only after the location had been selected would the technician identify the type of trap to be set there. Thus, the trapper could not intentionally favor one trap type over another.

Daily activity at each trap set



Mark Shoup photo

During the study, trappers set traps in the same areas with methods they have always used. Observers record data and ensure protocol is followed.

would be recorded by the technician and captured animals sent to an independent laboratory where a veterinarian would perform a necropsy to determine the extent of injury to the animal. The vet would know nothing of the circumstances in which the animal was trapped. After necropsy, the vet would then use a trauma scale to determine the severity of injuries.

The scale, developed by biologists and wildlife veterinarians, assigns numeric values to each injury based on severity. "Mild traumas" ranged from two to 10 points and included such things as swelling or minor cuts. "Moderate traumas" ranged from 25 to 30 points and included more serious but non-life threatening injuries such as a tooth fracture or a broken rib. "Moderately severe traumas" included such injuries as a simple fracture at or below the joint of the foot. These injuries ranked from 50 to 55 points. Finally,

"severe trauma" encompassed everything from amputation of three or more digits to death. All severe traumas scored 100 points.

Scores for all injuries were tabulated to achieve a final injury score. Any combination of injuries to an animal totaling 55 points or more was considered unacceptable, so traps had to achieve an average injury score less than 55 points to be recommended through BMPs. Additionally, at least 70 percent of the animals captured had to fall within the mild or moderate trauma range for the traps to be acceptable.

Because BMP research was initiated eight years ago, the same procedure has been followed in other states targeting species specific to different regions. Body gripping traps have been tested under a kill-trap protocol in Canada, and restraining snares (meant to capture, not kill) have been tested in Wisconsin with great success.

"The key to trappers' acceptance of this study is that it is a true field evaluation of trap performance," says Peek. "The trapper operates as he always has, using the same baits and the

same sets at the same spots he places his own traps.”

The ultimate goal is to discover which traps meet BMP standards. This means they have to be 1) efficient in catching and holding the animal, 2) create a low injury level, 3) be selective in catching the species targeted, 4) be practical for the user, and 5) be safe for the user.

In fact, most traps tested to date have passed BMP standards, lending credence to what trappers have been saying all along — that traps are not inherently cruel and dangerous devices. Even more compelling is the fact that 98 percent of the animals caught in the studies have been target species.

This latter point is important. A trapper wants to trap only the species of value to him, and he does not want to capture non-furbearers. In addition, in the case of a dog or other domestic animal being caught in a trap, it is critical that that animal not be permanently harmed.

The foothold traps used in the study I observed were nothing like the old toothed traps you see in museums or animal rights magazines. They were either padded or offset, meaning they don't close entirely. The offset traps also had thickened jaws designed to displace the force of the trap over a greater surface area of the animal's foot. Other modifications included shock absorbers on the chains, center swiveling of the traps, and rounded, smooth jaws.

This was the last planned year for bobcat



Matt Peek photos

The most recent BMP study in Kansas targeted bobcats. Soon, BMP criteria for bobcat, coyote, raccoon, red fox, muskrat and beaver will be completed.

testing in Kansas, and a bobcat BMP end-product is near. That product will be a user-friendly document recommending traps and trapping methods that meet the BMP criteria. In addition to the bobcat BMP, raccoon, coyote, red fox, muskrat, and beaver BMPs are at or very near completion. Eventually, BMPs will be developed for all harvestable furbearer species in the U.S., but they are intended to be “living” documents, and studies will be

reinitiated as new traps or technology become available.

At this point, you may be wondering if trappers will really use these things.

Peek has a convincing answer: “Just take a look at any trapper supply magazine or website, and you'll find that what they offer is what we're recommending. And it only makes sense; they are popular because they are efficient and safe. Trappers know that the more you reduce injury, the greater the chance of capture, and that's in their interests. Plus no one wants to unduly harm their catch; that just doesn't make sense. And if you capture and harm the farmer's dog, you're not likely to be welcomed back.”

You might also wonder if all this is necessary, since trapper numbers have declined in recent years. There are several answers. Perhaps the most sur-



Mark Shoup photo

Traps are designed to hold furbearers without causing injury. Each animal caught in the study was sent to a veterinarian for a complete necropsy and injury score.

prising is that foothold traps have been used to save species on the decline. The river otter is one example. Once close to extinction in the U.S., wildlife biologists have employed the assistance of trappers using foothold traps to capture and transplant more than 4,000 otters, helping establish populations in 18 states. This technique has also been used to restore populations of wolves, lynx, fisher, marten, beaver, bobcat, fox, opossum, and raccoon.

Trapping can also help wild species by keeping the balance of predator and prey when one or the other becomes overpopulated in a given area, preventing starvation and spread of disease. In some instances, trapping of predators can be used to protect endangered species. Trapping can also protect habitat when species such as beaver become destructive. And funding from furharvester and fur dealer licenses helps finance projects that manage and protect the habitats of many animals, not just furbearers.

Trapping has economic value as well. Fur clothing is the most common, but by-products from furbearers include artist's paint brush bristles, perfumes, fishing lures, boot-leather waterproofing, and in some cases, food. Trapping predators can also protect livestock and pets.

For trappers, trapping provides a wealth of information about the natural environment. By necessity, trappers must become expert naturalists, learning the signs, life cycles, and habits of not only the animals they pursue, but those they don't. When the numbers of these animals becomes out of balance —



whether too many or too few — trappers are the first to know and report their concerns to wildlife biologists.

One last important fact about trapping that the general public is often unaware of is that it is highly-regulated. It is mandatory that trappers be licensed, check their traps daily, tag their traps with their name and address, trap only in specified seasons, use specified sizes of traps, trap for certain species only in specified areas, and use specified traps for certain species. In Kansas, anyone born on or after July 1, 1966, must also take a certified trapper education course before trapping.

Trapping has been banned in California, Colorado, Massachusetts, and Washington, and Arizona has significantly restricted the use of foothold traps and snares. In these cases, animal rights activists, ignoring sound biology and playing emotion against logic and facts, have convinced an uninformed public that trapping is cruel and unnecessary. The results have been disastrous in many areas because the primary tools used to resolve conflict with furbearer species

have been lost. For example, beaver populations in Massachusetts have more than doubled, causing massive habitat destruction, flooding, and destruction of water wells.

Fortunately, wildlife biologists now have solid scientific data to prove that not only do recommended traps inflict minimal levels of injury acceptable by international standards, but trapping is beneficial to both wildlife and humans. But unless the public is educated — both formally and informally — these benefits could be lost. Hopefully, the data gleaned from the Best Management Practices research will prevent further erosion of this time-honored and important

What are BMPs?

A practical tool for trappers of all skill levels, BMPs are carefully-researched recommendations designed to address animal welfare concerns and increase trapper efficiency. BMPs feature the latest scientific information, along with practical advice from experienced trappers and wildlife biologists about techniques and equipment.

What BMPs are available?

Currently, BMPs for eastern coyote are available, and BMPs for six other species will soon be published.

Facts about BMPs:

- In the U.S., 32 states participated in testing, and all 50 support BMPs.
- More than 50 types of traps have been evaluated, including standard models, offsets, and more.
- More than 150 trapper/technician teams have participated in field tests.



Hatchery History

by Mark Kumberg,
manager, Pratt Fish Hatchery

There are four state-owned fish hatcheries in Kansas, and each fills a role in providing Kansas anglers outstanding fishing opportunities.

The Kansas Department of Wildlife and Parks began humbly 100 years ago with the development of a small fish hatchery just east of Pratt along the Ninnescah River. The hatchery system has grown over the years to include four major facilities located across the state.

In 1903, state officials were authorized to establish a fish hatchery at a place well suited for the propagation of fish. A thousand dollars was appropriated by the legislature to fund

this undertaking with the stipulation that land be donated. Warden Del Travis worked with Pratt County Commissioners, who donated 13 acres of land for the hatchery construction. Initially the hatchery consisted of a 2.5-acre pond with a windmill for its water supply. In 1905, a building and seven ponds were constructed, taking water from the mill race just north of the hatchery. The 1907 Kansas Legislature appropriated an additional \$3,250 for the purchase of 65 acres of land and

hatchery expansion. The rail car “Angler No. 1” was purchased that same year to distribute fish across the state

Expansion in 1911 created 83 ponds, a dam across the Ninnescah River with pipes for supplying water, and fish holding tanks. This was completed in 1912. The water supply conduit consisted of 6,875 feet of 21-inch clay pipe that moved water from above a low-water dam in what is now a Pratt city park. The pipeline is still in use today. At the dedica-

tion in 1912, the Pratt Hatchery was hailed as the largest of its kind in the world.

In 1922, channel catfish were successfully spawned in Pratt Hatchery ponds and the facility is somewhat famous for this innovation. Before this time, no one thought catfish could be propagated in this manner. A few years later, channel catfish eggs were first collected and artificially hatched in a system similar to that used today.

Today, the Pratt Hatchery consists of 87 ponds on 187 acres of land. There are 70 acres of useable water. Renovations to drain lines and the construction of fish collection areas, called kettles, started in 1988 and modernized hatchery operations. The fish hatchery building was expanded in 1996, almost doubling its size, adding a walleye and channel catfish hatching annex.

The current hatchery annually produces millions of fish which are stocked in waters across the state and across the country. It still serves as the sole source for all channel catfish produced and distributed in Kansas. Fish species cultured include: channel catfish, bluegill, sauger, saugeye, walleye, hybrid sunfish, largemouth bass, smallmouth bass, striped bass hybrids, fathead minnows, goldfish and grass carp. The Pratt Hatchery staff includes a hatchery manager, three fish culturists, and one maintenance technician.

The Meade Hatchery is the second oldest in the state. In 1928 a group of state inmates built five fish-rearing ponds cov-



Mike Blair photos

Harvest in an extensive, pond hatchery consists of draining the pond and seining fish. This photo of Pratt Hatchery staff was taken several years before construction of the fish collection structures, or kettles, was complete.

ering 6 acres. By 1936, construction of a state fishing lake and the hatchery was complete. Fifteen ponds, covering about 25 acres, were available for fish production. Water was supplied by the abundant artesian springs in the area.

The hatchery has historically been the main black bass rearing

station for the state. Other species including channel catfish, bluegill, hybrid striped bass, northern pike and walleye have been propagated at Meade.

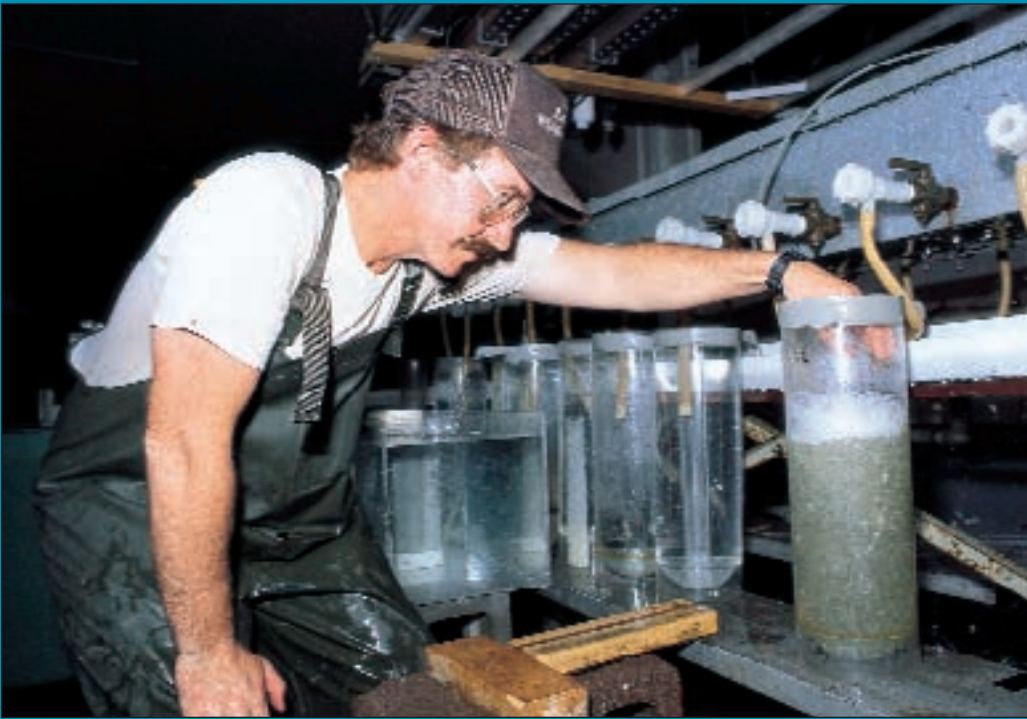
Irrigation caused the artesian springs to dry up, and in 1969 a water well was drilled to supply water to the hatchery and lake. Due to excessive water loss through the soil, the pond bottoms were sealed with a product called ESS-13. The hatchery now consists of 15 ponds that cover 20 surface acres of water.

