

Kansas reservoirs, designed for the future

An early evening return flight from nearly anywhere east of Kansas on the right weather day can present the dazzling visual welcome-home of the sun's reflection on the many reservoirs and lakes of Kansas. Seen from 40,000 feet with the setting sun lighting them up, lakes line up across the eastern half of the state – glistening gems set in the patchwork of sunset shadow and color.

From cruise altitude descending to a landing in Wichita for me would mean contorting to catch a glimpse of lakes where sail boating and teaching sailing as a Red Cross volunteer were special parts of many summers – Cheney, El Dorado and Fall River!

Background and history



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Although recreation is a major use of the 24 major Kansas lakes and reservoirs, most were originally parts of competing elements for a national Missouri River Basin development plan that was talked about as long ago as the Civil War. Nothing much happened on the project until major flooding on the upper Missouri River occurred during the spring of 1943. This disaster was serious enough to prompt action even as WWII was raging in Europe and the Pacific.

At the time of the flooding, two competing plans for a series of dams on the Missouri River and

its tributaries were fighting (along with their interest groups) for attention in Washington D.C. One, from the U.S. Army Corps of Engineers, was championed by then Colonel Lewis Pick (later

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compromise, the “Pick-Sloan Missouri Basin Program.” The Program was authorized with passage of the “Flood Control Act of December 22, 1944.” With it, each side won most items on their wish lists.

The Act approved the general comprehensive plan for the conservation, control, and use of water resources in the entire Missouri River Basin. The combined Corps and Bureau lists for the uses of these water

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A solitary fisherman on Keith Sebelius Lake on Prairie Dog Creek in Norton County. Recreation is one of the many uses for Kansas reservoirs.

was authored by the U.S. Bureau of Reclamation's William Sloan. The Sloan Plan emphasized irrigation, municipal/industrial water supplies, hydroelectric power, fish and wildlife habitat and recreation. This one was an upstream, farmer, and Western state favorite.

resources included flood control, aids to navigation, irrigation, supplemental water supplies, power generation, municipal/industrial water supplies, stream-pollution abatement, sediment control, preservation and enhancement of

fish and wildlife, and creation of recreation opportunities.

In a few short months after passage, many Army engineers and soldiers returning from the war had jobs in the Midwest, tackling the construction nationally of nearly 100 dams and the hundreds of miles of floodwalls and levies on the massive Pick-Sloan to-do list. Nationally, Pick-Sloan got the ball rolling as evidenced by the many additional reservoir projects that followed. In Kansas, nine of the

