

**Chehalis River.**—The plan of development on this stream includes a storage and intake dam near the lower end of Chehalis Lake, and a large concrete pipeline, some 10 miles in length, to an equalizing reservoir near the mouth of the river. The penstocks would lead from the reservoir to the power-house, and would give a head of about 400 feet. Chehalis Lake would give splendid storage. It might be possible to divert the flow of the west fork (Statlu Creek) into the lake or into the pipeline.

**Chilliwack River.**—This is quite a large stream, having a fall of about 2,000 feet between Chilliwack Lake and the Fraser River. At one time it was proposed to carry water from Chilliwack Lake to Jones Lake, but this scheme was abandoned owing to the heavy expense which would be involved, and also as it was found that Chilliwack Lake was not at a sufficiently high elevation above Jones Lake. Another proposal is to construct a tunnel from the Upper Chilliwack valley to the valley of the Fraser River. This plan is probably quite feasible, but sufficient surveys have not been made to develop all its features. On account of the great expense of the tunnel, it would be necessary to make a large initial development.

**Coquihalla River.**—About 6 miles from Hope, and just above the mouth of the Nicolum River, the Coquihalla flows through a narrow gorge from 30 to 70 feet wide. The precipitous rock walls rise to a height of 150 feet. By constructing a dam at this canyon a head of 100 or 125 feet could be obtained. The power-house could be built opposite the mouth of the Nicolum River, and the water conveyed to it from the dam through a tunnel.

Below the mouth of the Nicolum River is another small canyon and falls (Natural Bridge), but it would be rather expensive to utilize this fall with the other.

**Green River.**—At Nairn Falls there is a good site for a development. An intake dam could be built on a rock foundation above the falls and connected by a short penstock with the power-house built below the falls. The Pacific Great Eastern Railway is being built along the river bank within a few hundred feet of the falls, and would give good transportation. The presence of the railway along the east shore of Green Lake will seriously interfere with the use of the lake for storage, and there would be very little pondage at the falls, but it might be possible to store water on the tributaries, Soo River or Six-mile Creek.

**Jones Creek.**—The Vancouver Power Company has been investigating Jones Creek as a possible source of power. The plan is to drive a tunnel through the ridge between Jones Lake and the Fraser valley. The tunnel would be 10,200 feet long. Steel penstocks, 6,000 feet in length, would lead from the portal to the power-house on the bank of the Fraser River. A dam near the outlet of the lake would provide considerable storage. Boulder Creek could easily be diverted into the lake. This plant would utilize the combined flow of Jones and Boulder Creeks, and would be fairly well regulated by the storage in Jones Lake, under a head of 1,800 feet.

**Mesliloet (Indian) River and Tributaries.**—The Westminster Power Company proposes to develop power here and has already made extensive surveys. Splendid storage facilities are available in Norton, Young, and Ann Lakes; from the first-named lake a head of 2,000 feet could be developed.

**North Lillooet River.**—A small amount of power could be developed at a falls on this river. The municipi-

ality of Maple Ridge, however, has applied for the right to use part of the water for domestic purposes.

**Rainbow Creek.**—A series of falls near the mouth of the creek give a head of 630 feet in about half a mile. A small diversion dam could be built at the head of the falls to turn the water into the pipe line. A power-house could be built on the flat at the mouth of the river, a few hundred feet from Pitt Lake.

**Raven (Rushton) Creek.**—This is a small creek flowing into Pitt Lake. Rushton Lake is 700 feet above Pitt Lake and only 4,000 feet distant. About 1,000 feet from Pitt Lake there is a fall of 100 feet. Mr. E. J. Fader proposes to run a pipeline from the head of the falls to a power-house to be built near the mouth of the creek. The power is to be used for running a rock quarry and gravel-screening plant, neither of which have been built as yet.

**Silver Creek (near Hope).**—It would be quite possible to develop power on Silver Creek, which flows into the Fraser River, near Hope, though as yet no definite details of any such scheme have been worked out. There is a fall of 1,100 feet from Silver Lake to the Fraser, but it is pretty evenly distributed over a distance of 5 miles. A long flume line would be necessary to develop any considerable amount of power. Silver Lake might be used for storage as long as it did not damage the Pacific highway, which is being built up the creek valley and along the lake.

**Silver Creek (tributary Pitt River).**—This stream might be used for developing a small amount of power, but the municipality of Coquitlam is planning to obtain its water supply from it.

**Stollicum Creek.**—This small stream discharges into an arm of Harrison Lake. It has a series of falls near the mouth, with a total drop of 2,000 feet in about half a mile.

**South Lillooet River.**—Various plans have been proposed at different times for developing power on this stream. Probably the simplest method from a physical standpoint would be to drive a tunnel from Lillooet Lake to Stave Lake. This would enable the Western Canada Power Company to use the water in their present plant at Stave Falls, and also in the plant they propose to construct near the mouth of the river. Another plant could be constructed on Stave Lake below the outlet of the tunnel to utilize the fall from Lillooet Lake to Stave Lake, some 100 feet. This plan would give a very efficient means of utilizing the whole fall between Lillooet Lake and the Fraser River.

**Kamloops Division.**—The principal hydro-electric development in the Kamloops division is the city of Kamloops municipal plant of the Barrière River, for which Messrs. Ducane and Dutcher, of Vancouver, are designing and constructing engineers.

The plant\* will operate under a head of 196 feet, water being carried by 17,800 feet of flume line to the penstocks. Good storage facilities are afforded, and no serious interference from frazil or anchor ice is anticipated.

The initial capacity of the plant will be 1,600 to 2,000 h.p., and provision is being made for its ultimate extension to 10,000 h.p. The cost of this initial undertaking is estimated at \$237,600. The ultimate development will probably increase the cost by \$250,000 to \$300,000. Power will be generated at 2,200 volts, 3 phase, 60 cycles,

\* [Note.—This plant was completed in 1914. See *The Canadian Engineer*, Nov. 5, 1914.—Editor.]