The Meade facility was geared more toward wildlife propagation than for fish culture during its first 30 years. As many as 30,000 pheasants were reared annually at this facility this program was discontinued in the early 1960s. The original adobe buildings, which are still in use, are historically significant.

The department-owned complex now consists of



Sport fish species produced in Kansas hatcheries include smallmouth bass (pictured), channel catfish, blue catfish, walleye, sauger, saugeye, largemouth bass, bluegill, hybrid sunfish, striped bass, hybrid striped bass, northern pike, yellow perch, and redear sunfish



Walleye eggs, taken from wild fish are hatched at Pratt, Meade, and Milford. The fry are either stocked soon after hatching or moved to ponds and raised to fingerling size before being stocked.

1,244 acres encompassing a state fishing lake, state park, wildlife area, and fish hatchery. The fish house contains four 700-gallon holding tanks. Hatchery production currently includes artificial walleye egg hatching, channel catfish intermediate production, smallmouth bass, as well as pellet-trained brood fish of northern strain largemouth bass. Meade is staffed by a hatchery manager and one maintenance technician.

The Farlington Hatchery is the state's third warm-water extensive facility. It is located just north and east of Girard. Construction of the Farlington Hatchery began in 1939 and was completed shortly after World War II ended. The hatchery was operated as part of the U.S. Fish and Wildlife Service's national hatchery system until 1969 when ownership of the facility was conveyed to KDWP. The first year the state actually operated the new station was 1972.

The hatchery consists of 30 earthen ponds on 149 acres of land. Water is supplied through a 14-inch siphon line from Crawford State Fishing Lake.

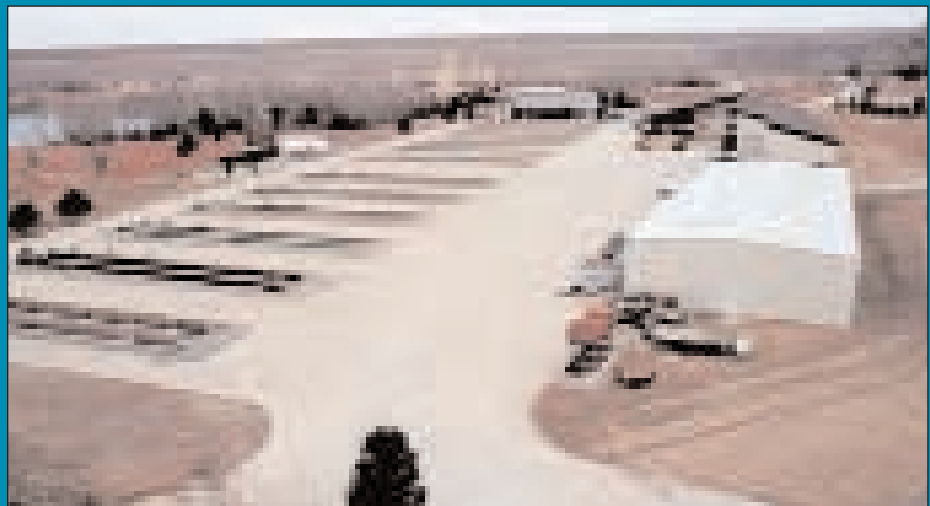
Major renovations have taken place in the last 15 years. In 1988 a new fish house was built, complete with tanks and a micro-screen drum filter to remove unwanted fish. From 1990 to

1992 approximately two-thirds of the hatchery was remodeled. In the late 1990s, harvest structures were rebuilt and the main water line to the hatchery was replaced.

Fish propagated at Farlington include bluegill, blue catfish, channel catfish, saugeye, sauger, walleye, striped bass, hybrid striped bass, redear sunfish, hybrid sunfish, yellow perch and grass carp. A two-acre channel catfish production pond below Woodson State Fishing Lake is also managed remotely by Farlington employees. Farlington

staff includes a hatchery manager and two fish culturists.

The final wheel in the state's hatchery system is the Milford Fish Hatchery, which was completed in 1985. It is the Kansas hatchery system's only intensive hatchery, meaning the fish are reared in concrete raceways at much higher densities and water flows than used at the other



Mike Blair photos

The Milford Hatchery is one of a few warm-water, intensive hatcheries in the U.S. Intensive hatcheries use concrete raceways rather than earthen ponds.

photo courtesy of Don Patton



The photo above shows the first pond constructed at Pratt in 1903. Below is an aerial of the Pratt hatchery showing the ponds used today. All of the channel catfish stocked in Kansas re produced at Pratt. Ponds are also used to raise bluegill, sauger, saugeye, walleye, hybrid sunfish, largemouth bass, smallmouth bass, striped bass hybrids, fat-head minnows, goldfish and grass carp.



Mike Blair photo

extensive facilities. Milford is located northwest of Junction City, just below the dam of Milford Reservoir. The Milford Nature Center is also located on the hatchery grounds.

At the time the hatchery was built, it was one of the few intensive warm-water fish rearing stations in the United States. Fish are propagated in 24 cement raceways measuring 100 feet long by 8 feet wide by 4 feet deep and 6 one-acre plastic-lined

ponds. Other facilities include pump houses, generator buildings, aeration towers and a liquid oxygen delivery system. The principal hatchery building houses the offices, fish incubation and rearing areas, a filter room and shop area.

The Milford facility houses four large incubation racks which are used to hatch millions of walleye, saugeye and sauger eggs each year. Striped bass hybrid eggs are also spawned

and hatched in this area. An ongoing program to develop a domestic, pellet-fed source of striped bass brood fish is becoming successful (see Page 14). Over the last few years, millions of striped bass hybrid eggs and fry have been collected from these fish.

Other major efforts for this station include rearing several hundred thousand channel catfish. These fish are distributed to waters all over the state. In the past, Milford has been involved in chemically marking different species of fish so survival rates of hatchery stockings can be evaluated. This study has shown that stocking hatchery-raised fish is very successful. These stockings often become a major part of the population in waters receiving them. The Milford staff includes a manager, four fish culturists, and two maintenance technicians.


Species of fish produced at Milford include channel catfish, walleye, saugeye, sauger, largemouth bass, striped bass, striped bass hybrids, and hybrid sunfish.

The hatchery system in Kansas has a rich and interesting history, and served as the beginnings of KDWP as we know it today. The four facilities and 17 employees produced nearly 100 million fish stocked in Kansas waters in 2004. That total includes 4 million channel catfish, 5.5 million wipers, 6 million saugeye, and 77 million walleye. With the continued dedication of hatchery employees and innovative thinking, the culture system will be an important part of outdoor recreation for the next 100 years. ♡

2005 Fishing Forecast

Use the following pages to find quality fishing for the sport fish you prefer. The forecast lists reservoirs and lakes (water bodies less than 1,000 acres) for each species. Ratings include the **Density Rating**, which is the number of fish captured per unit of effort by fisheries biologists; **Preferred Rating**, which is the number of fish at a preferred length

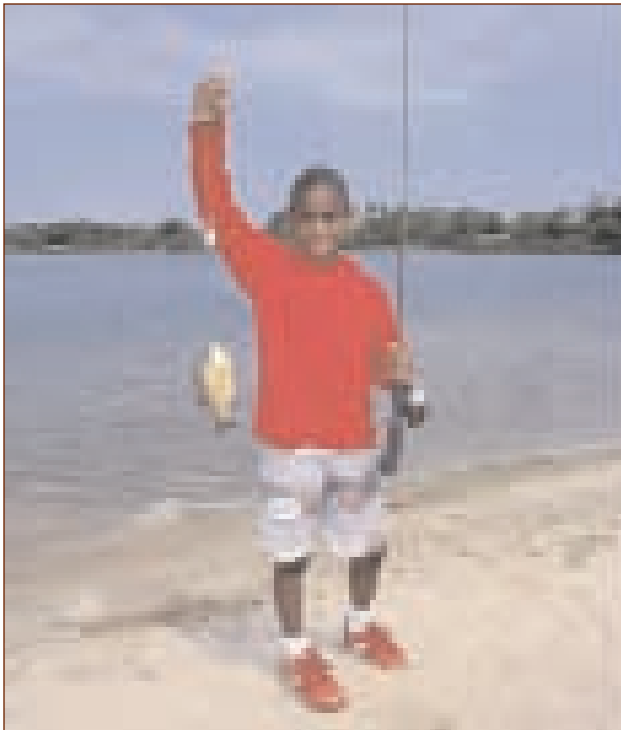
for that species; **Lunker Rating**, which is the number of fish sampled at a length most anglers consider a trophy, and **Largest fish**, which is simply the largest fish caught during sampling. The **Biologist's Rating** is a rating of E - excellent, G - good, F - fair or P - poor given by the biologist who considers other factors in addition to sampling. In theory, a lake with a

Density Rating of 24 will have twice as many fish per acre as a lake with a **Density Rating** of 12. This information will give you an idea not only of which lakes have high populations, but also those which have larger fish. You may view these tables on the department's web page www.kdwp.state.ks.us or a brochure can be mailed or picked up at a KDWP office. 

WHITE CRAPPIE						
IMPOUNDMENT	Density Rating (>8")	Preferred Rating (>10")	Lunker Rating (>12")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
LOVEWELL	28.00	23.00	2.83	1.56	E	2986
MARION	19.33	3.17	1.83	1.47	G	6160
HILLSDALE	14.90	9.80	0.90	1.20	G	4580
PERRY	13.71	4.25	0.63	1.09	F	12600
BIG HILL	12.00	4.40	0.20	1.80	G	1240
TORONTO	11.50	3.94	1.50	2.31	G	2800
FALL RIVER	7.14	3.79	0.86	2.20	G	2500
MELVERN	6.00	3.00	0.00	1.10	G	7000
CLINTON	5.80	2.00	0.30	0.00	F	7000
KANOPOLIS	4.94	2.38	0.31	1.13	G	3550
LA CYGNE	4.94	3.69	0.44	1.08	G	2600
LAKES						
ATCHISON CITY LAKE #9	79.50	3.00	0.00	0.65	F	18
OTTAWA SFL	45.38	3.75	1.38	1.91	F	138
WICHITA-CHISHOLM NORTH LAKE	43.50	8.00	1.25	0.88	G	25
SCOTT STATE LAKE	29.50	9.50	0.00	0.89	F	115
SEDAN CITY LAKE-OLD	26.75	8.00	1.00	1.61	E	55
ATCHISON CITY LAKE #2	26.00	0.50	0.00	0.50	F	3
WASHINGTON SFL	24.50	5.00	1.00	1.03	G	65
SHERIDAN SFL	22.50	2.75	0.00	0.67	F	67
NEBO SFL	22.00	3.50	0.75	0.97	F	38
HORTON-MISSION LAKE	21.25	10.25	2.00	1.48	G	154
EUREKA CITY LAKE	19.50	2.75	0.50	0.89	G	135
BLACK KETTLE SFL	18.00	4.00	1.00	1.12	G	12
NEOSHO SFL	17.30	2.50	0.50	0.90	G	92
PARSONS CITY LAKE	16.30	3.50	0.80	1.40	G	980
MADISON CITY LAKE	12.50	2.25	0.75	1.22	G	114
HORTON-LITTLE LAKE	11.50	6.00	2.50	1.38	F	10
SEDAN CITY LAKE-NEW	10.25	2.50	1.00	0.92	G	70
JEFFREY EC-MAKEUP LK	8.30	6.30	0.50	1.10	G	125
GARDNER CITY LAKE	7.20	2.00	0.00	0.50	P	100
MEADE STATE LAKE	6.75	4.00	0.25	0.78	F	80
OLATHE-CEDAR LAKE	6.30	3.50	1.30	1.20	P	56
BOURBON SFL	6.25	2.25	0.50	1.02	G	103
PLEASANTON EAST LAKE	6.25	4.00	0.00	0.67	G	127
MOLINE NEW CITY LAKE	6.00	3.50	2.25	1.57	G	185
ANTHONY CITY LAKE	6.00	1.50	0.50	0.90	F	156
LOUISBURG CITY LAKE	5.70	5.30	0.30	0.80	F	23
GEARY SFL	5.50	1.00	0.00	0.57	G	97
HIAWATHA CITY LAKE	5.00	0.50	0.00	0.37	P	7

