

TWENTY-FOURTH ANNUAL REPORT

OF THE

COMMISSIONERS

FOR THE

Queen Victoria Niagara Falls Park

1909

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO



TORONTO :

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COMMISSIONERS FOR THE QUEEN VICTORIA NIAGARA
FALLS PARK.

JOHN W. LANGMUIR, Chairman.
GEORGE H. WILKES.
P. W. ELLIS
COLONEL L. CLARKE RAYMOND, K.C.
WILLIAM L. DORAN.
LIONEL H. CLARKE.

JOHN H. JACKSON, C.E.,
Superintendent.
J. HARRISON PEW,
Assistant Superintendent.
HENRY J. MOORE,
Chief Gardener.

PARLIAMENT BUILDINGS,
TORONTO, March 3rd, 1910.

*To the Honourable JOHN MORISON GIBSON, K.C., LL.D., Lieutenant-Governor of
the Province of Ontario.*

MAY IT PLEASE YOUR HONOUR:

I beg to submit to you herewith the Twenty-fourth Annual Report of the
Queen Victoria Niagara Falls Park Commission, 1909.

I have the honour to be,

Your Honour's most obedient servant,

W. J. HANNA,
Provincial Secretary.

To the Honourable W. J. HANNA, K.C., M.P.P., Provincial Secretary, Province of Ontario, Parliament Buildings, Toronto.

SIR,—I have the honour to transmit herewith for presentation to the Legislature of Ontario the Twenty-fourth Annual Report of the Commissioners for the Queen Victoria Niagara Falls Park (being for the year ended 31st December, 1909), together with statements of receipts and expenditures and other documents connected with the Report.

I have the honour to be, Sir,

Your obedient servant,

J. W. LANGMUIR,

Chairman.

TWENTY-FOURTH ANNUAL REPORT

OF THE

Commissioners of the Queen Victoria Niagara Falls Park.

*To the Honourable JOHN MORISON GIBSON, K.C., LL.D., Lieutenant-Governor of
the Province of Ontario.*

MAY IT PLEASE YOUR HONOUR:

The Commissioners of the Queen Victoria Niagara Falls Park beg to submit their Twenty-fourth Annual Report, to which is appended statement of Receipts and Expenditures for the year 1909.

The report of the Park Superintendent, showing the character and extent of the various works and improvements carried on in the several Parks and connecting lengths vested in the Commissioners along the bank of the Niagara River between Lake Erie and Queenston Heights, together with the text of all contracts entered into by the Commissioners during the year, will be found in the appendix to the Report.

NIAGARA RIVER BOULEVARD.

Reference has been made in previous reports of the Commissioners to the construction of a Boulevard or Esplanade between Bridgeburg and the southealy end of Niagara Falls Park. The works connected with this undertaking comprise the complete protection of the shore line of the river against erosion at all points: the acquirement of additional land necessary to widen the Reserve or Boulevard to one hundred feet; the building of bridges over the creeks and water courses flowing into the River and the construction of a high class macadam road from Bridgeburg to the head of the Park, a distance of sixteen miles. Up to the 31st December, 1909, there had been expended on these operations the sum of \$121,857.92; and in order to complete the undertaking it became necessary to ask the sanction of the Legislature for the issue of additional debentures to the extent of \$200,000, making \$300,000 in all for the completion of the work.

The Commissioners confidently hoped that at least one-half of the macadam roadway on the Boulevard would have been placed under contract before the close of 1909, and, having regard to the fact that a considerable portion of the land required for bringing the width up to one hundred feet had been purchased and taken possession of before the close of 1908, it was but reasonable to expect that little difficulty would have been experienced in closing with the remaining owners. The prices offered were acknowledged by expert valutors to be fair and just, apart entirely from a consideration of the contemplated improvements which would greatly enhance the value of the lands fronting on the Boulevard. Notwithstanding that great patience has been exercised in the negotiations for acquirement and that every effort has been made to reach an equitable adjustment without proceeding to expropriation, there still remains at the close of the year a large percentage of frontage to be purchased before actual construction can be proceeded with.

Seeing that the efforts of the Commissioners to acquire the lands at reasonable prices have proved fruitless, it only remains to commence expropriation proceedings,

To that end the plans for all the unpurchased frontage have been prepared and will at once be filed. The two sections of roadway which were placed under contract last year have been completed and are excellent specimens of macadam road construction with proper and efficient drainage.

