

NPDTM

MEMORANDUM

5 November 1952

SUBJECT: Skagit River Report

TO: Mr. F. S. Brown, Chief, Engineering Division

1. The Seattle District's Skagit River report has been returned for review. One factor requiring reconsideration is the increased value now being used for power benefits. The lower Skagit is subjected to heavy damage from floods. The Skagit Valley is one of the outstanding farming areas in western Washington and protection should be provided, if possible. Flood control of the Skagit is accomplished to some extent by the city of Seattle's Skagit power projects storage dams but material damage still occurs annually and much more storage will be required to eliminate flood damages.

2. In the past, consideration has been given to a 500 ft. high dam at Faber which would provide 4,000,000 acre-feet of storage and give substantial protection against floods because it is situated below the Sauk River. The salmon run on the Skagit is quite important and a 500 foot dam is opposed by all fishing interests, especially the sportsmen's clubs, and it is improbable that the State of Washington would approve a dam 500 feet high at Faber on the Skagit. An alternate plan is herewith suggested for the development of the Skagit as follows:

a. Reduce the height of Faber Dam to 100 feet which would backwater to Marblemount and provide 500,000 acre-feet of storage.

b. Build a high dam at the lower Sauk site about 400 feet high creating 2,000,000 or 3,000,000 acre-feet of storage on the Sauk. A saddle dam would be required between the Sauk and Stillaguamish Rivers unless it is found feasible to build a dam on the north fork of the Stillaguamish River to the same elevation as the Sauk dam which would increase the storage and also the yield of this project because about 500,000 acre-feet of run off would be added from the north fork of the Stillaguamish River.

c. Consideration should be given to raising Ross Dam to provide complete control of the Skagit at that point by adding the gravity section to the present arch dam at Ross.

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d. Construct a dam on the Cascade River providing 100,000 acre-feet or more of storage.

e. Construct two 100 foot dams on the Skagit between Marblemount and Nehalem which will operate run-of-river power plants.

f. Consideration should be given to a series of dams on the north fork of the Stillaguamish beginning with the Oso project to furnish complete slack water to the Sauk storage site. If the development of the north fork Stillaguamish is possible, the waters from the Sauk River could be released down the Stillaguamish thereby developing the full head to elevation 50 feet above sea level, whereas if the Sauk is developed by way of the Skagit about 100 feet of head ~~water~~ would be lost.

g. Construct a dam on the Baker River providing 150,000 acre-feet of storage on Baker Lake. Power would be installed at all of these dams.

h. Consideration should next be given to the utilization of the Skagit River for "winter power" to balance the Columbia River power system. This may have considerable merit because the Skagit can be completely controlled by this method and increased storage on the Columbia is difficult to obtain.

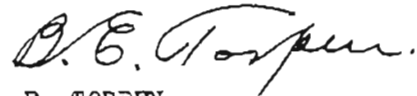
i. Drawbacks of this project: First of all, the fish people will oppose any additional dams on the Skagit. The 300 ft. Faber dam obviously is out. It is hoped that by the substitution of 100 ft. dams over which fish may be passed successfully as on the Columbia River dams by means of fish ladders, it may be possible to secure approval from the fishing interests for the construction of this very necessary project. The benefits from power and flood control should be material. The second difficulty is that by raising the Ross Dam, the reservoir will extend further into Canada and that international problem must be solved. The damages will not be great, however, because the area is rather isolated.

j. The Sauk Dam would be insurmountable to fish but the Sauk does not have a heavy salmon population being a very silty stream as its major tributary, the Suiattle is heavily laden with glacial silt from Glacier Peak. Further, the Sauk Dam to the height herein proposed would flood the town of Darrington, some 500 people more or less. Darrington, however, is a lumber and logging town; the residents being nearly all engaged in lumber operations which are now at their height, with two mills and much snipping of logs centered there. The intermediate step development of the Sauk is possible, however, whereby the height of the dam would be reduced to elevation about 500, thus leaving the town of Darrington undamaged and still providing a million acre-ft.

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of storage. Thus with two million acre-ft. added to Ross storage, two million or more on the Sauk, 150,000 at Baker River and Cascade River and 500,000 acre-ft. at Faber, damage on the extensive Skagit River Valley farm lands should be completely eliminated and extensive power development would be feasible. A thorough analysis of the various combinations of dams herein proposed seems desirable to determine which, if any, have merit in the comprehensive development of the water resources of the Pacific Northwest.



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