BLACK CRAPPIE						
IMPOUNDMENT	Density Rating (>8")	Preferred Rating (>10")	Lunker Rating (>12")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
WEBSTER	2.63	2.00	1.25	1.29	F	3500
MARION	2.50	1.33	0.00	0.86	F	6160
SEBELIUS	2.13	1.63	0.63	1.38	F	1500
LAKES						
ATCHISON CITY LAKE #23	38.00	21.00	0.00	0.68	G	39
CENTRALIA CITY LAKE	26.00	11.90	0.00	0.60	G	400
ATCHISON CITY LAKE #9	25.00	0.00	0.00	0.45	F	18
ATCHISON CITY LAKE #4	23.50	0.00	0.00	0.32	F	4
BROWN SFL	22.00	5.00	0.25	0.92	G	62
PRATT CO. LAKE	15.00	0.75	0.00	0.62	G	51
SHERIDAN SFL	12.75	0.25	0.00	0.50	F	67
GRAHAM CO.-ANTELOPE LAKE	12.75	8.75	0.25	1.28	G	80
BRONSON CITY LAKE	12.25	2.75	0.00	0.88	F	0
PLEASANTON WEST LAKE	12.00	1.50	0.25	0.94	G	20
SHAWNEE SFL	9.90	2.50	0.30	2.10	F	135
NEBO SFL	8.25	0.25	0.00	0.35	F	38
KINGMAN SFL	8.00	7.00	1.25	1.03	F	144
MOLINE OLD CITY LAKE	7.00	2.25	0.00	0.58	P	68
BUTLER SFL	6.67	0.83	0.00	0.65	F	124
GRIDLEY CITY LAKE	6.00	0.50	0.00	0.50	F	33
NEOSHO SFL	5.30	0.00	0.00	0.40	F	92
GARNETT CITY LAKE-SOUTH	5.00	1.50	0.50	0.80	F	25
WYANDOTTE CO. LAKE	4.40	2.40	0.10	1.00	G	407
HOLTON - BANNER CREEK LAKE	4.00	2.75	0.25	1.07	F	535

FLATHEAD CATFISH						
IMPOUNDMENT	Density Rating (>16")	Preferred Rating (>24")	Lunker Rating (>28")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
SEBELIUS	4.50	4.00	2.50	23.37	G	1500
CEDAR BLUFF	3.25	2.50	2.25	18.74	G	6500
KIRWIN	2.50	0.50	0.00	9.78	F	4000
LA CYGNE	1.75	1.25	0.75	15.41	G	2600
WEBSTER	1.50	0.50	0.00	9.40	F	3500
LAKES						
HERINGTON CITY LAKE-OLD	4.00	3.00	1.00	14.11	F	367
CLARK SFL	2.50	2.50	1.00	14.54	G	300



CHANNEL CATFISH

IMPOUNDMENT	Density Rating (>16")	Preferred Rating (>24")	Lunker Rating (>24")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
CLINTON	7.00	1.50	0.50	12.60	G	7000
SEBELIUS	6.88	3.92	0.85	9.25	G	1500
CHENEY	6.67	1.67	0.17	9.02	G	9550
HILLSDALE	5.30	1.50	0.50	13.20	F	4580
KIRWIN	5.19	3.17	0.77	15.43	E	4000
MILFORD	5.17	0.83	0.00	6.03	G	16020
LOVEWELL	5.17	2.17	0.50	12.60	G	2986
WILSON	4.75	0.25	0.13	13.23	G	9040
WEBSTER	4.55	1.52	1.10	21.61	G	3500
GLEN ELDER	4.50	0.70	0.50	12.71	G	12586
MELVERN	4.50	0.30	0.20	8.30	F	7000
TORONTO	4.00	0.00	0.00	5.29	G	2800
LA CYGNE	3.75	0.75	0.00	8.55	G	2600
PERRY	3.25	0.25	0.00	6.37	F	12600
TUTTLE CREEK	3.00	1.60	0.20	14.40	G	15800
FALL RIVER	3.00	1.00	0.00	5.95	G	2500
KANOPOLIS	3.00	0.50	0.00	5.35	G	3550
POMONA	2.50	0.25	0.00	7.01	G	4000
MARION	2.33	0.17	0.00	5.34	F	6160
LAKES						
SABETHA CITY LAKE	37.00	0.00	0.00	5.51	G	100
PLEASANTON WEST LAKE	30.00	1.00	0.00	6.37	E	20
SABETHA - PONY CREEK LAKE	30.00	11.00	0.00	7.05	G	171
ATCHISON SFL	30.00	3.00	0.00	9.56	G	66
BONE CREEK LAKE	29.00	5.50	0.50	8.70	E	540
MELVERN RIVER POND	22.00	6.00	1.00	10.10	E	100
CARBONDALE CITY LAKE - EAST	22.00	7.00	6.00	16.70	E	265
LYON SFL	21.00	4.00	0.00	9.81	E	135
HOLTON - BANNER CREEK LAKE	20.00	5.00	2.50	13.45	G	535
JEFFREY EC-AUX. MAKEUP LK	18.00	6.50	1.50	16.20	G	460
BROWN SFL	17.00	1.00	0.00	6.39	G	62
LEAVENWORTH SFL	16.50	1.50	0.00	9.40	G	175
GARNETT CITY LAKE-SOUTH	15.00	3.00	3.00	18.50	E	25
GARDNER CITY LAKE	15.00	3.00	1.00	13.00	G	100
OLATHE-CEDAR LAKE	14.00	0.00	0.00	3.50	F	56
JO CO. SHAWNEE MISSION LK	13.50	1.00	0.00	6.20	G	121
HORTON-MISSION LAKE	13.00	0.00	0.00	5.07	F	154
WILSON SFL	12.50	1.50	0.00	11.90	G	110
YATES CENTER CITY LAKE-NEW	12.00	4.00	2.00	22.50	E	205
BLACK KETTLE SFL	12.00	1.00	0.00	5.11	F	12
OSAWATOMIE-BEAVER LAKE	12.00	0.00	0.00	4.80	F	6
OSAGE CITY LAKE	12.00	3.00	1.00	15.00	E	50
CHASE SFL	11.00	0.00	0.00	4.28	G	109
GRIDLEY CITY LAKE	11.00	3.00	1.00	12.90	E	33
EUREKA CITY LAKE	11.00	1.00	0.00	6.39	G	135
LEBO CITY LAKE	11.00	1.50	0.50	11.00	E	70
CLARK SFL	10.00	1.50	0.50	9.59	E	300
OLPE CITY LAKE	10.00	0.00	0.00	6.61	G	90
BOURBON SFL	10.00	2.00	1.00	9.46	E	103
NEOSHO SFL	9.50	0.50	0.00	10.60	G	92
MOLINE NEW CITY LAKE	9.00	0.00	0.00	5.51	F	185
CRAWFORD SFL	9.00	1.00	0.00	6.10	G	150
MADISON CITY LAKE	9.00	1.00	0.00	7.28	G	114
MIAMI SFL	9.00	0.00	0.00	3.00	G	118
WOODSON SFL	8.50	1.50	1.50	13.50	E	180
BUTLER SFL	8.00	2.50	0.50	9.87	G	124
GARNETT CITY LAKE-NORTH	8.00	8.00	4.00	16.50	E	55
POTTAWATOMIE SFL #1	8.00	2.00	1.00	10.70	G	24
HARVEY CO. LAKE-EAST	8.00	0.00	0.00	2.04	G	240
THAYER CITY LAKE (NEW)	7.50	0.50	0.00	6.90	G	45
HORTON-LITTLE LAKE	7.00	0.00	0.00	4.85	F	10
KINGMAN SFL	7.00	3.00	1.00	9.81	G	144
PLEASANTON EAST LAKE	7.00	0.00	0.00	5.28	G	127
CHANUTE CITY LAKE	7.00	1.00	0.00	7.60	G	80
DOUGLAS CO.-LONESTAR LAKE	6.50	2.00	0.50	8.60	G	195
OSAGE SFL	6.00	1.00	1.00	10.50	E	140
GREENBUSH ED CENTER	6.00	0.00	0.00	3.20	G	5
NEBO SFL	6.00	0.00	0.00	4.63	F	38
OTTAWA SFL	5.50	0.50	0.00	6.00	G	138
ATCHISON CITY LAKE #23	5.00	0.00	0.00	3.30	F	39

BLUEGILL

IMPOUNDMENT	Density Rating (>6")	Preferred Rating (>8")	Lunker Rating (>10")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
PERRY	26.10	0.00	0.00	0.40	F	12600
LA CYGNE	2.38	0.00	0.00	0.31	F	2600
MILFORD	0.77	0.00	0.00	0.41	G	16020
LAKES						
ATCHISON CITY LAKE #2	180.00	0.00	0.00	0.40	F	3
ATCHISON CITY LAKE #9	180.00	18.00	0.00	0.30	G	18
SABETHA - PONY CREEK LAKE	105.60	0.00	0.00	0.30	F	171
BROWN SFL	102.70	30.00	0.00	0.70	G	62
ATCHISON CITY LAKE #4	100.00	2.50	0.00	0.40	G	4
NEBO SFL	86.40	0.90	0.00	0.50	F	38
SABETHA CITY LAKE	82.20	2.20	0.00	0.60	G	100
THAYER CITY LAKE (NEW)	80.00	19.00	1.00	0.36	F	45
CRAWFORD SFL	76.00	24.00	0.00	0.37	F	150
BONE CREEK LAKE	74.00	26.00	0.00	0.34	G	540
CHANUTE CITY LAKE	72.00	28.00	0.00	0.32	F	80
ATCHISON SFL	65.00	29.00	0.00	0.60	G	66
HORTON-LITTLE LAKE	63.30	0.00	0.00	0.30	F	10
NEOSHO SFL	53.00	47.00	0.00	0.35	G	92
HIAWATHA CITY LAKE	41.70	0.00	0.00	0.30	F	7
HOLTON - BANNER CREEK LAKE	37.40	11.10	0.00	0.60	F	535
NEW STRAWN CITY LAKE	27.00	6.00	0.00	0.60	E	3
BOURBON SFL	17.30	2.70	0.90	1.04	G	103
YATES CENTER-SOUTH OWL LAKE	13.00	0.00	0.00	0.40	P	150
ATCHISON CO. LAKE	12.90	0.00	0.00	0.30	P	60
OSAGE SFL	12.00	0.00	0.00	0.30	G	140
PLEASANTON EAST LAKE	11.80	4.10	0.00	0.50	G	127
MELVERN RIVER POND	9.00	0.00	0.00	0.40	G	100
HORTON-MISSION LAKE	7.30	0.00	0.00	0.30	P	154
YATES CENTER CITY LAKE-NEW	7.00	0.00	0.00	0.40	F	205
GARNETT CITY LAKE-NORTH	7.00	0.00	0.00	0.44	F	55
GRIDLEY CITY LAKE	7.00	0.00	0.00	0.40	G	33
CARBONDALE CITY LAKE - EAST	5.00	0.00	0.00	0.30	P	265
WASHINGTON SFL	4.75	0.75	0.00	0.41	G	65
GARNETT CITY LAKE-SOUTH	4.00	0.00	0.00	0.40	F	25
BOURBON SFL	3.90	0.63	0.00	1.04	G	103
PLEASANTON WEST LAKE	2.28	0.00	0.00	0.39	G	20
WOODSON SFL	1.00	1.00	0.00	0.60	G	180
OSAGE CITY LAKE	1.00	0.00	0.00	0.30	P	50