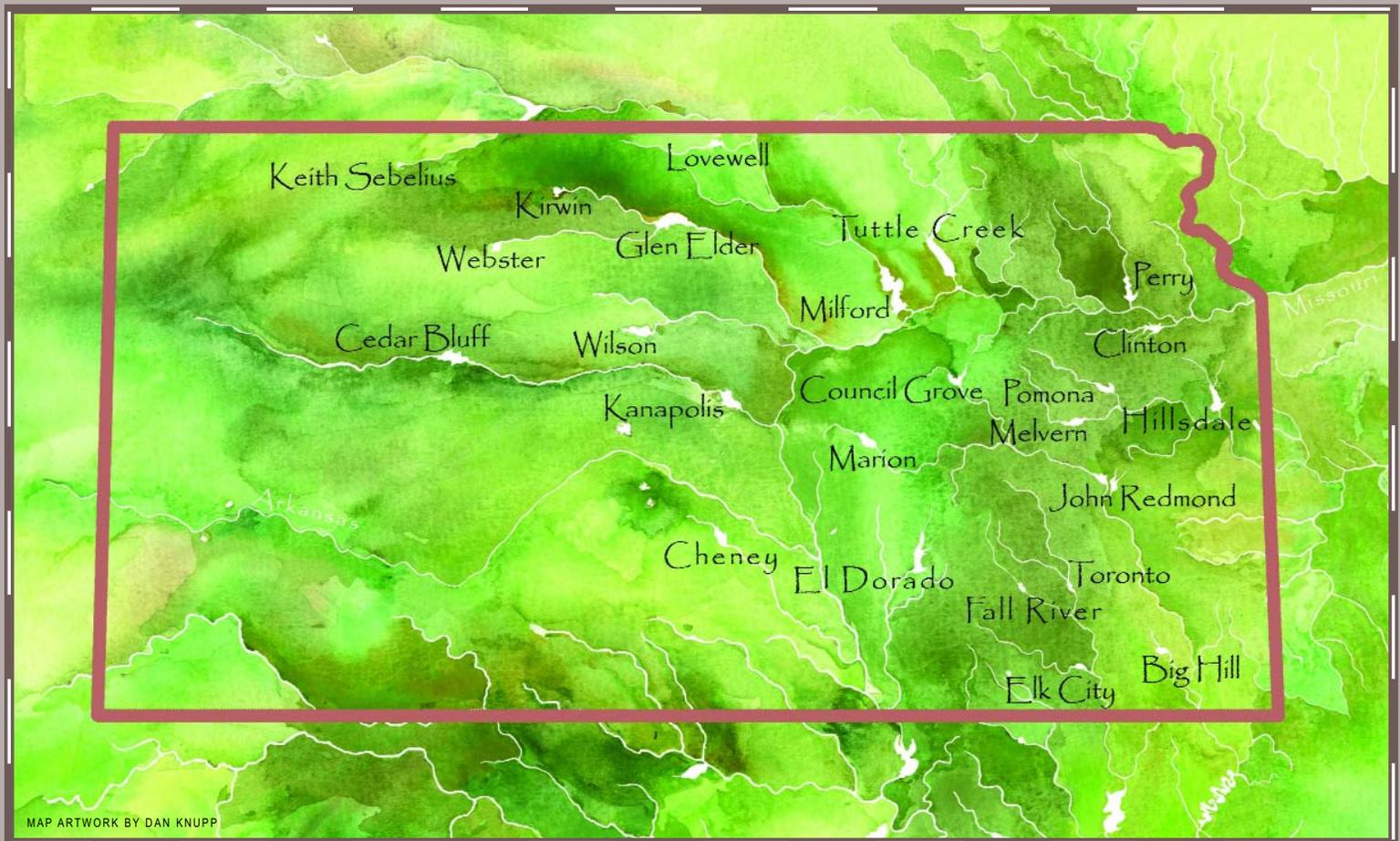
federal reservoirs are in the Arkansas Basin and were not part of Pick-Sloan – and not all reservoirs in the Missouri Basin were Pick-Sloan.

Competition persists for Missouri River water

The high price tag on the Flood Control Act was due in part to the many uses the Plan encompassed and the interest groups represented have been competing ever since. In dry years farmers want more water released for irrigation, while the recreation

industry wants water left in place. The environmental lobby sues to have water released at critical times for habitat maintenance and barge owners counter-sue to have water released only during dry times to ensure down-stream navigation – including navigation on the Mississippi River! Over the 62 years since the Act's passage, nasty political fighting over this water has been common. As population growth continues and the Midwest contends with an ongoing drought, we can be assured of more to come.

Federal Reservoirs in Kansas



The Kansas Floods of 1951 started “serious” dam construction

Politicians became serious about flood protection immediately after the horrific July

1951 Kansas floods that inundated much of the state. Despite the flood control political fervor created in the disaster’s aftermath, some local political opposition to the Kansas River Basin reservoirs

find Federal money immediately became available. Today 18 reservoirs protect the flow in the lower Kansas River Basin. At the time of the ‘51 flood, only two reservoirs in the lower Kansas



Above: The Kansas (Kaw) River at Lawrence cresting during the 1993 flood. A June 1993 Kansas Geological Society photo shows the high water at the bridge linking Lawrence and North Lawrence. Flood control was a major reason for constructing Kansas reservoirs.



Above right: An aerial view of Perry Reservoir in Jefferson County, north of Hwy. 24 at Perry, Kansas.

remained well into some dam construction, especially at Tuttle Creek on the Big Blue River. Many local pols were opposed to loss of tax base, town sites and farm land but the political and general public opposition slowly evaporated as previously hard-to-

River basin were completed in Kansas – Cedar Bluff and Kanopolis reservoirs – both on the Smoky Hill River. One in Colorado and two in Nebraska were also online but all were situated too far above most of the rainfall to do much good.