The shore protection of rip rap stone work was continued during 1909 at short lengths where the river currents made it necessary, and it is satisfactory to note that this class of protection against erosion is proving effective. Some additional lengths of the shore line will require to be completed in the same way during the current year.

The location of the Boulevard connection between the southerly limit of the Park proper and the Village of Chippawa received careful consideration from the Commissioners with the result that the land for this new and important entrance to Queen Victoria Niagara Falls Park is being acquired south of and adjoining the lands of the International Railway right of way. It was originally contemplated to make the connection along the shore of the river, using for the roadbed the material excavated from the Power Company construction, but, as the Chippawa River is part of the Canal System of the Dominion, and even if the excavated material had been available, the great cost of placing a drawbridge over the River and the future maintenance of the same would have rendered the carrying out of the plan not only difficult but exceedingly expensive. It was therefore finally decided to make the connection between the head of the Park and Chippawa over the high land running parallel with the International Railway, which will give a more extensive view of the Upper River and Rapids and will at the same time enable a better entrance to be made to the head of the Park.

The contract for this portion of the Boulevard, comprising about a mile, has been accepted and will be proceeded with at the opening of the Spring. There will then remain the short length through the Village of Chippawa to be arranged for between the Commissioners and that Municipality which, when finished, will complete about three miles of the new roadway running southerly from the head of the Park.

QUEEN VICTORIA NIAGARA FALLS PARK.

Early in the year an improved system of water supply for the northerly portion of the Park proper was decided on in order to increase the facilities for more effective lawn watering. When the contract for construction was about to be let the City of Niagara Falls approached the Commissioners with a request to be allowed to run a new and enlarged main through the Park in order to supply the increased wants of the City. It was suggested by the City representatives that the requirements of the Park might be better served by combining the proposed system with the new and enlarged City main. After careful consideration it was decided that the supply of water for the Park would be more effectively accomplished by such combination and an agreement was accordingly executed to give effect to the arrangement. The new pipe line will give an adequate supply of water for Park purposes for all time. The text of the agreement will be found in the Appendix.

GREENHOUSES WITH CONSERVATORIES.

The project of constructing spacious greenhouses with conservatories has been under the consideration of the Commissioners for several years. The most appropriate site for the building is the space midway between the power houses of the Canadian Niagara Power Company and the Electrical Development Company. This site is in full view of the Upper Rapids and has the additional advantage of being

the widest portion of the Park proper. Designs have been prepared for improving the whole of this part of the park from the shore line of the River to the slope of the bank. Unfortunately, however, the Ontario Power Company commenced to lay down its second pipe, necessitating the breaking up of a large portion of the surface of the ground proposed to be dealt with, thus rendering it not only impossible to carry out the improvements contemplated but also rendering it necessary to postpone the carrying out of the designs for the greenhouses with conservatories on this site. In order to supply the growing needs of the Park proper and the outlying areas of the Park system temporary space had to be provided on the present site of the greenhouses, as well as for additional glass surface.

If this great historic park is to keep pace with the great parks on this continent in this most attractive feature of park decoration, it is quite evident that the construction of extensive greenhouses with conservatories cannot longer be delayed, and it may become necessary to select another location for the purpose than the one between the Canadian Niagara Power Company and the Electrical Development Company.

It is greatly to be regretted that the development of the aesthetic features of the southerly end of the Park has to give way to the utilitarian or commercial requirements in the generation of power, or that the two could not have been simultaneously carried out. After a period of rest during which the work of restoration was favourably progressing and a large number of trees and shrubs had been planted and carefully nurtured, the work was not only arrested but much plant life was lost by the excavations for the power works of the Ontario Power Company. In the excavations for laying the enormous pipe of eighteen feet in diameter the limits of surface disturbance are very wide and necessarily extend much beyond the trench required for laying the pipe.

Pending the completion of the works connected with the Ontario Power Company in the southerly portion of the Park, which will enable the restoration and planting of that part of the Park proper to be proceeded with, the efforts of the Chief Gardener will be directed to improvements in the northerly part of the pleasure grounds by the removal of trees and shrubs where they have become too dense, and the opening up of vistas. It is intended also to introduce a new feature of rock gardening along the slope of one of the small ravines.