LARGEMOUTH BASS

IMPOUNDMENT	Density Rating (>12")	Preferred Rating (>15")	Lunker Rating (>20")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
SEBELIUS	71.43	9.36	0.00	3.41	G	1500
LA CYGNE	50.74	33.82	5.15	8.41	E	2600
TORONTO	50.00	14.71	1.47	5.29	F	2800
CEDAR BLUFF	28.15	16.15	0.62	6.79	G	6500
BIG HILL	25.20	13.30	1.60	6.10	E	1240
FALL RIVER	19.61	7.84	0.00	2.65	P	2500
KIRWIN	17.65	10.78	0.00	3.76	F	4000
HILLSDALE	14.90	5.40	0.80	4.70	F	4580
MELVERN	11.70	3.60	0.40	5.90	G	7000
WEBSTER	10.83	6.67	0.83	6.15	F	3500
EL DORADO	7.84	2.94	0.00	3.31	F	8000
CLINTON	6.00	2.20	0.00	4.40	P	7000
PERRY	5.60	2.30	0.20	6.00	F	12600
LAKES						
GRAHAM CO.-ANTELOPE LAKE	146.00	10.00	0.00	2.14	F	80
SEDAN CITY LAKE-OLD	133.82	54.41	13.24	5.84	E	55
BUTLER SFL	133.33	71.93	7.02	5.37	E	124
SEVERY CITY LAKE	130.56	50.00	0.00	4.19	G	5
SEDAN CITY LAKE-NEW	119.61	21.57	1.96	4.85	E	70
PLEASANTON WEST LAKE	108.30	49.07	2.78	5.71	E	20
OLATHE-CEDAR LAKE	106.40	61.50	0.00	3.90	G	56
MOLINE NEW CITY LAKE	102.94	10.29	1.47	5.29	E	185
GARDNER CITY LAKE	97.30	77.30	10.70	6.80	E	100
COWLEY SFL	96.87	29.69	0.00	4.35	G	84
PRATT CO. LAKE	96.34	9.76	0.00	3.00	E	51
YATES CENTER CITY LAKE-NEW	94.70	42.10	0.00	3.30	E	205
PLAINVILLE LAKE	94.12	44.12	0.00	3.19	G	100
POTTAWATOMIE SFL #1	92.00	24.00	2.00	4.90	E	24
SHERIDAN SFL	92.00	30.00	0.00	2.59	G	67
EUREKA CITY LAKE	88.24	22.06	4.41	5.95	E	135
BROWN SFL	88.20	9.10	0.00	3.80	G	62
OLPE-KIDS POND	85.71	42.86	0.00	3.97	G	2
MOLINE OLD CITY LAKE	85.29	8.82	0.00	1.41	G	68
OSAWATOMIE CITY LAKE	85.00	0.00	0.00	1.30	F	21
FORT SCOTT CITY LAKE	83.67	21.43	0.00	3.35	G	350
DOUGLAS CO.-LONESTAR LAKE	83.40	20.00	2.30	5.70	E	195
MADISON CITY LAKE	79.41	39.71	7.35	6.61	E	114
EMPORIA-PETER PAN PARK	76.47	58.82	0.00	4.85	G	2
LEAVENWORTH SFL	74.20	23.50	0.80	3.90	E	175
WYANDOTTE CO. LAKE	74.00	10.10	0.00	2.50	G	407
CLARK SFL	72.89	47.59	4.22	5.80	E	300
MCPHERSON SFL	71.00	40.50	1.50	4.94	E	46
CHERRYVALE CITY LAKE - TANKO	70.20	21.10	0.00	4.40	G	11
MEADE STATE LAKE	69.03	33.63	1.77	5.88	E	80
NEOSHO SFL	65.80	26.30	2.60	6.00	G	92
HOLTON - BANNER CREEK LAKE	63.70	26.30	0.00	4.90	G	535
THAYER CITY LAKE (NEW)	58.00	0.00	0.00	3.70	E	45
SABETHA - PONY CREEK LAKE	57.80	39.40	0.60	5.60	G	171
OVERLAND PK-REGENCY PK LK	55.20	34.50	0.00	5.00	G	3
LEBO CITY LAKE	55.00	15.00	0.00	2.30	G	70
GRIDLEY CITY LAKE	55.00	15.00	0.00	2.30	G	33
JO CO. SHAWNEE MISSION LK	53.90	1.50	0.00	1.70	F	121
CHANUTE CITY LAKE	52.70	29.70	3.60	6.70	G	80
ATCHISON SFL	52.00	8.00	0.00	3.50	G	66
SABETHA CITY LAKE	51.10	36.70	0.00	3.50	G	100
NEW STRAWN CITY LAKE	51.00	15.60	0.00	4.70	E	3
SHAWNEE CO.-LAKE SHAWNEE	48.40	10.50	1.10	5.50	G	416
PRAIRIE CENTER POND	48.00	16.00	0.00	4.60	G	1
YATES CENTER-SOUTH OWL LAKE	47.00	25.00	0.00	3.50	P	150
HORTON-LITTLE LAKE	45.00	31.70	1.70	5.30	G	10



SAUGEYE

IMPOUNDMENT	Density Rating (>14")	Preferred Rating (>18")	Lunker Rating (>22")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
SEBELIUS	42.52	16.79	1.04	3.56	E	1500
KANOPOLIS	15.50	3.25	3.25	7.52	G	3550
TUTTLE CREEK	2.70	0.90	0.30	5.10	F	15800
COUNCIL GROVE	2.20	0.80	0.20	6.40	F	3280
LAKES						
GRAHAM CO.-ANTELOPE LAKE	19.00	10.00	0.00	3.76	G	80
HARVEY CO. LAKE-EAST	17.00	9.00	4.00	5.51	G	240
CHASE SFL	12.00	0.00	0.00	1.60	F	109
SHERIDAN SFL	10.00	8.00	0.00	3.51	G	67
WICHITA-CHISHOLM NORTH LAKE	9.00	0.00	0.00	1.53	F	25
GEARY SFL	8.00	2.00	2.00	4.74	G	97
WASHINGTON SFL	8.00	8.00	5.00	6.61	G	65
EUREKA CITY LAKE	6.00	1.00	0.00	2.20	F	135
SEDAN CITY LAKE-OLD	6.00	3.00	1.00	4.74	F	55
MIDDLE CREEK SFL	4.00	1.50	1.00	5.20	F	280
PARSONS CITY LAKE	3.50	3.50	3.00	8.90	G	980
GARDNER CITY LAKE	3.00	2.50	1.00	5.20	F	100
OLPE CITY LAKE	2.00	1.00	0.00	2.65	P	90

SMALLMOUTH BASS

IMPOUNDMENT	Density Rating (>11")	Preferred Rating (>14")	Lunker Rating (>17")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
CEDAR BLUFF	28.00	7.00	0.00	1.64	G	6500
COFFEE CO. LAKE	15.80	10.70	2.30	2.70	E	5000
GLEN ELDER	12.00	5.00	0.00	1.79	G	12586
BIG HILL	10.40	3.90	0.70	3.10	G	1240
WILSON	9.50	2.00	0.00	1.49	F	9040
MILFORD	4.78	1.46	0.49	3.40	G	16020
EL DORADO	2.61	1.31	0.33	2.58	F	8000
LAKES						
JEFFREY EC-MAKEUP LK	11.00	1.30	0.00	2.10	G	125
GEARY SFL	1.54	0.77	0.00	1.61	F	97

SPOTTED BASS

IMPOUNDMENT	Density Rating (>11")	Preferred Rating (>14")	Lunker Rating (>17")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
CEDAR BLUFF	44.00	6.00	0.00	1.49	G	6500
SEBELIUS	20.69	9.85	0.00	1.97	G	1500
EL DORADO	2.60	0.33	0.00	1.75	P	8000
MELVERN	2.40	0.00	0.00	1.10	F	7000
LAKES						
CRAWFORD SFL	65.00	25.00	10.00	1.60	G	150
CHASE SFL	49.51	17.48	0.00	1.77	G	109
WILSON SFL	45.00	15.00	1.30	3.50	E	110
BOURBON SFL	32.73	12.73	0.00	1.75	E	103
EMPORIA - LAKE KAHOLA	19.61	5.88	0.00	1.31	F	405

SAUGER

IMPOUNDMENT	Density Rating (>11")	Preferred Rating (>14")	Lunker Rating (>17")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
PERRY	4.50	3.50	1.25	1.91	F	12600
MELVERN	3.70	1.70	0.30	1.80	G	7000
LAKES						
HOLTON - BANNER CREEK LAKE	13.00	13.00	0.50	1.31	G	535

STRIPER

IMPOUNDMENT	Density Rating (>20")	Preferred Rating (>30")	Lunker Rating (>35")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
WILSON	4.75	0.13	0.00	13.32	G	9040
GLEN ELDER	2.00	0.00	0.00	10.63	F	12586
LA CYGNE	0.00	0.00	0.00	1.17	P	2600

WALLEYE

IMPOUNDMENT	Density Rating (>15")	Preferred Rating (>20")	Lunker Rating (>25")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
WEBSTER	26.28	2.22	1.33	5.85	G	3500
WILSON	16.25	0.25	0.00	3.14	G	9040
CHENEY	13.50	9.67	3.67	8.27	G	9550
MARION	11.67	1.83	0.33	6.66	G	6160
HILLSDALE	11.30	7.00	1.30	7.30	G	4580
KIRWIN	10.66	1.53	0.34	3.83	G	4000
COFFEE CO. LAKE	10.60	0.40	0.00	3.00	E	5000
CEDAR BLUFF	10.00	1.00	0.25	6.75	F	6500
EL DORADO	8.30	2.50	0.70	6.40	G	8000
MILFORD	7.67	0.67	0.67	7.78	G	16020
LOVEWELL	6.33	3.33	1.00	7.52	F	2986
SEBELIUS	3.55	0.73	0.34	1.67	F	1500
CLINTON	2.30	0.30	0.30	6.10	F	7000
LAKES						
ALMA CITY LAKE	21.00	0.00	0.00	2.40	F	80
HOLTON - BANNER CREEK LAKE	9.00	2.50	0.00	4.96	F	535
JEFFREY EC-AUX. MAKEUP LK	6.50	2.00	0.00	4.20	F	460
JEFFREY EC-MAKEUP LK	6.00	0.00	0.00	2.00	F	125
BARBER SFL-LOWER	6.00	0.00	0.00	1.21	G	51
EMPORIA - LAKE KAHOLA	6.00	0.00	0.00	2.65	G	405
SHAWNEE CO.-LAKE SHAWNEE	6.00	1.00	0.50	6.00	F	416
HERINGTON CITY LAKE-NEW	6.00	2.00	0.00	3.39	F	555
WYANDOTTE CO. LAKE	5.50	0.50	0.00	3.60	F	407
LEAVENWORTH SFL	5.50	1.00	0.50	5.70	F	175
MELVERN RIVER POND	5.00	1.00	0.00	2.90	G	100
SABETHA - PONY CREEK LAKE	5.00	5.00	0.00	5.51	F	171
WICHITA-CHISHOLM NORTH LAKE	5.00	4.00	0.00	5.44	F	25
LEBO CITY LAKE	4.50	0.00	0.00	2.30	F	70
SHAWNEE SFL	4.00	3.00	0.00	3.30	F	135
BROWN SFL	4.00	0.00	0.00	2.23	P	62
SCOTT STATE LAKE	3.00	0.00	0.00	1.49	G	115
ATCHISON SFL	3.00	2.00	1.00	6.61	F	66
PLEASANTON EAST LAKE	2.00	2.00	0.00	1.68	F	127
YATES CENTER CITY LAKE-NEW	2.00	0.00	0.00	1.50	F	205
WOODSON SFL	2.00	0.00	0.00	1.40	F	180
BONE CREEK LAKE	1.50	1.00	0.00	4.20	F	540
PRATT CO. LAKE	1.11	0.00	0.00	2.45	F	51
JEWELL SFL	1.06	1.06	0.13	6.99	F	57



WHITE BASS

IMPOUNDMENT	Density Rating (>9")	Preferred Rating (>12")	Lunker Rating (>15")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
KANOPOLIS	89.50	38.75	3.00	2.44	E	3550
GLEN ELDER	69.50	14.50	7.10	3.62	E	12586
PERRY	47.75	22.50	0.25	1.67	G	12600
CEDAR BLUFF	45.50	24.00	8.00	1.98	E	6500
FALL RIVER	44.00	29.00	9.00	2.65	G	2500
TORONTO	41.00	22.00	8.00	2.54	G	2800
LOVEWELL	39.83	6.67	0.17	1.61	E	2986
BIG HILL	25.40	18.30	0.70	1.70	E	1240
CLINTON	25.00	16.50	1.50	1.80	G	7000
POMONA	22.50	14.75	0.50	2.61	G	4000
WEBSTER	18.65	12.52	0.16	1.49	G	3500
MILFORD	15.33	11.17	0.83	1.68	G	16020
KIRWIN	15.00	13.11	2.61	2.35	E	4000
MARION	12.50	1.50	0.67	2.03	F	6160
COFFEE CO. LAKE	12.40	1.40	0.00	13.50	G	5000
HILLSDALE	11.00	11.00	0.00	1.50	F	4580
CHENEY	10.83	8.83	4.00	2.47	E	9550
EL DORADO	9.80	7.70	0.70	1.75	G	8000
TUTTLE CREEK	8.60	4.70	2.30	3.00	F	15800
COUNCIL GROVE	6.20	3.00	0.00	1.25	F	3280
LAKES						
HERINGTON CITY LAKE-NEW	49.00	29.00	2.00	1.45	G	555
CLARK SFL	35.00	20.50	0.00	1.52	E	300
HARVEY CO. LAKE-EAST	34.00	20.00	1.00	1.79	F	240
CHASE SFL	17.00	12.00	2.00	1.81	F	109
JEFFREY EC-MAKEUP LK	15.00	7.00	0.00	0.90	G	125
PAOLA CITY LAKE	11.00	5.50	0.00	1.00	F	220
HERINGTON CITY LAKE-OLD	10.00	2.00	0.00	0.98	F	367
JEFFREY EC-AUX. MAKEUP LK	3.00	1.50	1.00	2.80	F	460

