Fall River District Fisheries Newsletter

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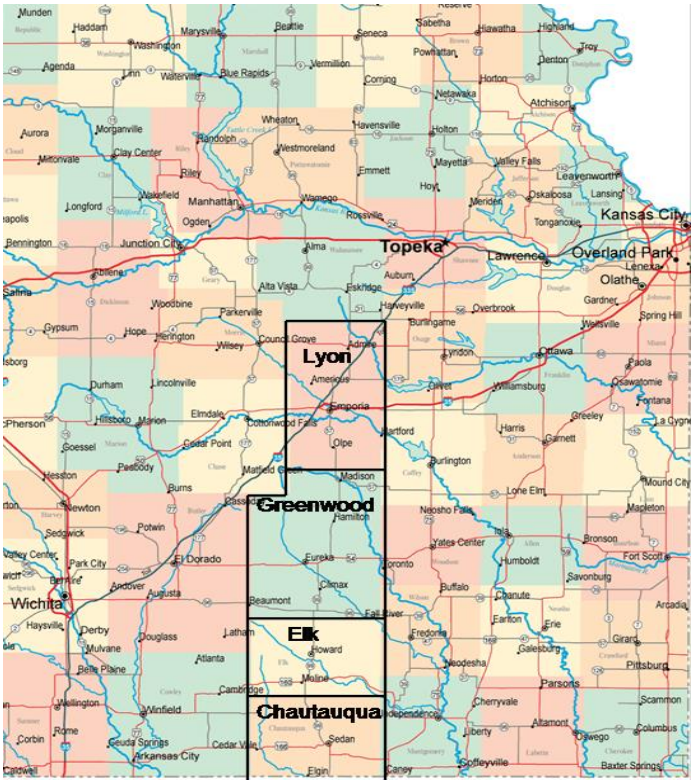
Where is the Fall River District?

Since this is the Fall River District Fisheries Newsletter you may be wondering, "Where is the Fall River District?" anyway. The Kansas Department of Wildlife & Parks is divided into five regions. You can see them on the KDWP web page by selecting "Fishing" then "Where to Fish in Kansas". However, in 2008 the Fish and Wildlife Division separated into different sections. Since then, the Fisheries Section for Regions 4 and 5 have been combined and are administered by the Wichita Office. The Fall River District includes Lyon, Greenwood, Elk, and Chautauqua Counties.



Following is a list of reservoirs, lakes, and ponds within the district:

Lake Name	Acres	County
Toronto Reservoir	2,800	Woodson
Fall River Reservoir	2,500	Greenwood
Carbondale City Lake	265	Osage
Eureka City Lake	259	Greenwood
Moline New City Lake	185	Elk
Lyon State Lake	135	Lyon
Madison City Lake	114	Greenwood
Olpe City Lake	90	Lyon
Sedan New City Lake	70	Chautauqua
Howard City Lake	69	Elk
Moline Old City Lake	68	Elk
Sedan Old City Lake	55	Chautauqua
Severy City Lake	10	Greenwood
Emporia Jones Park Ponds (3)	3	Lyon
Emporia Peter Pan Pond	3	Lyon
Olpe Jones Park Pond	1	Lyon
Fall River Kid's Pond	1	Greenwood
TOTAL	**6,628**	

There are two federal reservoirs, one state fishing lake, ten city lakes, and six ponds, nineteen waters in all. The district used to include Emporia Lake Kahola 405 acres in Chase County, Allen City Lake 59 acres in Lyon County, and Quivera Boy Scout Lake 475 acres in Chautauqua County. However, these lakes are now closed to the public.

All the public waters (listed above) in the Fall River District are open to public fishing without cost. The City lakes and ponds are enrolled in the Community Fisheries Assistance Program, CFAP. CFAP was designed to remove barriers to fishing access and provide family friendly fishing areas close to where people live. KDWP utilizes Sport Fish Restoration Act funds to pay cities, essentially leasing the lakes, for free fishing access. Prior to CFAP, most cities charged anglers a fee to fish. In accordance with the CFAP agreement, cities may still charge for other activities such as camping, swimming, jet skiing and recreational boating (not associated with fishing). So enjoy all 6,628 acres of water available for fishing in the Fall River District.

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Lunker Structures for Bass

Many trout anglers know that undercut banks provide excellent habitat for monster fish. Natural undercut banks in streams provide excellent overhead protection, have slower current to conserve swimming energy, and are great places to hide while waiting to ambush unsuspecting prey. Habitat of this quality often produces lunker fish. If it works for trout, why not black bass in a Kansas stream?

