

INFO. COPY

ENGR. DIV.

20 November 1946

The Federal Power Commission
Washington 25, D. C.

Handwritten notes and signatures:
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H...
S... 1390
M&R

Dist File 800.2251 (Seattle Power Project Skagit River) 26

Gentlemen:

Reference is made to your letter of 29 July 1946, submitting for approval by the Chief of Engineers and the Secretary of War, certain plans of the third step in the construction of the Ross Dam, located on the Skagit River, Washington, submitted by the City of Seattle, Washington with its application for amendment to license No. 553. Your letter also requests that this office advise the Commission as to such terms and conditions considered desirable to have inserted in the amendment, if issued, in the interest of navigation and also recommendations with respect to flood control storage and the operation of the reservoir in the interest of flood control after the completion of the third step.

The plans have been examined and found satisfactory so far as the interests of navigation are concerned, and have therefore been approved in accordance with Section 4 (b) of the Federal Power Act. The conditions now included in the license are considered satisfactory, so far as the interests of navigation are concerned and no change is recommended.

Careful consideration has been given to the Commission's request for advice and recommendation with respect to storage and operation of the reservoir in the interest of flood control. In accordance with a reported statement by the Licensee at a public hearing before the International Joint Committee on 12 September 1941, the storage between elevations 1710 and 1735, amounting to 300,000 acre-feet, would be reserved for flood control. Studies by our District Engineer, Seattle, Washington, indicate that 300,000 acre-feet or more of capacity would be required to control floods comparable to the historical floods of 1815 and 1856, although a reserve capacity of approximately 200,000 acre-feet during the period 1 November to 1 April would have controlled floods of record since 1909. It appears that the dam will not be constructed above elevation 1620 with the top of the spillway gates at elevation 1600 and spillway crest at elevation 1582. Studies indicate that, with the top of dam at elevation 1620, the reservation of 200,000 acre-feet of storage capacity for flood control would not seriously impair operation of the Seattle City Light power plants and would provide important flood control benefits downstream.

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U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

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Ltr. to The Federal Power Commission

It is therefore recommended that during the period 1 November to 1 April, 200,000 acre-feet of storage be reserved for flood control. Suggested methods of operating the reservoir in the interest of flood control are as follows:

"During the period 1 November to 1 April, 200,000 acre-feet of storage shall be reserved for flood control and utilized as prescribed herein. The reservoir level will be drawn down to elevation 1582.5 by 1 November of each year. When the flow of the Skagit River at the gaging station below Concrete exceeds 25,000 second-feet (gage reading 21.0) on the rising stage of a flood, the Licensee shall release only such flows from the Ross Dam as are necessary to the normal production of electric energy at the Ross, Diablo, and Gorge Plants. Storing of floodwaters shall continue until the water level of the reservoir approaches the top of the gates (elevation 1600) at which time the spillway gates will be opened gradually so as to hold the reservoir surface at that level or until all gates are completely opened. If all gates are opened fully during the storage period, the discharge shall be uncontrolled until the receding pool level approaches elevation 1600 at which time the spillway gates shall be closed gradually so that the pool level will be approximately elevation 1600 by the time the inflow and discharge decrease to 10,000 second-feet. When the flow of the Skagit River at Concrete is 50,000 second-feet (gage reading 26.0) or less on receding flood stages and the pool level is at or below elevation 1600, the stored flood waters in Ross Reservoir shall be released at a rate not to exceed 10,000 second-feet until the level drops to elevation 1582.5.

All three tracings and one copy of the application for amendment are returned herewith.

Sincerely yours,

2 Incls.
#1-copy of amendment
#2-Roll of 3 tracings
(553,-105,-106
4-107)

R. C. CRANFORD
Brigadier General
Acting Chief of Engineers

CGs D.E., Seattle ✓
Div. Engr., M&D
Mr. Burger w/d
Mr. Beard w/d
Civil Works w/d

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