WIPER

IMPOUNDMENT	Density Rating (>12")	Preferred Rating (>15")	Lunker Rating (>20")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
SEBELIUS	63.43	39.10	14.75	6.48	E	1500
WEBSTER	39.59	31.45	9.18	12.90	E	3500
KIRWIN	32.94	31.28	12.48	5.03	E	4000
EL DORADO	30.80	0.17	0.00	1.39	F	8000
MARION	26.17	19.83	2.50	10.26	G	6160
MILFORD	16.83	12.50	6.17	11.68	G	16020
KANOPOLIS	16.50	3.00	1.00	5.67	G	3550
CHENEY	13.83	9.83	5.50	11.35	E	9550
LA CYGNE	13.00	6.00	3.25	7.65	E	2600
CEDAR BLUFF	9.25	9.25	8.25	11.44	G	6500
POMONA	7.25	4.75	0.25	3.79	G	4000
LAKES						
SHAWNEE CO.-LAKE SHAWNEE	52.50	17.50	7.50	7.40	E	416
SABETHA - PONY CREEK LAKE	51.00	16.00	4.00	4.85	G	171
JEFFREY EC-MAKEUP LK	37.00	8.00	6.00	10.10	G	125
WICHITA-WATSON PARK LAKE	31.00	0.00	0.00	1.44	P	42
NEW STRAWN CITY LAKE	20.00	5.00	5.00	4.10	E	3
MIDDLE CREEK SFL	15.50	5.50	0.50	5.00	G	280
PAOLA CITY LAKE	15.00	4.50	2.50	8.40	G	220
HERINGTON CITY LAKE-NEW	14.00	2.00	1.00	3.83	F	555
GARNETT CITY LAKE-SOUTH	12.00	4.00	3.00	4.90	G	25
SHERIDAN SFL	12.00	6.00	3.00	8.87	G	67
PLEASANTON EAST LAKE	11.00	7.00	3.00	6.39	G	127
LEAVENWORTH SFL	11.00	8.50	1.50	4.10	G	175
JO CO. SHAWNEE MISSION LK	10.00	10.00	1.50	6.00	G	121
DOUGLAS CO.-LONESTAR LAKE	10.00	7.00	1.00	4.10	G	195
GRIDLEY CITY LAKE	9.00	3.00	3.00	4.30	E	33
MELVERN RIVER POND	8.00	7.00	0.00	2.70	G	100
COLDWATER LAKE	8.00	8.00	0.00	2.79	G	250
OVERBROOK CITY LAKE	8.00	8.00	0.00	3.50	G	8
OSAGE SFL	6.00	0.00	0.00	1.20	F	140
WICHITA-CHISHOLM NORTH LAKE	4.00	0.00	0.00	0.73	P	25
LEBO CITY LAKE	3.50	3.00	2.00	6.10	G	70
OLATHE-LAKE OLATHE	3.00	1.50	0.00	3.20	F	172

Edited by Mark Shoup

LOVE THE DIGITAL

Editor:

I just wanted to comment on your *Kansas Wildlife & Parks* magazine. I was previously a 12-year resident of Kansas and happened to come across your July/August 2004 issue. Because I had first-hand experience duck hunting at Cheyenne Bottoms years ago, I found the "Cattail Battles" (Page 2) article quite interesting. Then I read the article that Mike Blair wrote and wanted to thank him personally for such an informative view on real world photography through "Digital Future."

I have personally felt that the digital format is great, and I am very pleased that he has shared his knowledge with us. My only disappointment was not finding some of his work on your website. Please keep up the fantastic work.

*John Skolaut
Cornelius, North Carolina*

TELL THE GOVERNOR

Editor:

My name is Todd Whitaker. I am from Athens, Georgia, and try to make it to your great state each year. I started coming to Kansas in 2002. I did extensive homework for four months before making the 17-hour drive out. I was given an absolutely great reception from Helen Hands and Randy Rogers. These two helped me out so much and were always so eager to answer my questions and help me with things I needed to make my first trip to Kansas successful. I spoke with them probably once per week or more, so they didn't have to be so nice to me.

Once in Kansas, I was amazed at your management techniques on your state and federal lands, and even more amazed at this curious thing you call WIHA. Once I had the opportunity to take full advantage of your WIHA program, I realized it is the single most important and wonderful thing that the

government has ever done for hunters. This program is absolutely outstanding, and you are to be commended for it.

I am now planning my second trip and as if Helen and Randy were not nice enough, I had the distinct privilege to speak with Roger Applegate, who is just as friendly and helpful as Helen and Randy. I have had the privilege (sometimes non-privilege) to hunt in 11 states in the U.S., but your employees at the Department of Wildlife and Parks are among the most professional and nice human beings I have ever met. You guys give the outdoors a whole new meaning, and you are to be commended for your management and hunting programs. The residents of the state of Kansas are also to be commended for the nice and friendly hospitality they give us outsiders.

I hope this message finds the very upper echelon of your state government, including your governor. I want everyone to know how much KDWP benefits your state.

*Todd Whitaker
Athens, Georgia*

WHERE NO STORMS GO

Editor:

I finished reading a story in the Sept./Oct. 2004 issue of *Kansas Wildlife & Parks* magazine, the one by Mark Shoup entitled "Where No Storms Go" (Page 39). He told it the same exact way I have felt for years.

When I returned from Vietnam in 1968, the next day I was lucky enough to be able to close the Illinois hunting season. I got two roosters and a rabbit; you can't put in words how I felt that day. I hunted every day for my whole leave before returning to my next duty station.

I'm sorry to see an entire way of life ending. I don't know about the west, but here in Illinois, there is so much anti-gun/hunting it's sad. Like Mark, I used to just open the bolt on my Remington Model 11, take a handful of shells, and walk right past the village hall. The offi-

cers on duty just waved at my little black spaniel and me.

Now I feel like I have to hide my gun just going to the garage. Thanks for the read.

*Fred Moffatt
Joliet, Illinois*

SUCCESS DEFINED

Editor:

On the first day of rifle season in 2003, it had snowed 10 inches the night before, and the air was crisp. It was a truly beautiful day to hunt deer. The prior year, I had been tempted by no less than four substantial 10-point bucks but held to my principles because my buck tag was for the archery season. So I was determined this year, firearm buck tag in my pocket, to hold out for one of those big boys.

About 8 a.m. on this beautiful snow-filled Kansas winter day, a respectable 8-point walked 30 yards right by me. With visions of 10-points from last year dancing in my head, I passed on this fine gentleman. My partner just over the next hill had no doubts in his mind about the quality of this deer and dropped the hammer on him. I was as pleased as can be at my friend's success, even if it was at my own expense. It was as if that deer was my gift to a close friend. And another year went by with no filled buck tag.

But that's Kansas deer hunting to me, the experience shared with friends, not just something to hang on the wall.

*Dave Griffith
Wichita*

MOVE MUZZLELOADER 2

Editor:

The idea in the Nov./Dec. issue of *Kansas Wildlife & Parks* (Page 33) about moving the September muzzleloader deer hunt to January does have some merit. I'm also 53 years old and hunted for the first time with the muzzleloader this year. I agree; the mosquitoes won the battle along with the heat.

But if we would have had a cool period in any of those two weeks, it would have been a pleasure to be out in the woods.

I suggest an additional period in January and leave the September season where it is. Previously, I have bowhunted, but today due to time restraints and raising a family, I simply do not have the time to spend in the woods.

To the response by Mr. Fox about taking away time from the bowhunters, I want to express my opinion. The bow season is already three months long. Additionally, they get to hunt in the prime of rut. They also spend time in the woods with leaves on the trees along with that time when it is late fall and early winter. I think the large numbers in the association of bowhunters control the firearms season. I don't think that is fair.

Thank you for considering new changes.

*Thomas Young
Westphalia*

THE VALUE OF A DOLLAR

Editor:

I am a lifetime resident of the state of Kansas. I thoroughly enjoy everything Kansas has to offer. I also look forward to the day I can take my two boys afield with me to experience everything Kansas has to offer. The question in my mind, though, is will I be able to? It is becoming ever so evident that the residents of Kansas are finding it more difficult to find a place to experience the outdoors.

As a teacher, I see kids everyday and get to experience some of the fond memories they are building in their outdoor experiences. It is becoming more obvious, however, that there are fewer and fewer youth enjoying and experiencing the outdoors. Most youth tell me that they have no place to hunt or fish. In addition, their parents don't hunt or fish any more either.

As a resident of Kansas I have seen many changes in the opportunities for outdoor experiences. I am also sure that other Kansans have seen many changes. Many private lands are becoming leased, and more and more outdoor areas such as WIHA and public hunting areas are going to be hit hard. The pleasures of being in the outdoors may still be avail-

able, but will the experience be the same? If you don't own land or lease land, your chances of enjoying the great outdoors in Kansas are becoming limited.

It is my fear that Kansas will become a state more concerned about the dollar value of these experiences rather than the experience itself.

Thanks to KDWP, many residents can experience hunting through the WIHA program and public wildlife areas. My question though is this: how many residents in the state of Kansas use these areas, and is there enough room for all the residents if we keep experiencing the changes in privately-owned land? More and more of the private lands are getting leased to outfitters.

It is my belief KDWP manages the wildlife programs extremely well. In J. Michael Hayden's 2003 KDWP Annual Report (*Kansas Wildlife & Parks* magazine, Nov./Dec. 2004, Page 12), he showed the revenue generated from resident and nonresident sales of licenses, federal aid, park permits, boat registrations, and state general funds. The overall revenue was \$37,572,500. I was truly amazed at the revenue generated in outdoor activities offered in Kansas. I do not know the expenditures that we entail, but it is one of my concerns. Are we generating enough revenue for the residents of Kansas to experience the outdoors as they are entitled, or are we leaning toward a method of generating more revenue, period?

It is my hope that my children will get to have some of the similar experiences that I have been privileged to have. Lets hope our legislators see it that way also. Don't cloud the value of a dollar with the value of life experiences.

*Justin D. Redeker
Olpe*

Dear Mr. Redeker:

I appreciate your sentiments. I wish I had an answer. Landowners have the right to lease their land, and we have no constitutional right to deny them that. Right now, we are trying to compensate with things like the WIHA program, which has more than 1 million acres enrolled this year. Hopefully, this can be supplemented with some modest land acquisitions in the future.

—Shoup

WHAT'S CRP?

Editor:

Since my father-in-law moved to a nursing home, all of his mail comes to my wife who pays the bills and sends the magazines to which he subscribes on to him. I have been reading his copy of *Kansas Wildlife & Parks* before sending it on and enjoy the articles. My wife and I live in St. Louis, but we both were raised in Kansas, she in Stevens County and I in Reno County. I grew up on a farm near Nickerson.

Besides letting you know of my pleasure in reading your magazine, I also have a question and a comment. First, the question. In the July/August 2004 article on "Drought's Impact" (Page 18), the acronym CRP is used in a couple of places (page 23 and 24). Could you tell me what CRP stands for?

The comment: In the "Backlash" piece on page 45, in the second and fifth paragraphs, the word "isle" is used when it should be "aisle." Unfortunately, as I have found in my own work, spell check won't catch that kind of error. Not that it really matters; I chuckled as I read the article because it reminded me of how little it took to influence my grandpa to go to the fishing hole.

Thanks for the interesting articles. I also enjoyed the information in the "Cattail Battles" piece.

*Kent Leichliter
St. Louis, Missouri*

Dear Mr. Leichliter:

The acronym "CRP" stands for the federal Conservation Reserve Program, which pays landowners to plant highly erodible land to native grasses and other plantings and leave it for a period of 10 years.

Thanks for the correction on "isle." I'll let our editor, Mike Miller, know. Maybe he'll send me packing to some isle (preferably tropical).

—Shoup

NABBED AT NIGHT

An incident in Pratt County on Sunday, Nov. 21, illustrates the important role that hunters and other concerned citizens play in the enforcement of Kansas wildlife laws. Kansas Department of Wildlife and Parks (KDWP) natural resource officer (NRO) Phil Kirkland, St. John, received a phone call from a Pratt County landowner regarding a large whitetail deer that had been found on his property. The deer had apparently been shot with a rifle in archery season and left lay. The condition of the animal led the landowner to believe that the deer had been shot within the previous 24 hours.

The landowner and three friends had come to the property in mid-afternoon to scout for deer and hunt pheasants, but when they arrived, a pickup belonging to a local bowhunter who had permission to hunt the land was parked in the middle of the field. While pondering whether or not to approach the truck, the landowner received a cell phone call from the bowhunter, who said that he was standing over a very large buck that had been shot with a rifle. The landowner called Kirkland and left a message on his answering service.

Kirkland shortly returned the phone call and arrived at the scene about 30 minutes later. After looking at the deer and the area, Kirkland said he would return later in the evening to stake out the site.

After dark that evening, Kirkland returned to the site and waited. Soon, a vehicle with lights off circled the section and came to a stop some distance from where the deer lay. Using night-vision equipment, Kirkland watched a man get out of the truck and walk to the deer. Some time later, as the man returned to his truck carrying the deer's head, Kirkland turned on his lights. The man immediately ran into a grove of nearby cedar trees, then emerged some distance away on the road, where Kirkland detained him.

After questioning, the man admitted to shooting the deer and returning to remove its head. Kirkland called the Pratt County Sheriff's office for support and then phoned NRO Brian Hanzlick, Great Bend, for a tracking dog. The sheriff's deputy arrived and took the suspect to town to fill out a written statement, and Kirkland waited for Hanzlick. When Hanzlick arrived, the dog found the deer, three bloody knives, and eventually the deer head.