A research project was undertaken by KDWP and Kansas State University to evaluate the use of man-made undercut banks, known as lunker structures, by spotted bass in Otter Creek on the Fall River Wildlife Area. KDWP funded the project and constructed the lunker structures. A KSU graduate student evaluated their use by spotted bass. Twenty-six adult spotted bass were surgically implanted with a radio transmitter. They were then tracked for two years to see how often they used the lunker structures. They all did. Every one!

lunker structure construction

There's something very attractive about lunker structures. These things were easy to build. Everyone got in on the fun. Pictured above, Area Manager John Bills (now retired) and Conservation Officer Dan Melson drive 30 penny ring-shank pole barn nails into the tough oak planks with a sledge hammer. We used rough sawn green (not dried) oak planks, three inches thick, because they had to support a lot of weight and not rot in water. Each structure was eight feet long by two feet wide with a one foot high space for fish to occupy. We built 12 lunker structures just like this one.

installing lunker structure

We installed the lunker structures in three different sections of Otter Creek. Four structures were placed end to end in waist deep water, making a total length of 16 feet of artificial undercut bank in each section. Nine 5/8 inch rebar rods four feet long secured each structure to the creek bottom (see picture above).

placing limestone rip-rap on lunker structures

Then a huge trackhoe was used to cover the entire section of lunker structures with limestone boulders (pictured above). To top it off, creek gravel was spread over the boulders to a thickness of about two feet (see top left picture on page 3). Anyone who's spent any time around creeks in Kansas knows about stream bank erosion. These things have withstood the test of time. They've been in place since 2001 and haven't washed

down stream. They've experienced three 25 year flood events and two 10 year flood events and they're still there providing bass habitat.

finished section of Otter Creek lunker structures

Root-wads or Lunker Structures for Bass Habitat?

The previous article described how lunker structures were successfully utilized by spotted bass in Otter Creek on the Fall River Wildlife Area. However, these were rather expensive to construct, $522 each. So a less expensive alternative, root-wads, were simultaneously evaluated in the same stream sections as the lunker structures. This way, we used the same 26 transmittered spotted bass over the same two year period to determine if they had a habitat preference.

There are six miles of Otter Creek on the Fall River Wildlife Area. There is road access to the Creek throughout the wildlife area making it readily accessible to anglers. During the study, two of the transmittered spotted bass disappeared completely. They could have been caught by anglers or simply swam upstream off the wildlife area or down stream to Fall River. The creek is remarkably clear with gravel and limestone rock bottom. Much of the drainage basin is tall grass prairie which contributes greatly to the clean water. In short, the creek is ideal spotted bass habitat.

completed root-wad installation

The lunker structures provided simple overhead cover, while the root-wads provided complex overhead and mid-water cover. We also wanted to see if the spring floods would wash the root-wads out. It seemed likely that the tangled jumble of roots sticking out into the creek's main channel would catch flood debris and build up to the point that they would wash out. There's a US Geological Survey stream gauging station on the KS Highway 99 Bridge over Otter Creek. It recorded the volume of water coming down the creek during the two flood events that occurred during the project.

uprooting hedge trees for root wads

Construction of root-wads was simple; however it required some large equipment. Pictured above, a D-8 Caterpillar was required to push the hedge trees over, uprooting it, leaving the root system in tact. Hedge trees

were selected for their strength and rot resistance in water. The tops of the trees were cut off, leaving the roots and trunk. A front end loader was used to lift the behemoth trunks and root wads onto a gooseneck trailer for transport over to the stream sites (pictured below).

A large trackhoe was used to dig a trench for the tree trunks. The trunks were angled upstream at a 45 degree angle so the current would tend to push the root-wads into the bank instead of pull them out. The trackhoe was used to cover the trunks with limestone boulders. Then the boulders were covered with creek gravel. A completed root-wad structure site is pictured on the left.

We placed the root-wads near the same three sites as the lunker structures plus two additional sites for a total of five locations. Each root-wad complex consisted of five trees and cost $388 by the time we got them buried. The root-wads were $134 less expensive than the lunker structures.

loading root-wads onto gooseneck trailer

So did the radio transmittered spotted bass use the root wads? Root-wad structures were used 37 percent of the time. They looked like great bass habitat but something kept the bass from using them all the time. It could be that when given a choice between lunker structures and root-wads, they felt more secure with complete overhead cover provided by the lunker structures. It would be interesting to perform a similar radio telemetry tracking project on bass in a lake to compare their use of brush piles and lunker structures.

trackhoe lifting root-wad and trunk into trench

Although the root-wad structures attracted spotted bass reasonably well in Otter Creek, they did not pass the test of time. The first spring after they were installed, a 1,476 cubic feet per second flood event did exactly what was feared; it trapped debris in the root-wads. Although they held, they didn't look the same. This might partially explain why spotted bass didn't use them as much. Although, the second spring brought a lesser flood event of only 492 cubic feet per second, the damage was already done. The root-wads, already plugged up with flood debris, couldn't take any more hydraulic pressure. They washed down stream. The lesson learned here was that although brush piles work in lakes, in Kansas streams with their riparian trees, root-wads collect flood debris and wash out after a couple of years.

Get your friends, get your family . . . and FISH KANSAS!

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