The Park approach at the north gateway widened last year and macadamized under an agreement with the City of Niagara Falls has been further improved by the building of a neat and substantial cement walk with new guard rail from the Upper Steel Arch Bridge to Ferry Road, the new grade conforming to the new elevation of both roadway and railway tracks.

THE NIAGARA FALLS PARK SYSTEM.

The Parks and outlying properties now under the supervision of the Commissioners comprise:

1. Queen Victoria Niagara Falls Park proper, having an area of 196 acres.
2. Queenston Heights, containing 88 acres.
3. Niagara Glen and Whirlpool Point, containing 75 acres.
4. The Old Fort Grounds at Fort Erie, containing 17 acres.
5. Butler's Burying Ground, 1 acre.

6. Lundy's Lane Burying Ground, 3 acres.

7. The Chain Reserve along the Niagara River from the Park to Niagara-on-the-Lake, a distance of 13 miles, together with all the ungranted lands lying between the Reserve and the water's edge, 260 acres.

8. The Chain Reserve along the Niagara River from Chippawa to Fort Erie, a distance of 16 miles, 100 acres.

All of these Parks and outside areas have been efficiently maintained and generally improved during the year, as more particularly set out in the Report of the Superintendent.

QUEENSTON HEIGHTS.

At Queenston Heights the suggested changes in the location of the entrance gates have been completed and to this change, along with other improvements, are due the large increase in the number of visitors to this most attractive Park.

Travellers to this Park have been a good deal annoyed by the operations of certain vendors of souvenirs, post cards, etc., on the roadway fronting the Monument Grounds. These persons, although licensed by the County of Lincoln, are in no way amenable to Park regulations. Efforts are now being made to secure jurisdiction over this portion of the old Military Reserve at Queenston Heights.

NIAGARA GLEN.

This resort continues to be a great attraction to visitors, although much damage was done during the ice jam in the early part of April. The northerly limit of the area was completely swept of trees and shrubs by the action of the ice in passing down the Gorge, and much time was spent in repairing the paths and other portions of the Glen during the past summer. It is quite evident, however, that the great beauties of this charming spot will not be appreciated until an incline is erected at Whirlpool Point and another at the northerly end of the Glen in order that visitors may have easy access to the banks of the River.

BUTLER'S BURYING GROUND.

After considerable negotiation the plot of ground known as "Butler's Burying Ground" has been purchased as authorized by the Legislature and a right of way to it has been acquired. The plot has been fenced and this year works of restoration and improvements will be carried out.

LUNDY'S LANE.

For some years the Burying Grounds at Lundy's Lane on the old battle ground have been in a neglected and unkempt condition, due partially to the Trustees having no assured revenue for the purpose of maintenance. At the last Session of the Legislature it was proposed that this sacred spot should be placed under the care of the Commissioners so that it might be presentable in appearance to the many visitors both from Canada and the United States who yearly come to see where the brave men of 1814 fought and fell. While the Act was not passed owing to the lateness of its introduction the Commissioners were authorized to prepare the way for assuming control by clearing the area of refuse and repairing the

fences. Considerable money will require to be spent here, for many of the old grave-stones are completely off the foundations and present a very dilapidated appearance.

POWER COMPANY EXTENSIONS.

In May last the Canadian Niagara Power Company informed the Commissioners that the increased demand for power necessitated the installation of an additional unit in connection with the further development of its plant. This request was approved of under the terms of their agreement and the construction of the additional length of power house has been completed. The total electrical equipment of the Canadian Niagara Power Company will now comprise five units of 10,000 H.P. each and one unit of 12,500 H.P., or a total development of 62,500 H.P.

Towards the end of the year the Ontario Power Company made application for permission to increase its output of electrical energy by laying down a second conduit from its forebay at the Dufferin Islands through the Park to the Power House site; and also to make a corresponding addition to the hydraulic and electrical plant under the bank of the River below the Falls.

This Company has the right under its agreement with the Commissioners to withdraw from the river a quantity of water equivalent to the volume that will pass through three pipes each of eighteen feet diameter, only one of which pipes has been, up to this date, installed. Some points of difference arose between the Commissioners and the Company in the details of construction to be followed, but these were amicably adjusted, whereupon authority was granted to proceed with laying down the second pipe line.

With the completion of these works the Ontario Power Company will have a capacity of about 90,000 electrical horse power, comprising three units of 10,000 each and five units of 12,000 each. With the demand for power constantly increasing and the near approach of the time for supplying the Hydro Electric Power Commission with electrical energy for Provincial distribution it is expected that this company will at once erect two additional units of 12,000 horse power each.