"This was really a nice deer," Kirkland said. "I would guess it to score in the 170s at least." Under Kansas state statutes, a deer with antlers having an inside spread of at least 17 inches is considered a "trophy." This deer was well over 17 inches inside spread.

Kirkland filed complaints with the Pratt County Attorney on the Pratt man, including unlawful possession of an untagged deer, hunting in archery season without an archery permit, wanton waste of a big game animal, hunting without written permission on ground posted for written permission only, taking deer by illegal means, and illegally taking a trophy deer. If all charges are pressed and convictions obtained, the man faces possible fines of nearly \$9,000, six months in jail, loss of hunting privileges, and loss of the firearm used in the crime.

—Shoup

Wildlife criminals are often difficult to apprehend because natural resource officers may be responsible for as many as three counties. As a result, most cases are made when citizens like this landowner take the time to notify an officer and provide enough evidence and information for the case to be pursued. Anyone witnessing a wildlife crime can report the incident anonymously by phoning KDWP's Operation Game Thief toll-free hotline, 1-877-426-3843. The number is open 24 hours a day. Those who wish to contact their local natural resource officer directly may find the number listed in the *2005 Kansas Hunting & Furharvesting Regulations Summary* or phone their county law enforcement dispatcher to obtain the officer's number.

WAY outside

BY BRUCE COCHRAN



LANDOWNER DEER MANAGEMENT

An additional option in deer management was studied in Kansas last year. The Landowner Deer Management Program (LDMP) was created by the Kansas Legislature last session. That legislation directed the Kansas Department of Wildlife and Parks (KDWP) to initiate a pilot program on five locations for the next three years. The program will create a contract between a landowner and the department for deer permits. Landowners who manage deer on their property benefit with the guarantee of a specific number of deer permits for their property. The landowner may then provide a certificate to others that will allow those people to purchase a nonresident deer permit without competing in the random draw for permits.

The program will also benefit Kansas resident deer hunters because some of the permits issued for each LDMP area will be made available for resident deer hunters. Resident hunters will compete for those permits similar to the way they apply for permits that allow them to hunt for mule deer although the LDMP permits will be valid only on property the landowner has enrolled in the program.

LDMP properties in western Kansas (DMU 1, 2, 3, 4, 5, 7, 16, 17, & 18) must be at least 10,000 contiguous acres, whereas the minimum size in eastern Kansas (DMU 6, 8, 9, 10, 11, 12, 13, 14, 15, & 19) must be 3,000 contiguous acres. The property may be owned by one Kansas landowner or may include properties that neighbors operate cooperatively to manage them for deer.

Landowners applied for the 2005 program in January.

—Mathews

FARMERS: NEW AID FOR WILDLIFE

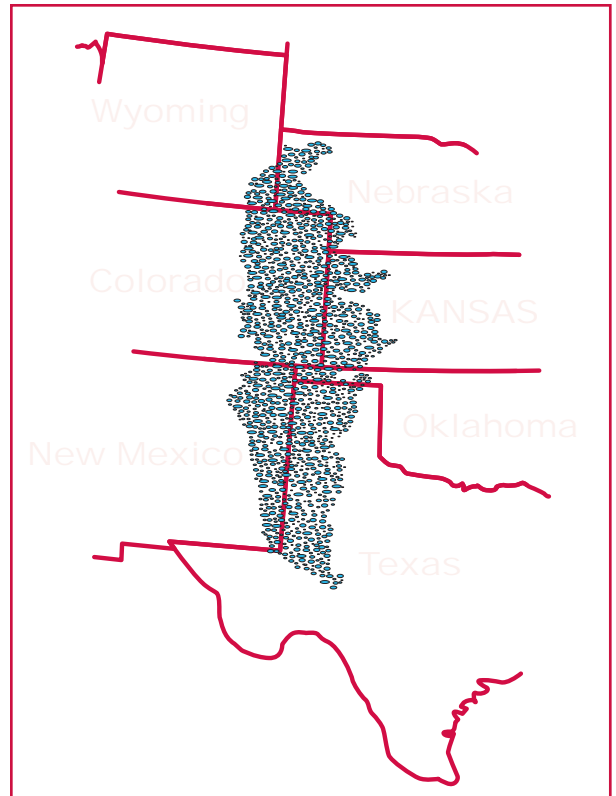
Signup has begun for a new initiative under the federal Farm Bill's Conservation Reserve Program (CRP) aimed at protecting playa lakes. The initiative is of particular importance to Kansas, Colorado, Nebraska, New Mexico, Oklahoma, and Texas, where nearly all playas exist.

The Wetlands Restoration Non-Floodplain Initiative, or CP23a, provides farmers financial incentives to protect and restore playa wetlands. Signup is on a continuous basis through Dec. 31, 2007. Although signup is continuous, many resource managers estimate that given the regional resource need, playa lakes states will be fully enrolled within the first year.

Playa lakes - sometimes referred to as buffalo wallows - are shallow, seasonal wetlands that collect water from the surrounding area after heavy rainfall or runoff. They are the primary source of recharge for the Ogallala Aquifer and host millions of migrating, breeding, and wintering birds throughout the year. Playas are the most numerous wetlands in the region, totaling about 60,000 in the southern and western High Plains.

The initiative provides cost share, annual rental payments, and other financial incentives to landowners to restore and protect playas and other wetlands located outside the 100-year floodplain. Wetlands must have been farmed four out of the past six years (from 1996 to 2001), and buffers of up to four times the wetland acreage are also eligible for enrollment. Unlike other CRP wetlands programs, this new initiative has no maximum wetland size, which will allow larger playas to be enrolled.

Signup has also begun for the new Upland Bird Habitat Buffer Initiative, or CP33, under CRP. The initiative aims to create 250,000 acres of nesting and brood cover to increase numbers of northern bobwhite quail by 750,000 birds annually. The initiative allocates 56,600 acres to playa



lakes states that host approximately 25 percent of the breeding population of bobwhite quail.

The program provides cost share, annual rental payments and other financial incentives to landowners to establish 30- to 120-foot native grass buffers around crop fields. Like the wetlands restoration initiative, land must have been cropped four out of the past six years to qualify for enrollment. The U. S. Department of Agriculture (USDA) estimates the initiative will pay \$125 million nationally, and of that, \$27 million is estimated to go to landowners in playa lakes states.

Both the wetlands and upland bird initiatives are subject to the same 25-percent acreage cap as other CRP programs, so landowners in counties that have already reached the cap will not be able to enroll. However, PLJV partners are urging landowners to express their support for these programs, even in capped counties.

Farmers interested in enrolling in either program can sign up through their local Farm Service Agency (FSA) office. To find your local office, visit www.fsa.usda.gov.

—Playa Lake Joint Venture release

OKKIDS Essay Contest Winners

In December, Kansas Wildscape announced the winners of the OKKIDS essay contest. Stacey Korte of Holton and Nick Howard of Topeka were the winning authors of "My Best Outdoor Experience." Stacey and Nick, both 10 years old, each received a \$100 check. The following are their essays.

Nick Howard, Topeka First Place, Boys

PK Kids Day was a blast! I think the best part of OK Kids Day was when my mom and I went on the nature trail looking for orange flags to complete a Mark Twain quote to enter a drawing. The reason I liked it so much

was because on the nature trail, we had to go across a creek to look for the flags, and I saw a frog I got to chase around the trail.

There were so many more things to do, like disc golf, tennis, horseshoes, kite flying, archery, and casting. I also really liked the casting because I love fishing.

Hopefully, next year OK Kids Day will get even more sponsors.

Stacy Korte, Holton First Place, Girls

We went to Banner Creek for a campout. We camped down by the playground, so my sister and I could play. After we set up our tents, we went down to play. They had swings, slides, and monkey

bars. The monkey bars were triangle. Well, I thought I would fit inside those triangle monkey bars, but you know what happened? Pretty predictable: I got stuck. My sister thought it was funny. Well, I didn't! It was pretty uncomfortable up there.

Anyway, later on that night we roasted marshmallows and hotdogs and ate chips. It was fun. We also had a watermelon with us. Our dad had brought it from our garden. While we were eating the watermelon, our bus driver happened to stop by. We talked to him for awhile and offered him a slice.

We went swimming and went on trails. We leaned over the dock and saw fish. They were so cute.

Then the unthinkable happened. It rained and the lightning was close by! It was about four a.m. My sister and I were just going to sleep. We had been writing about the other things we had done that day. We had two tents up, one for my parents and one for my sister and me, so we took down both tents and packed up everything and went home.

The next morning, we were all sleepy. And that's what happened on our camping trip.

For more information on Kansas Wildscape, visit www.kansaswildscape.org.

—Kansas Wildscape Foundation

KDWP LEGISLATIVE AGENDA FOR 2005

Proposal #1. Park Funding

This proposal would fund future park operations and maintenance from a fee associated with motor vehicle registrations. The Outdoor Resource Registration fee is proposed at \$5. Four dollars of the fee would be directed to the Park Fee Fund, and \$1 would go to the Local Government Outdoor Grant Program Fund. The proposal also includes a provision for a refund for those who would like a refund. The refund would be administered by the Department of Revenue. In return for the fee, any Kansas registered motor vehicle could enter the state parks free of charge. Camping and other fees would still apply. Ultimately, the goal is to remove state general funding from the KDWP's budget although in the transition period, some state general funding will be needed to operate the state park system.

Proposal #2. Wildlife Violator Compact

This proposal would make Kansas a party to the Wildlife Violator Compact, which currently includes 19 states. Under the compact, if a violation of wildlife laws occurs, nonresidents from compact states, while in Kansas, and Kansas residents, while in other compact jurisdictions, could be given citations and notices to appear in lieu of bonding out of custody. Alleged violators would be required to comply with

the legal proceedings, much the same way traffic citations are handled. Also, Kansas would be required to recognize other state wildlife hunting privilege suspensions and other states in the compact would be required to recognize Kansas suspensions. This would preclude violators from other compact states from coming to Kansas to hunt, in many cases preventing a violator from taking a legitimate hunting opportunity from a legitimate hunter.

Proposal #3. Boating Law Updates and New State Vessel Theft Statutes

This proposal would apply several updates to the boating laws of Kansas based primarily on federal law changes. In addition, several new statutes are proposed to assist the department in combating the ever-increasing crime of vessel theft.

Proposal #4. Fee Fund Protection

This proposal stems from accounting changes implemented by the Division of Budget this past legislative session. In essence, all federal funds were placed into separate respective accounts for the purpose of tracking federal funds expenditures. The proposed legislation is necessary to avoid a potential diversion. The language is similar to language for the current fee funds and requires expenditures to be allowed solely for specific purposes.

—Chris Tymeson, agency attorney, Topeka

BIGGER ANTLERS?

EDITOR'S NOTE: A number of our constituents have emailed us asking why we don't have an antler size restriction on bucks to help ensure more large bucks in the future. Last winter, KDWP deer biologist Lloyd Fox answered the question:

There is a large body of scientific study and state wildlife agency programs that have attempted regulations on antler-point restrictions. To my knowledge, no large-scale project where antler point restrictions have been attempted over a large area and many years has ever been considered a success.

On small areas, for example lands controlled by a hunting club, this type of approach has been accepted. The primary reason is that the majority of the club members agreed to the restriction before it was enacted. It is also their standard way of hunting.

When antler-point restrictions are attempted over large areas, it is basically one group of people, primarily people who believe that size of antlers is the most important factor, dictating to other people how they should hunt. The approach limits the activities of people who want to harvest a deer primarily for its food value or people who select deer based on shot placement potential or time limitations they may have for hunting.

Additionally, state wildlife agencies that have attempted antler point restrictions frequently experience complaints that hunters have shot deer and then left them in the woods when they discovered the antlers were below minimum size.

One of the more recent attempts to regulate hunters and restrict them to deer that met an antler-point requirement was studied, and it was found that the regulation actually had a negative effect on the herd. The very best yearling deer were legal to harvest and deer with genetics to produce small antlers were never legal to take. Antler development in that deer population decreased as years of hunting pressure removed the deer with the best potential for antler growth and protected the deer with the poorest potential.

From a deer biology standpoint, I would argue that selecting for antlers ignores many of the other factors that are important for deer, such as resistance to disease, efficiency to use forage, and behaviors such as ability to avoid predators and vehicles. Deer biologists and population managers should focus on issues that help manage deer populations and our environment over the long term.

—Lloyd Fox,
deer biologist, Emporia

First Rabbit

This picture is worth a thousand words and really exemplifies the significance of the change in hunter education requirements this year. By the way, this is Cedar Bluff Wildlife Area manager Kent Hensley's 6-year-old son Dalton.

