

Reinvesting in America's Watersheds: A Special Report

DAMS IN DANGER PEOPLE AT RISK?

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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 New York, 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



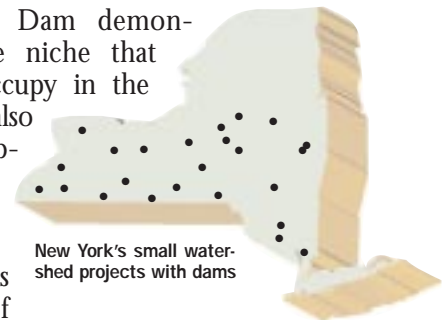
Small watershed projects

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.

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 New York...

Patterson Creek Dam demonstrates the unique niche that these structures occupy in the infrastructure. It also exemplifies the problems that plague New York's older watershed dams.



New York's small watershed projects with dams

The dam controls about 3,000 acres of

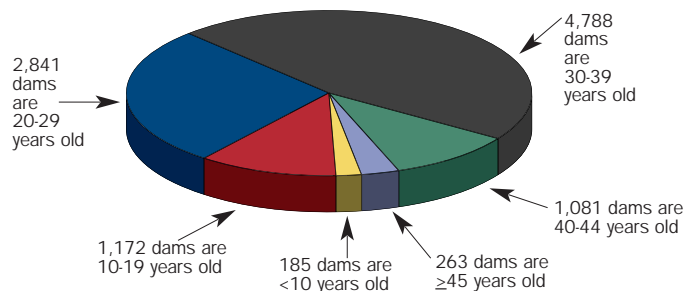
watershed and was originally designed as a single-purpose, flood-control dam to protect the city of Endicott in south-central New York. It has evolved into providing many more benefits than originally planned.

In the summer, one can witness baseball, day or night, at one of several diamonds that have been constructed just downstream from the dam, soccer games in the auxiliary spillway, or hikers enjoying the myriad of trails that wind around the floodpool. A municipal golf course borders the upper pool area.

Because of its age and the fact that most residents don't remember when flooding and evacuation from

Continued on back

Our Nation's Aging Dams



Continued from front

homes was the norm, this dam has been taken for granted. When built in the late 1960s, the surrounding countryside consisted of open land and farmsteads. Today, the city has literally grown up around the dam and lake that serves as a recreational hub. Every inch of useable space is being utilized. Younger residents may not comprehend the importance of the dam during periods of rain and runoff, but they certainly appreciate the beauty and tremendous recreational opportunities it can provide aside from the direct benefits of flood control.

When viewed from an untrained eye, the problem associated with aging isn't apparent. A thick layer of sedimentation has been deposited in the pool area to the point that the reservoir drain gate can barely open. When it's finally pried loose, muddy, murky water is sent downstream through the outlet channel until it reaches its final destination—the Susquehanna River 2.5 miles downstream. Stress imposed on the gate mechanism and the deterioration caused by 30 years of exposure to winter has taken a toll on its components. The pool area no longer resembles a body of water, but instead looks like a mud hole with veins of erosion where sediment has been sucked through the discharge system.

It's estimated that 40,000 yards of material at a cost of \$400,000 be removed from the site. Another \$10,000 would be required to repair the gate and components. It is estimated that 20 dams statewide are in need of immediate sediment removal, with another 29 needing similar work in another 5 to 10 years. Repair work will also be required on the auxiliary spillways on others, and a large percent of all of the dams in the state will require reservoir drain gate repair. Total cost of these rehabilitation efforts is estimated at about \$2 million statewide.

If allowed to go untreated, these critical problems will eventually render the structure ineffective and destroy the ecosystem that has developed around it.



SOME OF THE PROBLEMS. Above: At Patterson Creek Dam, baseball diamonds have been built directly below the toe of the dam, and soccer fields are situated in the auxiliary spillway's outlet. Such development changes the dam's classification and is a serious threat if the dam fails. Left: At Finch Hollow Site #1A, each time the reservoir drain gate is opened, a slug of sediment-laden discharge is flushed downstream, eventually entering the Susquehanna River.



WHY REPAIR THE DAMS? Clean water is vital to communities. The current situation of aging dams poses a safety and health threat to people, communities, and our natural resources.

A Call to Action in New York

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dams will need
sediment removal
within the next
10 years

\$2 million

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