The Electrical Development Company has now an equipment consisting of four units of 10,700 horse power each, and it is stated that they are contracting for three additional units of 14,000 horse power each.

PAYMENT FOR EXCESS POWER.

The verbatim report of a conference held in connection with the question of payment for excess power generated by the various power companies was incorporated in last year's Report, but inasmuch as the discussion which took place at the Conference did not have the effect of bringing any closer together the widely differing contentions of the Companies and the Commissioners, litigation was determined upon and the suit is still before the Courts.

In illustration of the difference between the methods adopted for these payments for power generated in excess of the amount stated in the agreements with the companies, the following schedule shows the amounts of such difference to this date:

Six months ending.	C.N.P. Co.		Ont. P. Co.		Elec. Dev. Co.	
	Average.	Peak.	Average.	Peak.	Average.	Peak.
April 30th, 1906. }	\$ 2,823 00	\$ 8,087 99				
Oct. 31st, 1906. }						
April 30th, 1907. . .	5,196 18	8,146 95				
Oct. 30th, 1907. . .	8,636 57	10,882 16				
April 30th, 1908. . .	8,700 26	12,459 15				
Oct. 30th, 1908. . .	9,923 89	13,828 81				
April 30th, 1909. . .	10,125 40	14,718 79				
Oct. 30th, 1909. . .	11,360 15	14,978 08				
	\$56,765 45		\$83,101 93			
March 31st, 1908. . .				\$ 1,136 54		
Sept. 30th, 1908. . .			\$ 88 50	3,474 80		
March 31st, 1909. . .			5,822 02	8,773 08		
Sept. 30th, 1909. . .			4,413 00	10,332 59		
			\$10,323 52		\$23,717 01	
Aug. 1st, 1907.						\$ 2,521 11
Feb. 1st, 1908.					\$ 662 20	5,794 68
Aug. 1st 1908.					1,602 00	8,660 88
Feb. 1st, 1908.					1,787 50	10,889 72
Aug. 1st, 1909.					4,106 00	12,008 92
					\$8,157 70	
					\$39,875 131	

HIGH AND LOW WATER.

The early months of 1909 were notable for some of the most phenomenal physical occurrences that have taken place in the Niagara River and Gorge within the last half century. The month of January, with its usual low water conditions, was followed in February by the almost complete withdrawal of water from the American Niagara Falls, the immediate cause being an ice jam which formed as a result of the exceedingly low water at the head of Goat Island, thus practically closing off the American Falls. This occurrence took place on Saturday the 13th February, and during the Sunday, Monday and Tuesday following only a few trickling streams were in evidence instead of the normal thousand feet of rushing water. A similar event happened in 1848 but did not occur since that time until 1903, and then to a partial extent only.

Following these phenomenal conditions which, however, were free from damage, the month of April brought the highest water levels attained within the knowledge of the present generation. A wind storm of very high velocity swept over the range of the Great Lakes, breaking up the enormous ice fields, which swiftly floated down the Rapids and Lower Gorge till the mass became blocked at the mouth of the river, and within four days the whole length from Niagara-on-the-Lake to the Horseshoe Fall, with the exception of the Lower Rapids, was choked, and remained so until the end of April. The difference between the level of the water in the Lower Gorge in February and April was over 50 feet. On Saturday, April 10th, the water level rose to such an extent that the power house of the Ontario Power Company immediately under the falls was flooded and the generators entirely submerged. Structures and trees along the whole of the twelve miles from Lake Ontario were damaged and uprooted to an extent, in many cases, beyond repair.

At the request of the Government, the Commission entertained the Australian Press delegates to the convention in London, as they were passing across the continent in May last. A number of prominent Editors and Members of Parliament from the southern colony were present, and manifested great pleasure and much interest in viewing the great cataract and its surroundings.

In October a distinguished party of Japanese, comprising the Imperial Industrial Commission of Japan, who came to this continent to study American methods of manufacture, availed themselves of a visit to Niagara Falls, New York, to cross to the Canadian side, and were entertained by the Dominion Government, with the assistance of the Commissioners.

FINANCIAL STATEMENTS.