—Bruce Taggart, Public
Lands supervisor, Region 1



TANGLED WEB

Last November, Andrea Wiles, her husband Darwin, her sister Darci, and her brother Eric Gengler [the landowner and finder of the deer pictured] found that after a flood last summer, the waters had risen and planted a wad of twine in a tree. In the process of rubbing on a sapling, a deer had gotten stuck in the twine. After watching the deer for some time, they decided to come back in the evening and see what they could do. The deer had worn itself down enough that they were able to walk up to it and cut it loose. After a little persuasion, the deer ran off.

—Andrea Wiles, Beloit





by Mark Shoup

It was 1995. Six years earlier, Dad had retired at the age of 69. Osteoarthritis had made walking difficult, so his love for the outdoors was limited to turkey, deer, and duck hunting. Once retired, however, he was free to pursue the shooting sports in earnest, and he took up trap shooting.

Dad was always an excellent wing-shot, and his competitive nature drove him to shoot well on the range. It didn't take him long to shoot 22 or 23 out of 25 rocks consistently. Frank O'Brien, operator of the Kinsley Gun Club where Dad shot, told me on several occasions that if Dad had begun earlier, he would have been "one heck of a shot."

On this particular day, he was shooting lights out with his Browning BT-99. When he broke the 20th straight rock of his first round of 25, he began to feel strange. Then he broke five more for a perfect round of 25.

As he walked back to the clubhouse to await his next round, he felt a slight tightness in his chest, as if someone were pressing on it. "Do I look alright to you," he asked one of the other shooters.

"Well, no John, you don't," came the reply. "You look kind of pale. Maybe you should sit down for awhile."

"Well, I guess I can sit for a bit until my next turn," he answered. "I really feel like I'm on today."

So he sat and talked with the other men, feeling slightly out of sorts. And there was that tightness in his chest. But it didn't really hurt. At 75, he hadn't yet shot 50 clays in a row, and today felt like the day. When his turn came around, he stood and picked his Browning from the gun rack.

"Are you okay, John?" Frank asked. "Maybe you should sit out a round."

Dad shrugged off the suggestion. "No, I'm fine."

Back at the line, Dad was still in the groove. He powdered his first five, and the men watching began to rib the younger men about getting beat by an old geezer. Dad didn't hear a word of it. He was in the groove, and although the pressure on his chest was increasing, he was ready at the next station. Again, he powdered five in a row.

If I can make it through this round, I'm going to break 50 straight, he thought. One at a time, though. Uhmp. That hurts a bit. Maybe I'm coming down with the flu.

But Dad knew better; he'd had heart attacks at 42 and again at 57. He knew, but the magic 50 beckoned.

And the rhythm continued. Five in a row, and five in a row again. Pull, squeeze, puff, and it continued: pop the breech, step to next the station, wait turns, slide a shell in the breech, close and mount, pull, puff. And the compression in his chest.

Dad didn't miss until the 24th target of that second round, and his hopes for a perfect 50 were dashed. *Damn, what did I do different,* he thought. His breath was labored by this time, but he powdered his last target, then hobbled back to the clubhouse.

"Forty-nine out of 50, John!" came the cries. "What happened to that other one?" But the friendly ribbing quickly stopped as Dad collapsed. Someone called an ambulance.

"It doesn't hurt too bad," Dad whispered, "but I don't feel good at all." He carried on some conversation, remained

apparently awake, but he was elsewhere:

The roar of the B-17 engines is deafening as Dad hangs in the bomb rack 25,000 feet over Europe. It's a tempestuous 50 degrees below zero, and he has no oxygen, but a 500-pound bomb is stuck in the rack, and if he can't free the bomb, they won't be able to land at Molesworth, England. The crew will be lost. They're over the Channel now, but he's feeling weak. "What's that pulling on my chest," he mumbles aloud. "I don't even have a tether."

He's getting light-headed now, can't even feel his fingers. "Just one last latch..." Suddenly, the entire frame of the big ship trembles, and the bomb breaks free, Dad desperately clutching the arms of the bomb rack. He's weak now, ready to go, easier than holding on, but . . . "Not now." Where did that voice come from? Like a bolt from the blue, he's lifted into the plane's belly. He and the crew will be safe.

I met Dad and Mom at the hospital in Wichita that afternoon. Dad told me, "I thought I was going to meet my Maker, but He didn't come."

A recipient of the Distinguished Flying Cross and a bombardier with the first group of B-17s to fly high-altitude bombing raids over Germany, he knew of what he spoke. But Dad's Maker would come on December 22, 2004. Dad held on until he was finally ready to fly, not fall.

By now, I know he's received a hero's welcome. More important to him, he's likely powdered that 49th rock a dozen times.

So long, Dad. Have a great time.



CFAP Removes Local Fees

The Kansas Department of Wildlife and Parks (KDWP) launched the Community Fisheries Assistance Program (CFAP) this spring. Using matching funds from federal excise taxes on fishing equipment and motor boat fuel, the

department plans to offer leases for fishing rights to 221 community lakes statewide. Participating lakes would no longer charge fees for angler access, as many now do, and this could remove fees for anglers on nearly 14,000 acres of water.

The program uses \$800,000 in federal aid from a recent \$1,000,000 Wallop/Breaux reauthorization. KDWP will be responsible for 25 percent of the program's cost. Operation and maintenance of fisheries by local communities will account for most of the department's 25 percent match.

"Lakes that have been charging fees to fish will no

longer do so," explains Doug Nygren, KDWP Fisheries Section chief. "We hope removing this barrier increases opportunities for anglers to fish close to home."

Lakes that were not charging fees will also be included in the program. Lease money for these lakes can be used to improve fisheries and angler facilities. KDWP has designed a lease rate formula based on the number of surface acres and the quality of the fishery and facilities at these lakes. Larger lakes offering more facilities will receive greater lease amounts than smaller lakes with fewer facilities. This formula allows KDWP to

offer the program to all community fishing lakes.

Along with the lease payments, the department will provide participating local governments with increased access to resources and contact with district fisheries biologists. Lakes in the program will also receive priority for fish stocking, habitat improvement services, and additional improvement grants. This will ultimately improve fisheries management and facilities for Kansas anglers.

For more information, contact CFAP coordinator Jessica Mounts at 620-672-5911 or JessicaM@wp.state.ks.us.

—Shoup

NEW FOR 2005

The **2005 Kansas Fishing Regulation Summary** pamphlet is available at all KDWP offices and most places that sell license, and it contains some new regulations anglers should be aware of. In response to angler comments, the crappie daily creel limit has been reduced to 20 per day at Council Grove, Clinton, Perry, Melvern, and Hillsdale reservoirs. In addition, a 10-inch minimum length limit for crappie will be enforced at Clinton Reservoir.

Catfish anglers at El Dorado Reservoir will need to brush up on catfish identification skills because blue catfish have been stocked. All blue catfish less than 35 inches long will have to be released immediately. A poster will be available to help anglers distinguish blue catfish from channel catfish.

The paddlefish daily creel limit has been reduced to one per day on the Neosho River downstream from Chetopa Dam, and a 34-inch minimum length limit has been established on both the Neosho River downstream from the Chetopa Dam and the Marais des Cygnes River downstream from the Osawatomie Dam. Barbless hooks must be used where the length limit is in effect. Anglers will have to release any paddlefish less than 34 inches, measuring from the fish's eye to the tail-fork. The daily creel limit of one is reached when an angler catches a paddlefish 34 inches long or longer, and the angler must stop fishing.

Finally, anglers who desire to use more than two rods can purchase a three-pole permit for \$4. The current law allows anglers to use just two attended rods, in addition to eight set-lines or a trotline. However, the three-pole permit will allow use of a third attended rod. Three-pole permits are available wherever licenses are sold.

—Shoup

NEW SMALLMOUTH BASS RECORD

On Aug. 15, Jason Heis of Salina was competing in his local bass club's tournament at Milford Reservoir when he got the smallmouth surprise of his life.

"I got to the dam, and I just started smokin' 'em," Heis recalled. "And then 'Bam,' one hit hard."

When Heis arrived at the weigh-in site, he found that the 6.687-pound bronzeback was, indeed, a new state record. Fisheries biologist John Reinke was called in to confirm the record, and an application was sent to KDWP. After the department's waiting period, the fish was confirmed as a new record smallmouth.

Because of the quality of smallmouth at Milford and Wilson reservoirs, both fairly close to Salina, Heis has been pursuing them specifically in recent years. "I really started to get a preference for smallmouth because our club fishes Wilson and Milford so often," he explains.

This preference paid off in spades on Aug. 15; Heis not only caught a state record, but he won the tournament, as well.

"I put this above hitting a hole-in-one," Heis declared. "Lots of guys have hit holes-in-one, but to win a tournament and set a state record in one day - that's something special."

The previous state record smallmouth also came from Milford. It was caught by Jimmy Gilreath in 1997 and weighed 6.37 pounds.

—Shoup



Dragnet:

Jim Kellenberger, Jetmore

EDITOR'S NOTE: To celebrate the 100th anniversary of our agency, this and the following four issues of Kansas Wildlife & Parks magazine's "Nature" page will be devoted to profiles of retired, long-time employees of the agency, folks who dedicated their lives to the nature this page usually features.

Age: 64

Education: Independence Community College, social studies

Years of Service: 37 years, four months – Nov. 1, 1965-March 14, 2003

Original Hometown: Cherryvale

Positions Held: conservation officer, area supervisor, Region 3 supervisor (all in Law Enforcement Division)

Most Admired Employee: his supervisors, Marvin Hamilton and John Spence. "They taught me an awful lot, especially about management."

Toughest assignment: "The first time I had to make a budget on my own."

Most Important Issue Facing KDWP in the 21st Century: "Getting the common license buyer access to hunt."



Like the legendary Sgt. Joe Friday of "Dragnet" fame, "just the facts, Ma'am" best describes Jim Kellenberger's approach to law enforcement. When dealing with friends and colleagues, however, Jim's quick wit and capricious story-telling skills helped make this colorful character a KDWP legend.

Kellenberger knew his calling early, but the Kansas Forestry, Fish and Game Commission rules held those plans up.

"I came back from the Army and decided that being a game warden was what I really wanted to do," he explains. "I took the Civil Service Exam, which was required at the time. But I was only 24 when I took the exam, and when they interviewed me the first time, they couldn't hire me because you had to be 25 to be hired."

That was early 1965, but by November, he had landed the job of his lifetime. He found a perfect fit and enjoyed the people he worked with. In fact, this was one of the best parts of the job for him. "One of the things I liked best about working for Wildlife and Parks was the professionalism of the people I worked with," he explains.

As a game warden (now called natural resource officer), Kellenberger did more than just check licenses and hand out tickets. "One of the most beneficial things I got to do was help the U.S. Fish and Wildlife Service in Louisiana for two weeks working illegal duck and goose hunters," he says. "And some of my fondest memories have come from working

with youth in the Pass-It-On Program, which I'm still doing part time." In this current part-time capacity, Kellenberger travels the state conducting shooting skills workshops for youth. He is a certified NRA shotgun skills instructor and a National Sporting Clays Level 1 instructor.

During his years with KDWP, Kellenberger had experiences that ranged from the dangerous to comical. Here's the dangerous, in his words:

"I was called by the sheriff here in Hodgeman County to help with a DC-6 aircraft that had landed in the middle of the highway. The plane was full of bales of marijuana. That was pretty tense. I ended up capturing the co-pilot and an oiler off the plane out west of Jetmore. They fled on foot, but I caught them west of town. A farmer told me there was a guy hiding in a culvert. I caught one of them running down the highway, and I dug the other one out of the culvert."

When asked exactly what "dug out" meant, the Sgt. Friday persona emerged: "Well, I got down there, and I know very limited Spanish, but I remembered a few words about put your hands in the air and get out, and he did."

And then there's the comical:

"It was back in the 1970s, the opening day of pheasant season. My boss was in the hospital, just had his gall bladder out, and I had stopped to see him when the dispatcher called me and said I had company in my house. Well, I knew my wife's

uncle and two nephews were going to spend the night, so I said 'Okay, you tell her I'll be there after awhile.'

"I hadn't gone 10 miles when the dispatcher called again and said 'Your wife wants to know when you're going to be home; you've got company. And I just said 'Tell her it's opening day of pheasant season, and I'll be there when I drive in.'

"So I drive to a filling station in Jetmore to fill up my tank, and a guy pulls up and asks what the world's record snow goose weighed. I said 'I don't have a clue'.

"He said, 'I've got a 17-pounder!'

"I immediately walk over to my pickup and get my ticket book, and his wife says, 'What are you doin?'" and I say 'I'm going to write him a ticket.'

"She says, 'For what?' and I say, 'If he's got a 17-pound black and white bird, he's got a swan, a whooping crane, or a pelican.' And he had a swan. She couldn't believe I was going to give him a ticket. I later found out that when he showed the bird to several of his associates, they told him that he ought to take it to the game warden because there was a big contest going on for the biggest snow goose taken that year.

"That was one of those we called a 'basket case': it just fell into your hands."

KDWP is grateful for the many years of hard work Jim Kellenberger dedicated to the agency, and we hope our relationship will continue for many more.