With money flowing and many bad memories of high water guiding voters, 10 additional Kansas reservoirs have been constructed (see map on page 65) in the lower Kansas River Basin starting with Kirwin Reservoir on the North Fork of the Solomon River in 1955 and finishing with Clinton Reservoir on the Wakarusa River in 1977. Other river basins in Kansas were also afforded reservoir protection. Dams were also planned and built at three locations in the Osage-Marais Des Cygnes River Basin: Pomona, Melvern and Hillsdale Reservoirs. The Verdigris River Basin, in southeast Kansas, had Fall River prior to 1951 but has seen Toronto; Elk City and Big Hill dams start containment, effectively protecting areas far to the south. Dams located in the upper Neosho River Basin have also been built containing waters

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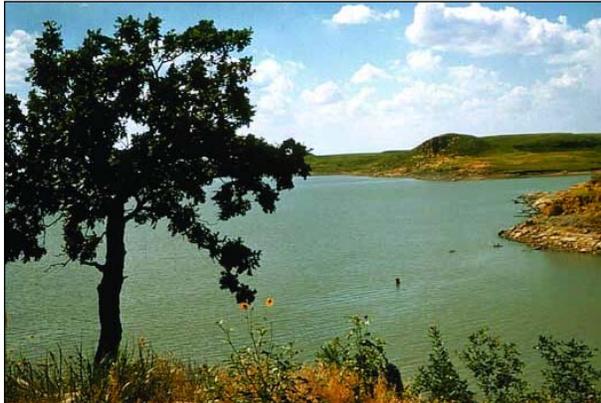
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in Marion, Council Grove and John Redmond Reservoirs.

During early reservoir construction in Kansas, the Pick-Sloan Program component dealing with reservoir use as a municipal

or industrial water supply was a building block for the future of a growing Kansas. The Corps of Engineers option as to whether or not to pay the costs for usable reservoir storage space which

contracts with the Corps for water storage in 13 of the State's reservoirs. The contracts are managed by the Kansas Water Office's Water Marketing Department. A benefit of these



Above: A 1961 view from Indian Hill at Kanapolis Reservoir on the Smoky Hill River in Ellsworth County.



Above right: A view of the dam at Kirwin Reservoir on the Solomon River and Bow Creek in Phillips County.

would otherwise be constructed for flood control only with no municipal water storage features was a decision easily made by farsighted Kansas planners those many years ago. Kansas signed

contracts has been that they have provided ample water for communities both urban and rural to grow and prosper in the more populated eastern half of Kansas during the last 25 to 40 years.

A hot dry week for Kansas – in July 2006

Kansas Water Office Engineer Iona Branscum prepared this report on stream flow last July.

After reviewing the USGS web page this morning, it is apparent that many people in the state are benefiting from the decisions made by prior administrations. Without the water supplies stored within the federal reservoirs, many of the eastern streams would have little flow in them and multiple municipal and other water users would be implementing water conservation measures out of necessity.

For example, the flow in the Kansas River at the Topeka gage is above 900 c.f.s. Flow from the tributaries to the Kansas River are providing about 200 c.f.s.

This office has been coordinating releases with both the Kansas City District and Tulsa District U.S. Army Corps of Engineers. The State has provided input or requested additional releases from the following reservoirs: Milford, Tuttle Creek, Perry, Toronto, Fall River, Council Grove and John Redmond. Releases from Elk City Lake are expected to be needed by the end of the week.

The following list provides the inflows and outflows respectively from the reservoirs in the Kansas, Marais des Cgyines, Neosho and Verdigris basins.

	Inflow	Outflow		Inflow	Outflow		Inflow	Outflow		Inflow	Outflow
Milford	15 cfs	350 cfs	Clinton	1 cfs	38 cfs	Hillsdale	1cfs	24 cfs	Elk City	0 cfs	15 cfs
Tuttle Creek	100	450	Melvorn	0	20	Toronto	5	12	Council Grove	5	32
Perry	1	25	Pomona	0	15	Fall River	2	8	Marion	0	13
									J. Redmond	50	76

I don't really know the people from the past who provided us with the ability to maintain flow in our streams during this drought, but I thank them anyway.

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