

cooperation. The annual benefits are \$11.8 million and the annual charges are estimated at \$4.35 million, giving a benefit-cost ratio of 2.7.

The report has been submitted to the State of Alaska and the interested Federal agencies. Upon receipt of the comments, the report of the Chief of Engineers will be sent to the Bureau of the Budget, through the Secretary of the Army, prior to its submission to Congress by the Secretary of the Army.

Mr. Chairman, this completes my statement.

Mr. JONES. Will you describe the improvements you expect to perform.

Colonel PICK. In the upper part of your map here, sir, is the recommended Little Chena River Dam and detention reservoir.

This will be a dry reservoir approximately 68 feet in height and about 4,700 feet in length.

It will have a reservoir area of about 2,500 acres, and will hold about 50,000 acre-feet of water for flood control purposes only.

The large Chena River Dam on the main stream is for the purpose of flood control, recreation, and fish and wildlife. Its length is 12,500 feet. It will average about 124 feet in height, with a reservoir area of 16,000 acres and a storage capacity of 820,000 acre-feet.

In addition to these two reservoirs, there will be flood control levees along the Chena and Tanana rivers.

The Chena River levees will be about 5 miles in length, with an average height of 8 feet.

The Tanana River levee will be about 22 miles in length and 18 feet in height.

Mr. JONES. Will you describe the character of the flow of the river?

Colonel PICK. The Tanana River, sir, is a large, wandering, meandering river flowing in a flood plain which varies from 20 to 40 miles across.

The Chena River is a tributary of the Tanana and is restricted by high ground noted on the upper portion of the chart. The Chena River Basin is about 40 square miles, and flows between definite ridges on both sides and has a rather confined flow down into the Tanana River.

The area at the confluence of the Tanana River and the Chena River is the flood plain, upon which the city of Fairbanks and Fort Wainwright have been built. Both communities are very vulnerable to flooding.

Mr. JONES. What is the capacity or the normal flow of the two?

Colonel PICK. The mean average combined flows of the Tanana and Chena Rivers at Fairbanks is about 21,000 cubic feet per second. The regulated flow of the Chena would be 12,000 feet at bankfall stage.

Mr. JONES. That is a normal flow?

Colonel PICK. No; the 12,000 is regulated flow and flood stage is 15,000.

Mr. JONES. What was the flood stage?

Colonel PICK. Flood stage is approximately 12 feet on the Chena at Fairbanks, and the flood of August 1967 reached a stage of almost 19 feet.