—Shoup

ON THIS DAY

The following items appeared in the March and April 1940 issues of *Kansas Fish & Game* magazine:

- The commission, softened by a touch of spring fever, has given the 100,000 anglers of Kansas an unexpected break. State lakes heretofore closed to night fishing have been declared open for that purpose. If you visit the state lakes for night fishing, you should contact the caretaker of the lake and ascertain of him the latest rules and regulations. The commission also set May 15 as the opening date for fishing in the Pottawatomie State Lake, Sheridan County State Lake, Crawford County State Lake, and Rooks County State Lake.

- Following the example of the Metropolitan Life Insurance company, we have been delving into sex matters. The statisticians of that company have stated that the population of the United States is predominately female. This knowledge is of no particular interest to the Bulletin; we have always suspected as much. Nothing can be done about it.

What concerns us most is the sex ratio of wild ducks and geese now winging their way across Kansas. To satisfy our curiosity in this regard, we have assigned our own investigators and statisticians to the task of determining this ratio.

Game protector John Shay has reported that the waterfowl in his district is 90 percent drakes. Protector Andrews sets the drake population at 80 percent. Frank

Robl, it is said, has estimated the sex ratio at 62 percent drakes, 38 percent hens. John Q. Holmes, United States game management agent who has had an opportunity to observe flights in all sections of Kansas, tells us that about 70 percent of the birds are drakes.

We quote these figures that you may be aware of the fact that the sex ratio of migratory birds is out of balance. Something can be done about this. If the duck hunter will forget about the old urge to get the limit and be content with drakes only, a more equitable sex ratio can be established and maintained.

- The Forestry, Fish and Game Commission has launched a statewide crow and cat killing contest to be participated in by the County Fish and Game Development Associations. The commission will award a first prize of 200 pheasants or quail to the county killing the most crows and cats between May 1 and Oct. 31, 1940, both dates inclusive. One cat will be considered the equivalent of five crows. Four other prizes will be given. Second prize is 150 pheasants or quail; third prize will be 100 pheasants or quail; fourth prize will be 75

pheasants or quail; and fifth prize, 50 pheasants or quail.

It is the opinion of Director Guy D. Jossierand that for every crow that is now flying, there had just as well be a pheasant or quail and that cats kill more quail than all the hunters of Kansas.

(Editor's note on this item: Needless to say there has been a considerable shift in game management and public relations philosophies in the past 65 years.)

—Shoup

LIFETIME LICENSE
WINNER

Winner of the KDWP website lifetime fishing license contest was Lori Bailey of Sawyer.

—Shoup



Ray Walton (right), Flint Oak Hunting and Shooting Resort founder, presents a check for \$2,866 to the KDWP Hunter Education Program. KDWP Secretary Mike Hayden (left) and Gov. Kathleen Sebelius flank KDWP's statewide Hunter Education Program coordinator Wayne Doyle.

A Stroll Across the Water

Everyone has been fascinated by what most people call "water striders." While they are insects — they only have six legs, not eight — they resemble spiders. There are actually two different families of insects that "walk" on water, water striders and ripple bugs. Water striders belong to the family Gerridae, and ripple bugs belong to the family Veliidae. Both belong to a suborder of insects interestingly called "long-horned bugs" — *Gymnocerata*, in scientific language.

But did you ever wonder why the water strider doesn't sink? How it can race across the surface, stop on a dime, and even jump to avoid being sunk by raindrops? Did you know it can carry 15 times its body weight without sinking? How does this critter do it?

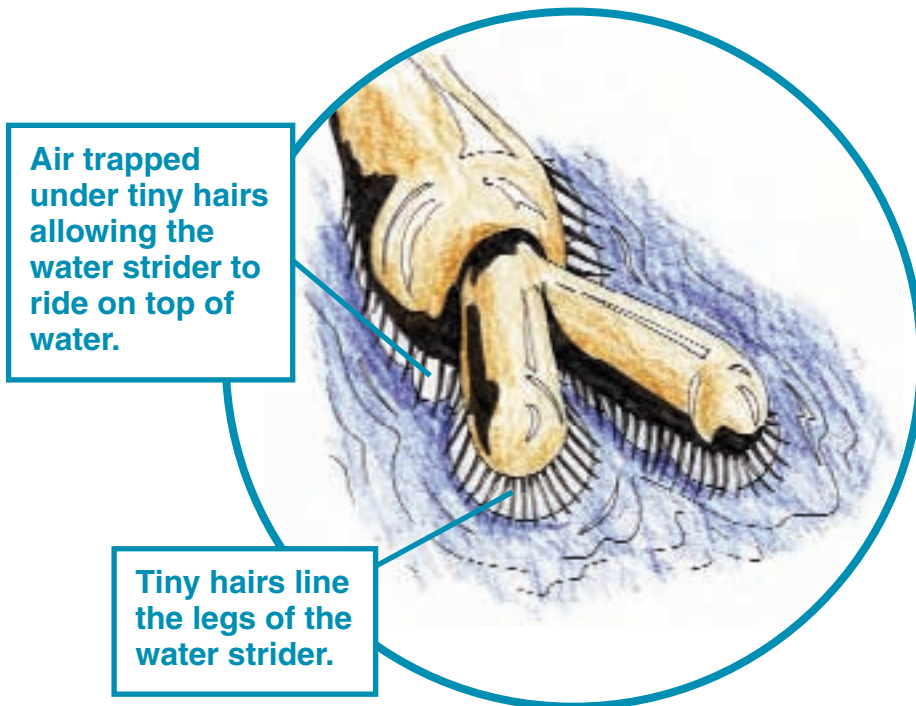
Scientists once thought that water strider's legs secreted a wax that created a surface tension that spread the insect's weight out, kind of like snowshoes work in snow. That theory



has now been disproved. The real secret is much simpler and more logical — air. With the help of tiny microscopic hairs on the water strider's legs, even tinier air bubbles are trapped within the hairs, allowing the insect to float.

Chinese scientists made this discovery and published their findings in the Nov. 4, 2004, issue of the journal *Nature*. The scientists are Xuefeng Gao and Lei Jiang (don't ask me to pronounce the names) of the Chinese Academy of Sciences. They made this amazing discovery with





Air trapped under tiny hairs allowing the water strider to ride on top of water.

Tiny hairs line the legs of the water strider.

microscopes powerful enough to peek between the water striders leg hairs, which are less than two-thousandths of an inch long. These hairs are scored with grooves so small they can only be measured in "nanometers," units measuring billionths of a meter. The grooves also help trap the bubbles.

This complex system provides the cushion of air that keeps the water strider's legs high and dry. The scientists have even come up with a fancy word for this effect — "superhydrophobic."

Just to prove that the old wax theory wouldn't work, the researchers have built artificial water strider legs coated with the theoretical wax. The results weren't good: the artificial critter could float, but any attempt at movement resulted in one sunk bug.

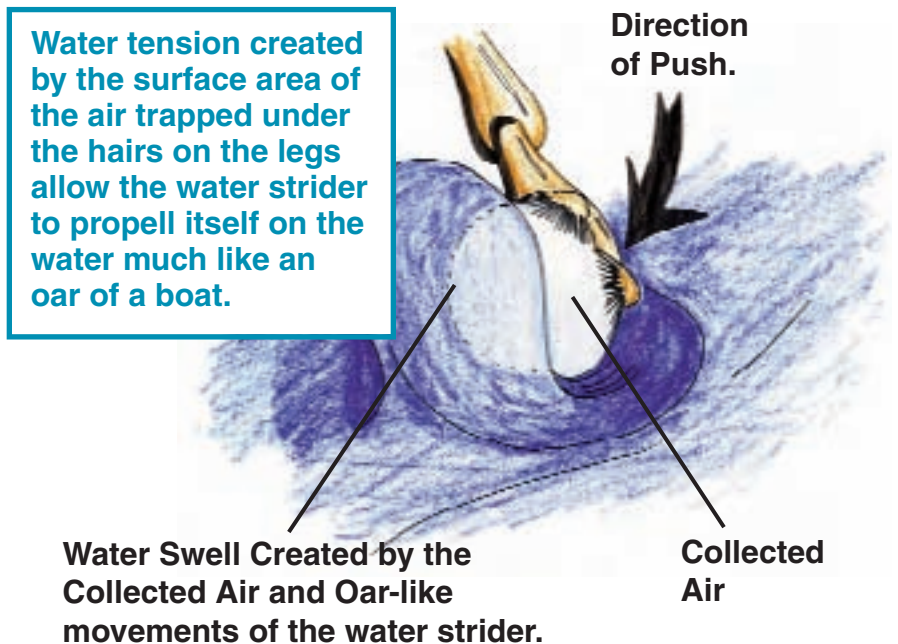
Meanwhile, scientists in the U. S. have discovered how the water strider performs its amazing aquatic acrobatics.

Massachusetts Institute of Technology mathematician John Bush and fellow researchers used high-speed video cameras that revealed the bugs legs being used like oars to keep their legs from getting wet, which is critical to their success in navigating the surface.

The Chinese scientists hope their discovery may lead to inventions to help people, perhaps anything from new water-resistant materials to aquatic

devices that maneuver through the water more efficiently.

Next time you're sitting by the water, fishing or just enjoying the view, look for these amazing creatures scurrying across the surface. And amaze your friends by telling them how it's done.



Water tension created by the surface area of the air trapped under the hairs on the legs allow the water strider to propel itself on the water much like an oar of a boat.

Direction of Push.

Water Swell Created by the Collected Air and Oar-like movements of the water strider.

Collected Air



Backlash

by Mike Miller

Cast Away Your Worries

It was a beautiful mid-February day, and I really wanted to call Lennie and talk about fishing. But it wasn't that I wanted to talk about fishing as much as I wanted to go fishing. I needed to talk about fishing to trick Lennie into inviting me to go along to his favorite pond. It was Lennie's spot, and it wouldn't be right to invite myself — although I wasn't above it. And I was sure Lennie wasn't thinking about going fishing. Plan A was to work on Lennie's sense of reputation as a fisherman, and if that didn't work, I'd switch to guilt. After rehearsing several dialogues, I called.

"What's up?" I said cheerfully.

"Nothin'. What's up with you?" Lennie replied without a clue to my intentions.

"Not much. I was just outside washing my pickup and noticed how nice it was. Have you been out?"

"Nope. Just finished watching the Duke game and K-State's on in 30 minutes. I think that Redick had 30 points. Man can he shoot the ball. Then I was thinking about taking a nap, in case you were wondering," he ended, indicating he was on to my scheme.

"We should go fishing," I blurted.

All my devious plans went right out the window. I couldn't help it. That warm sun hitting me in the face made me crazy to go fishing. But I gathered myself and went back to my plan.

"I mean, we hardly ever fish anymore. You know, it's too hot in the summer and too busy in the fall. People are going to think we're getting old and soft. I don't even know if I can remember how to get to the Mulberry Pond," I said working on his sense of reputation and guilt.

"Good grief," Lennie huffed. "You worry about what people think too much. We wouldn't catch anything if we went fishing today. There's probably even some ice still on the pond. It was down in the 20s just the night before last."

"Somebody's always catching fish," I retaliated. "We'll never know if we don't go."

"Somebody's watching college basketball, too,"

Lennie countered. "And I'll bet any amount of money that the fish aren't biting."

"I know," I resigned. "I was getting cabin fever . . ."

"Hey, it's tip-off time. Talk to you later," Lennie cut me off and hung up.

I knew Lennie was right. After I hung up, I wondered why I had been so determined to talk Lennie into going fishing. I reminisced about my college days at K-State. My buddies and I headed for the Rocky Ford Fishing Area on the first mild day in February. We never caught anything, and we usually ended up skipping stones or just basking in the sun. But we had fun and more importantly, we forgot about whatever tests or assignments loomed. We'd catch plenty of white bass on subsequent trips later in the spring, but these early trips seemed important.

I realized that I wasn't so much after fish as I was after diversion. Fishing has always been that way for me. I can stand and cast for hours without thinking of a single other thing. Even if the fish aren't biting, I'll forget just about every worry I have for a while, and that, I think, is beneficial therapy.

The more I thought about it, the more I convinced myself to call Lennie back. I hadn't worked the guilt card nearly enough. And guilt always works with Lennie. He can watch a basketball game any day. But this 65-degree February day will come only once this year, and it had been a long winter. My ace was helping Lennie move some furniture last fall. Even though he repaid the favor helping me load firewood, I was counting on him forgetting that. I would guilt Lennie into going fishing because fishing is important in the scheme of a happy life.

"One more thing . . ." I started before Lennie could even say hello. "How's that furniture we moved last fall working out?"

"Whatta ya mean, how's it working out? "

"I mean it was pretty heavy stuff and we moved it around alot, trying to get it just the right place. Did we get it in the right spot? Man, I think my arms were sore for two days. Gosh, it's nice outside . . ." ♡

