

non-Federal cost for lands, easements, rights-of-way, and certain modifications and relocations of roads, utilities, and related facilities made necessary by construction of the project. Construction would be contingent upon certain requirements of local cooperation including, for land enhancement benefits in the unleveed reach above Index, Arkansas, a cash contribution or equivalent as may be agreed upon by the Federal Government and local interests, amounting to 21.1 percent of the federal cost, such contribution now estimated at \$16,211,000. The reaches from Shreveport to Index and from Index to Denison Dam, analyzed separately, both have benefit-cost ratios of 1.3."

Para. 3. "The Board of Engineers for Rivers and Harbors concurs generally in the findings of the reporting officers with respect to the proposed bank stabilization improvements. However, the Board concludes that the bank stabilization works for the reach from Shreveport to the Mississippi River should be considered together with those proposed for the reach from Denison Dam to Shreveport, as a modification of the flood control project, Red River below Denison Dam. The Board estimates the total Federal first cost from Denison Dam to the Mississippi River at \$197,041,000 and, using a 100-year period of analysis, computes the benefit-cost at 1.2. On the basis of revised estimates of benefits for the reach from Denison Dam to Index, Arkansas, furnished by the reporting officers subsequent to submission of the report to the Board, the local cash contributions for land enhancement benefits was recomputed to be 26.1 percent of the first cost, an amount now estimated at \$20,127,000. Subject to certain requirements of local cooperation, including the revised cash contribution, the Board recommends modification of the flood control project for Red River below Denison Dam to provide for bank stabilization generally in accordance with the plan of the District Engineer, and deauthorization of Mooringsport Dam and Reservoir on Cypress Creek."

Further, in Para. 6, General Cassidy states, "... The bank stabilization measures will eliminate the wide meanderings of the stream which has plagued the area and permit productive use of lands which have been threatened by caving of banks. . . ."

The report states that about 1,000 acres of land are lost each year through caving in the reach above Index, Arkansas. Also, the total area threatened by caving of the river from Denison Dam to the mouth is an estimated 500,000 acres, including about 170,000 acres above Index, Arkansas. Local efforts to protect banks are ineffective because of the lack of continuity essential to a successful bank protection program. The Report mentions that 73 of 93 bank protection works installed by local and state interests have been destroyed or become ineffective because of the lack of continuity essential to a successful bank protection program.

The Report notes that due to natural river overflow, the choicest lands (and most productive) in Red River Basin are built up as levees along the river. These choice lands represent an irreplaceable resource to the several states and to the United States. These lands are the ones that are slowly being lost each year through caving and erosive action of the base flow as well as flood flows of the Red River.

The Board of Engineers for Rivers and Harbors noted the wide variation in the conditions of local cooperation for the three reaches, but also noted they are those normally required under current policy. The current policy referred to is not clear, and should be considered by the Congress.

The Board of Engineers for Rivers and Harbors (Pg. 20 of letter of transmittal to the Chief of Engineers) and the Chief of Engineers (Pg. 1 of letter of transmittal to the Secretary of the Army) recommended that the project, Red River below Denison Dam, authorized by the Flood Control Act of 1946 be modified by providing for realigning and stabilizing the banks of the Red River from the Mississippi River to Denison Dam, Oklahoma and Texas. Texas concurs and notes that this is in accordance with T 33 U.S.C.A. Section 701a which states, "... destructive floods . . . upsetting orderly process and causing loss of life and property, including the erosion of lands and impairing and obstructing navigation, highways, railroads, and other channels of commerce between the states, constitute a menace to national welfare; that it is the sense of Congress that flood control on navigable waters or other tributaries is a proper activity of the Federal Government in cooperation with States and localities . . . that investigations and improvements of rivers and other waterways, including watersheds thereof, for flood control purposes are in the interest of the general welfare; that the Federal Government should improve or partici-