

When the Commission became convinced that a basic difficulty in rehabilitating the Fraser sockeye salmon run lay at Hell's Gate Canyon, it not only concentrated its biological work to bear upon that point but also engaged the most experienced fishery engineers available. Milo Bell, the Commission's chief engineer, is the only active engineer in either nation who has specialized in fishery conservation devices directly related to Pacific salmon. And he in turn has had the assistance of Professor Charles W. Harris, an outstanding hydraulic engineer, as consultant.

So-called fish-ladders have been in use for many years as a means of enabling fish to ascend rivers blocked by dams and natural obstructions. The greatest installation heretofore made was at the Bonneville Dam on the lower Columbia River. The fishery devices at the Bonneville are said to have cost approximately \$7,000,000. Nevertheless, these fully justified the expenditure for they have successfully demonstrated their effectiveness in passing the well known Chinook salmon up the Columbia. The practical use of fish-ladders is therefore well recognized in the engineering field.

In the engineering report submitted herewith (1), the use of fish-ladders to obviate the Hell's Gate Canyon obstruction is presented. But although the Fraser salmon run substantially exceeds that of the Columbia both in quantity and value, the cost of the proposed fish-ladders at Hell's Gate Canyon, together with the estimated cost of investigating and overcoming other obstructions and incidental remedial proposals, all together is less than one-third of the cost of the work at Bonneville.

The Commission therefore requests a total appropriation of \$2,000,000, one-half from Canada, one-half from the United States, for the purposes above outlined. One good year's run restored should produce a catch ten times the entire proposed investment. And under continued and adequate regulation and protection, this enormous food resource should become recurrent year after year in perpetuity.

Respectfully submitted,

International Pacific Salmon Fisheries Commission,

By EDWARD W. ALLEN,
Chairman.

A. J. WHITMORE,
Secretary.

January 11, 1944.

(1) Identical copies of the Reports were presented to each Government by the Commission. It was therefore deemed unnecessary to attach them to the note of the Canadian Chargé d'Affaires of July 21, 1944.