

Reinvesting in America's Watersheds: A Special Report

KANSAS KANSAS KANSAS **DAMS IN DANGER** KANSAS KANSAS KANSAS PEOPLE AT RISK?

For 50 years, America's small upstream dams have provided for flood protection, municipal water supplies, wildlife habitat, water for livestock, and recreational opportunities. But time has taken its toll. Many of the nation's dams, including those in Kansas, are in desperate need of repair. If problems are not corrected, the consequences are grave—to both people and the environment. Funding is needed, and now is the time to act.



Across the Nation...

More than 600 dams need to be rebuilt and upgraded to ensure the safety and health of those downstream. In addition, another 1,500 dams need repairs so they can continue to provide flood control, municipal water supplies, recreational activities, water for livestock, and wildlife habitat. An estimated \$540 million is needed to rehabilitate these dams.

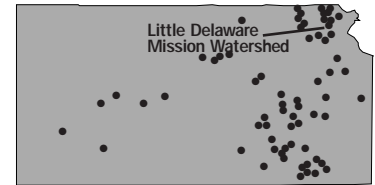


Small watershed projects

Ten thousand dams built under Small Watershed Programs make up a \$9 billion infrastructure. These dams provide more than \$800 million in benefits annually. The majority of these dams were built for a 50-year lifespan and some have already or soon will reach that mark. Funds for building these dams have come from four programs: Flood Control Act of 1944 (PL-78-534); Pilot Watershed Program; Watershed Protection and Flood Prevention Act of 1953 (PL 83-566); and Resource Conservation and Development (RC&D).

In Kansas...

Sixty-one small watershed projects, five pilot watersheds, and 56 PL-566 watershed projects are completed or under construction in Kansas.



Small watershed projects in Kansas

This represents an investment of about \$380 million.

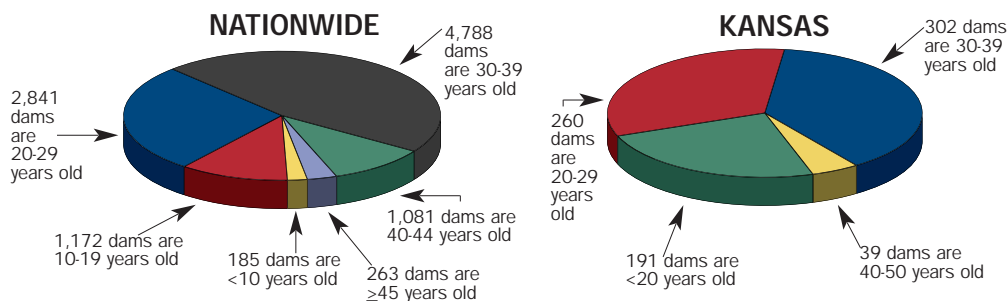
Since 1954, 792 flood-control and grade-stabilization dams have been built. Many will soon reach or surpass their lifespan, and need repairs. Between 1958 and 1979, 105 dams used corrugated metal pipe as the principal spillway; 93 are 25 years old, which is the design life of these pipes. A study of one of the first watershed projects shows that 40 percent of the structures with metal pipes need the pipes replaced. This will also involve upgrading the dam to today's standards.

Another problem is that homes have been built downstream in areas prone to flooding if the dam failed. There are 39 such sites documented. If some of these dams were to fail, roads and bridges would be damaged.

If the 58 dams needing repair or restoration were to fail,

Continued on back

Our Aging Dams



DAMS IN DANGER

PEOPLE AT RISK?

Continued from front

there would be catastrophic environmental and economic losses. Most of the sediment that has accumulated in the pool would eventually erode and be carried downstream into surface-water systems. The economic benefits of cropland protection would be lost, as would the protection to roads and bridges. Many of the local and state road authorities have come to rely on the many benefits resulting from the upstream watershed structures.

A Case Study...

The Little Delaware Mission Watershed lies in Brown, Atchison, and Jackson counties in northeast Kansas. The watershed has eight flood-control and 20 grade-stabilization dams from the pilot program, as well as 16 more recent dams.

A recent inspection identified 11 grade-stabilization dams in need of major rehabilitation. One of those is dam No. 26, which was built in 1958. An estimated \$155,000 is needed to rehabilitate this site to current dam safety standards. This will add storage for sediment, earthen spillway protection, improved pipe protection, and a principal spillway outlet.

The entire 380 acres controlled by this dam also depends on the conservation practices in the watershed to maintain the agricultural base that's so valuable to this rural community. Average annual benefits for this site are estimated at \$17,000. Rehabilitation costs are more than offset by the benefits provided by these dams.

This case study example can be applied to the entire watershed or to the rehabilitation needs throughout the state when considering similar repairs and updates.



THE PROBLEMS

Top: The corrugated metal pipe riser and barrel principal spillway has holes corroded in the pipe, causing leakage and downstream instability of the dam.

Middle and left: The pipe and outlet area need major repairs or reconstruction.

A Call to Action in Kansas

39

dams need to be rebuilt and upgraded to protect life and property in downstream areas

58

dams need repairs to safeguard municipal water supplies, provide flood control, and protect natural resources

\$20 million

is needed to rehabilitate those dams to protect people and natural resources