An examination of the financial statements for the year, herewith attached, shows that the gross receipts from all sources for the year (exclusive of the refund from the sale of the Niagara River Boulevard Debentures) amount to \$113,942.80, as compared with \$99,975.55 in 1908, or an increase of \$13,967.25. An analysis of these figures shows that this additional revenue was derived from rentals received from the Power Companies for excess generation, namely, \$10,235.02 from the Ontario Power Company, as compared with \$88.50 in 1908; and \$21,485.55 from the Canadian Niagara Power Company, as against \$18,624.15 in 1908. There is also an increase in revenue received from tolls from the ascent of Brock's Monument to the extent of \$476.75.

Immediately after the accounts for the year were closed, payment for excess rental was received from the Electrical Development Company to the amount of \$8,157.70, but this receipt does not appear in this year's statement. Practically, therefore, the increased revenue over 1908 is \$22,124.95.

An illustration is given in the text of the report of the results of computation on the basis of the varying views held by the Commission and the Power Companies in respect to the method of computing for the payment for excess rental. From this statement it will be seen that since the period that excess development was reached by the various companies the Commissioners should have received under the Peak system \$146,694.25 instead of \$75,246.67, a difference of \$71,447.58. Pending a final decision by the Courts on this question, the three Power Companies are now paying the amounts that they admit to be due under the average principle, and such payments are made by the Companies and received by the Commissioners "without prejudice" to the rights of either party.

In the capital and maintenance statements it will be observed that there is a considerable decrease in the expenditures for wages for permanent works, while the cost of material remained about the same. A new item in these expenditures is for lighting plant. This new lighting system greatly improves the appearance of the Park at night.

The payments during the year for works connected with the Boulevard amounted to \$53,573.83, which will, of course, be recouped to ordinary revenue receipts when the new debentures are disposed of.

All of which is respectfully submitted.

J. W. LANGMUIR, *Chairman*
GEORGE H. WILKES.
P. W. ELLIS.
L. CLARKE RAYMOND.
WILLIAM L. DORAN.
L. H. CLARKE.

QUEEN VICTORIA NIAGARA FALLS PARK.

FINANCIAL REPORT.

1909.

RECEIPTS.

Ontario Power Company, rental	\$30,000 00
Ontario Power Company, excess rental	10,235 02
Canadian Niagara Power Company, rental	15,000 00
Canadian Niagara Power Company, excess rental	21,485 55
Electrical Development Company, rental	15,000 00
Electrical Development Company, excess rental
International Railway Company, rental	10,000 00
Zybach and Company, rental,	9,000 00
Refund from sale of Niagara River Boulevard Debentures, being total cost of Boulevard to July 30th, 1909, expended out of ordinary revenue..	94,095 25
Brock's Monument tolls	1,478 25
Wharf privileges	511 00
Sundries	1,232 98
	<hr/>
	\$208,038 05

EXPENDITURES.

Paid Imperial Bank overdraft January 1st, 1909 \$73,722 50

Capital Account:—

Wages, Permanent Works:—

New roads	\$955 65
Queenston Gateway	431 68
Miscellaneous improvements	760 93
Butler's Burying Ground	75 00
	<hr/>
	\$2,223 26

Materials, Permanent Works:—

Iron Rail Fence to Whirlpool Point	\$820 30
Queenston Restaurant Building alterations	817 29
Queenston Gateway and Entrance	697 25
New roads	551 28
Butler's Burying Ground	478 26
Miscellaneous improvements	621 80
Furnishings	109 85
Queenston Hill	100 00
Queenston Flag Staff	57 55
Queenston lands	1 54
	<hr/>
	\$4,255 12

Legal	1,220 00
Lighting Park	5,475 05
Review on Dr. Spencer's Report	1,750 00
	<hr/>
	\$14,923 43

Niagara River Boulevard to July 30th, 1909:—

Lands, including legal	\$11,538 12
Roadway construction, drains, etc.	9,418 35
Stone Protection Works	4,622 87
Bridges	232 32
	<hr/>
	\$25,811 16

Amount carried forward \$114,457 09

Maintenance Account:—

Salaries, Office and Clerical Staff for Park System.	\$5,558 50
Salaries, Gardeners and Constables for Park System	9,899 50
Wages, Laborers and Teamsters:	
Queen Victoria Park	16,882 22

