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WYOMING SEEKS U.S. HELP TO REPAIR LEAKY DAM

By IVER PETERSON, Special to the New York Times

LA BARGE, Wyo.— Among Western water projects, the Fontenelle Dam has never been much of a success.

The mile-wide earthen dam, built by the Federal Bureau of Reclamation, leaked from the moment it was filled in 1965 and its reservoir had to be emptied within the first year for repairs to keep the Green River from washing the dam away. Meanwhile, a plan to use the reservoir's water to irrigate agricultural land was scrapped because little would grow in the harsh soils of the region and its short season.

Now the dam is leaking again, to the dismay of the reclamation bureau, an agency known for subduing mighty Western rivers with titanic feats of engineering like the Grand Coulee and the Boulder dams.

How the dam can be fixed, or whether it should be fixed at all, is a matter of controversy. Beyond that, there is a more basic dispute: Who should pay for whatever is done? Fix It or Breach It

The Bureau of Reclamation, in its analysis of the problem, listed two alternatives. One is to spend \$50 million for repairs. The other is to spend \$3 million to breach the dam, which would mean cutting a gap in it and letting the Green River run unhampered again through the high, sage-covered prairies of Sweetwater County.

The Bureau of Reclamation has never yet had to breach a big dam, and the prospect of admitting defeat and abandoning one "would certainly be embarrassing," as one reclamation official conceded.

But before Fontenelle can be fixed at Federal expense, as it has been in the past, the work has to be approved by the Office of Management and Budget as a dam safety project.

Although Wyoming residents argue that the leaks from the Fontenelle are manifestly a threat to the dam's safety, the budget office has rejected a similar plea from New Mexico to repair leaks in the Navajo Dam. The Federal Government has committed \$400 million under the dam safety act for other projects in Arizona and Wyoming.

The Reagan Administration asserts that repair work on dams should be largely financed by states that benefit from the water and electric power they produce. In the case of some of the hundreds of aging

dams across the West, the question is whether the cost of repairs is more than the economic value of the water to agriculture. Wyoming Girds for Battle

Wyoming's leaders are ready for a fight in Congress. "If we gave up every time we ran afoul of the O.M.B., we might as well pick up our tents and run away," said Warren White, state planning coordinator for water development. "A substantial part of the economy of Sweetwater County is dependent in one degree or another on water stored in the Fontenelle Reservoir."

The danger with an earthen dam like the Fontenelle is that seeping water, if unhampered, progressively removes more and more silt from an area under the dam, creating a cavity that speeds up the flow until the engineer's nightmare, known in the trade as a "catastrophic failure," occurs.

Washington has so far agreed to pay some \$4.6 million to test a relatively new technology in dam repair on the Fontenelle, a system that its French corporate developers call the Hydro-Fraise. The system uses a crane and a hydraulic bit to cut a shaft that is 8 feet by 2 feet wide through the crest of a dam, with the debris pumped out through a slurry. At Fontenelle, the shaft descends 40 and more feet into the underlying rock. Financial Matters

After the shaft is cut, the bit is moved and the cavity is filled with concrete. Eventually a series of side-by-side shafts is cut through the dam. But at Fontenelle, because of financial restrictions, the test wall will extend only a total of 850 feet out from each abutment, far less than the dam's total length of 5,424 feet.

As an inducement to Federal consent to pay most of the cost of repairs, Wyoming has pledged to pay \$5 million toward the \$50 million needed under rules of the dam safety act that require the water users to cover about 15 percent of costs.

If the Office of Management and Budget decides that Fontenelle does not qualify for dam safety money, Wyoming would have to pay the bulk of the costs of repairs. With its energy and agricultural economies in deep depression, that would be hard for the state.

Yet Wyoming's political and business leaders may find some unusual allies among the state's environmentalists in their struggle to convince Washington to pay the bill. Normally, Western environmentalists have been bitter opponents of dams and would welcome the prospect of breaching a dam and freeing its captive river.

But because Fontenelle protects a big wildlife refuge downstream, and improves water quality by removing much of its natural siltiness, there appears to be nearly as much support for saving the Fontenelle dam among environmentalists as there is among the municipalities and industries that depend on it for a reliable source of water.

"The Seedskedee Wildlife Refuge is the reason you find the environmental community supporting this dam," said Ron Smith, president of the Wyoming Wildlife Federation.

"The refuge still doesn't have all of the land it is supposed to get," Mr. Smith said, "and if we're talking about spending \$50 million to repair the dam, there ought to be a little money included to complete the refuge."

Meanwhile, the manager of the refuge, Dick Gilbert, is of two minds on the dam. Its control of water flows, he pointed out, has eliminated the annual alternating of flooding and drying of the flood plain around which the refuge's cottonwood trees and wildfowl nesting grounds evolved. And yet, since the refuge was financed by the reclamation office to make up for the loss of wildlife habitat flooded by the Fontenelle reservoir, the loss of the dam could also thwart his wish to acquire the remaining 8,000 acres promised to the refuge.

"I made the comment to the Bureau of Reclamation the other day that if the dam is breached the current reservoir should be turned over to Wyoming and to the Fish and Game Service," Mr. Gilbert said. "Their reply was, 'Well, if we walk away from the dam we won't have to mitigate for wildlife because we won't be there anymore.' "

map of Wyoming highlighting La Barge; photo of Bruce Barrett (NYT/Dick Randall)