

The Great Turn-off

Three times in the last fifty odd years, major rockfalls have dumped boulders at the foot of the American Falls. The last big slide was in December, 1959.

Some 280,000 cubic yards of boulders and smaller rubble, called talus, jut through the water curtain. Some people think the talus detracts from the beauty of the Falls and some think it adds a natural beauty of its own.

In 1967 the governments of the United States and Canada asked the International Joint Commission to consider ways to remove the talus and retard erosion. The Commission established the American Falls International Board to do the job.

In 1969 the U.S. Corps of Engineers blocked the right fork of the Niagara River with a cofferdam, cutting off the flow to the American Falls.

The naked crest appeared, chipped and shattered, and below it the formidable slope of talus emerged, reaching upward for twenty-five to fifty feet.

The Falls were photographed and mapped thoroughly, showing rock fractures and joints. Forty-six holes, averaging over a hundred feet deep, were bored in the face and crest. Piezometers were installed to measure water pressures and a massive amount of data was compiled, analyzed and correlated.

The small islands in the channel were irrigated to protect vegetation, and the shale face of the falls was kept wet by sprinklers.

The talus cobbles and boulders were measured and studied. Their depth was sounded by a

seismic survey, and they were found to be resting on bedrock ledges up to sixty-five feet above the water level of the Maid-of-the-Mist Pool.

A model of the Falls one/fiftieth the actual size was built at Ontario Hydro's Islington Lab. It included most of the channel above the Falls and part of the Maid-of-the-Mist Pool. Separate talus blocks were fabricated to permit their ready removal. The turbulence, mist, illuminations and volumes of water were reproduced exactly.

The cofferdam was removed on November 25, 1969, slightly more than five months after it had been put in place.

The Board studied the model with water falling and the talus in place, with the talus removed and partly removed, and with much of the talus slope submerged in the Maid-of-the-Mist Pool. It displayed the model in a variety of modes to the public and solicited opinions by distributing prepaid postcards. It convoked a seminar of environmentalists and landscape architects to consider the positive and negative aspects of talus removal.

It then reported to the I.J.C., which, after appropriate consideration, decided to leave the Falls and talus pretty much as they were. The Commission decided that:

—It was possible to remove the talus but not desirable. The removal would be irreversible (it might take 500 years for the talus to build up to its present proportions) and costly. It would change the majestic winter appearance of the Falls when ice builds up on the huge blocks of rock.

—The erosion of the crest of the Falls should not be arrested. It would cost an estimated \$26 million and would replace the natural rough grandeur of the Falls with an artificial waterfall in a formal park.

The War of 1812

Some of the bloodiest and least decisive battles in the War of 1812 were fought in the Niagara Peninsula.

On October 13, 1812, American forces attacked the British garrison at Queenston, killing General Isaac Brock.

In April, 1813, Americans under General Henry Dearborn invaded the Peninsula.

In July, 1814, the Americans under General Jacob Brown took Fort Erie and repulsed General Phineas Riall at Chippawa.

General Riall and General Brown and their troops then fought an indecisive battle at Lundy Lane with heavy losses—the British had 878 casualties, the Americans 850.

In August, 1814, the British under General Gordon Drummond attacked Fort Erie unsuccessfully, suffering 900 casualties. The next month the Americans came out of the Fort and attacked the British, each side losing over 500 men. The

Treaty of Ghent, signed on December 24, 1814, restored the Peninsula to peace and its former boundaries.



The Battle of Queenston, October 13, 1812.