US Army Corps
of Engineers
Fort Worth District

INTERIM REPORT
AND
ENVIRONMENTAL ASSESSMENT

SHOAL CREEK
AUSTIN, TEXAS

NOVEMBER 1991

SYLLABUS

This report presents the results of studies which identify water and related land resources problems and needs of the Shoal Creek watershed in Austin, Texas, and formulates alternative solutions to alleviate these problems. The area along Shoal Creek has suffered from frequent and severe flooding in the past which caused extensive property damage and loss of life.

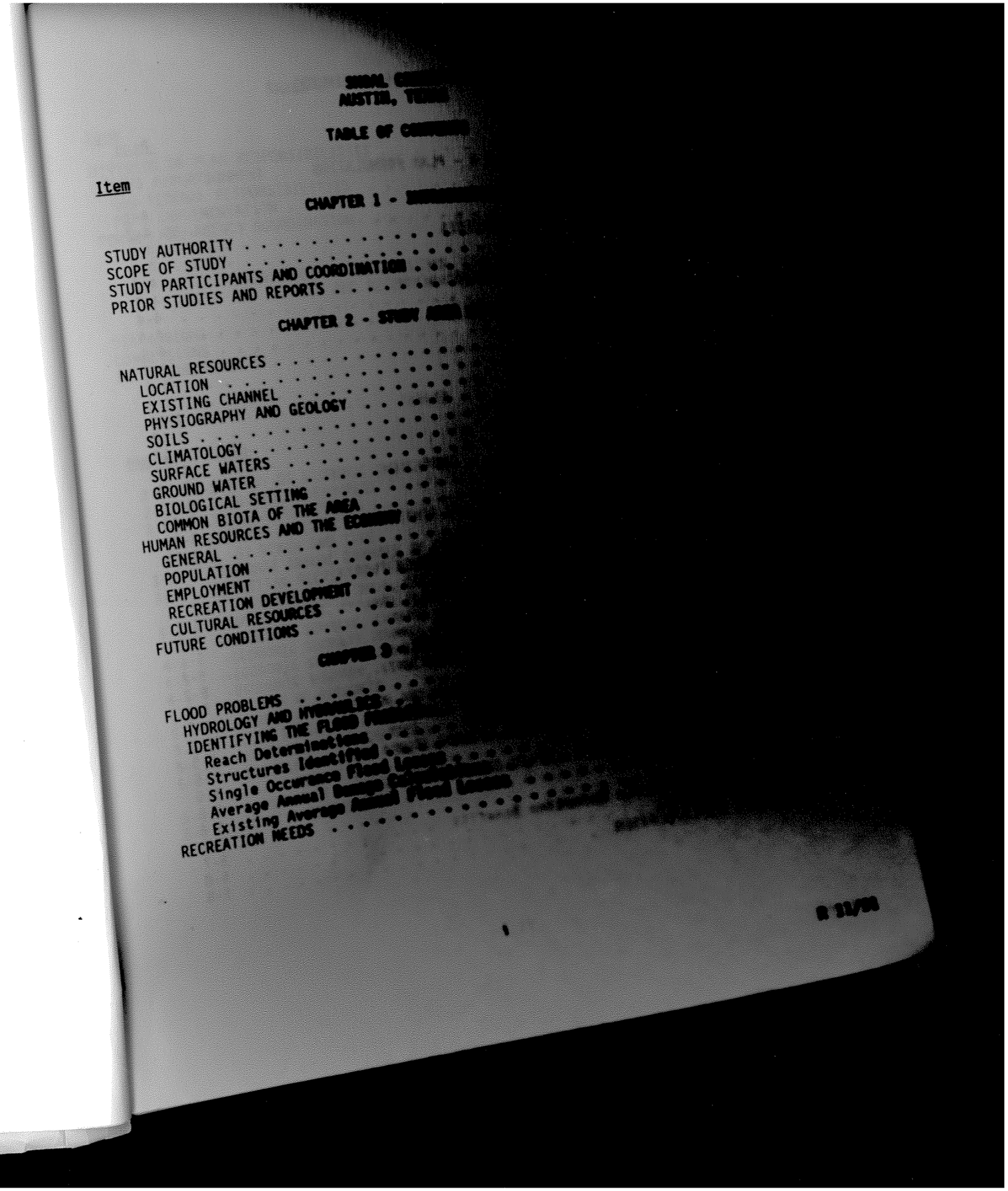
The analysis of the flood problems and formulation of structural and nonstructural solutions indicated that Federal participation in a flood damage reduction project along Shoal Creek could be justified. From the analysis of economic, environmental, engineering, and social data, a plan was developed which reduces the damages by approximately 82 percent. Based on the economic analysis, this plan is the National Economic Development (NED) plan and is consistent with the Principles and Guidelines for Planning Water and Related Land Resources Implementation Studies as developed by the U.S. Water Resources Council, dated July 1983.

The NED Plan identified for Shoal Creek is the 14-foot combination tunnel/channel plan and consists of the following improvements on Shoal Creek and Hancock Creek, the major tributary: approximately 1,200 feet of 50-foot bottom width grass-lined channel improvement on Shoal Creek from the MOPAC railroad bridge to U.S. Highway 183; two 11-foot conduits under U.S. Highway 183; 10,200 feet of 30- to 50-foot bottom width grass-lined channel improvement from U.S. Highway 183 to Greenlawn Parkway; a 14-foot diameter tunnel diversion with an intake downstream of Greenlawn Parkway and an outfall at Lake Austin near Bull Creek; a 14-foot diameter diversion tunnel with an intake on Shoal Creek near 19th Street and an outlet close to Town Lake near Pressler Street; 750 feet of grass-lined channel from the tunnel outlet to Town Lake. Recreational development will be provided along the channelization in the upper reaches of Shoal Creek. The plan also includes a 40- to 50-foot bottom width concrete channel along 3,200 feet of Hancock Creek from just upstream of Houston Street to 700 feet downstream of Hancock Drive.

The city of Austin reviewed the NED Plan and, after weighing all of the data provided, the city has made the decision to implement only a portion of the NED Plan. The city of Austin has indicated they would like to proceed with the Hancock Creek portion of the project. This buy-down from the NED plan was therefore the recommended plan.

This plan will require the disposal of approximately 40,500 cubic yards of material. The city of Austin has identified a couple of sites for the disposal of these materials. These sites are located in southeast Austin near the Colorado River. One site is a gravel pit, while another site is located in a relatively undeveloped area in the same general vicinity. Coordination has been maintained throughout the study with the U. S. Fish and Wildlife Service and the Texas Parks and Wildlife Department. The Recommended Plan will not require any mitigation measures for fish and wildlife purposes.

The first cost of the Recommended Plan at February 1991 price levels, is estimated at $6,634,700. Under current guidelines, the city of Austin would be responsible for $1,659,000 and the Federal Government would pay $4,975,700. The city of Austin would be responsible for all operation, maintenance, and replacement costs, estimated to be $5,000 annually. The total annual charges for the Recommended Plan, including operation, maintenance, and replacement costs, is $646,800. Average annual benefits for the Recommended Plan are $1,229,700. These include inundation reduction benefits, vehicular benefits, and reduction in insurance overhead benefits. The resulting benefit-to-cost ratio is 1.9 to 1.0.



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