Queenston Heights Park	1,515 47	
Niagara Glen	736 57	
Lundy's Lane Burying Ground	485 65	
Boulevard	36 00	
Materials:		
Queen Victoria Park	4,768 57	
Queenston Heights Park	283 43	
Niagara Glen	90 73	
Butler's Burying Ground	8 80	
Fort Erie	91	
Office Expenses:		
Travelling expenses	715 00	
Supplies, postage, telegrams, etc.	674 11	
Commissioners' expenses (travelling, etc.)	615 81	
Miscellaneous	798 35	
		\$43,069 62
Monthly interest on overdraft		2,563 08
Interest on debentures		24,167 53
Balance in Imperial Bank, Dec. 31, 1909		23,780 68
Total		\$208,038 05

NIAGARA RIVER BOULEVARD.

1909.

July 31. To amount expended to date on Boulevard:		
Lands, including legal	\$26,863 07	
Roadway	30,071 54	
Protection Works	25,936 40	
Bridges	4,547 10	
		87,418 11
Interest on above expenditure		6,677 14
		\$94,095 25
Dec. 31. To amount expended since July 31st to date:		
Roadway construction	\$19,992 73	
Lands, including legal	6,977 69	
Stone protection	500 00	
		\$27,470 42
Interest on above expenditure		292 25
Total expenditure to date		\$121,857 92
July 2. By proceeds of debenture issue	\$93,750 00	
By interest accrued	620 24	
		94,370 24
Overdraft in Imperial Bank, Dec. 31st, 1909		\$27,487 68

SPECIAL ACCOUNT.

1909.

For maintaining water levels at Intake of Canadian Niagara Power Company and the International Railway Company:

January 31, 1903. Deposited	\$25,000 00
December 30, 1905. Interest to date	2,288 41
	\$27,288 41
Less cost of submerged dam	2,189 32
	\$25,099 09
November 1, 1909. Interest to date	3,034 52
	\$28,133 61

APPENDIX A.

REPORT OF THE PARK SUPERINTENDENT.

To the Commissioners of the Queen Victoria Niagara Falls Park.

GENTLEMEN,—I submit herewith the Annual Report for the year 1909 of works carried on in the Queen Victoria Park System under the direction of the Board.

The early months of the year when winter conditions usually obtain were marked by a constantly rising and falling temperature and the Spring was more than ordinarily protracted with many frosts of unusual severity rendering the conditions under which the year's work was commenced anything but encouraging. The lawns and beds were wet and the roads badly cut and rutted while considerable of the planting undertaken several years back was destroyed. As a climax to these unfavourable circumstances the Niagara Frontier was swept on April 7th by a most severe wind storm of cyclone proportions doing damage to buildings and trees all along its course. Many of the larger specimen trees were uprooted and pines and cedars at Dufferin Islands, along the edge of the cliff towards Niagara Glen and also at Queenston, where the soil lies but shallow on the bed rock, were blown down as a frail shrub before the wind. The damage to trees and structures was small indeed, however, to the effects in evidence several days later, for the great ice fields upon Lake Erie had been broken up and suddenly piled into the lower gorge on the way to Lake Ontario. Tons upon tons were precipitated over the brink of the Falls with small danger till the mass blocked at a shoal beyond the mouth of the Niagara. Gradually the oncoming floes choked the river course till the whole length to the Queen Victoria Park was one immovable surface of ice cakes ever becoming more tightly wedged against the shore lines, and ever becoming thicker with the running ice from the upper reaches of the river. Nor was the danger confined to the scouring action of the mass for with decreased area of outflow the water began to rise in the gorge until the ice surface presented a mountainous appearance many feet above the normal winter conditions. Finally it reached a maximum on April 10th, when the lower works of the power companies were endangered, and the power house of the Ontario Power Company was flooded to the level of the top of the generators.

While causing tremendous anxiety for weeks after this occurrence no such height of water level was recorded nor were the immense works again submerged. Such was the flood of 1909 which will be of record as the highest reached by the Niagara River within the memory of man to this date. The damage by scouring of the shore lines and banks is irreparable and some years will pass before the marked evidences of the terrible pressure exerted are wiped out. One whole bench of trees at Niagara Glen were completely sheared off and destroyed.

During January and February, the low water period, some difficulty was experienced at the City Pumping Station from the lack of sufficient water to operate both the hydraulic machinery and the pumps. By far the lowest of these periods occurred in February when on Saturday, the 13th, ice was enabled to completely block the shallow American channel between Goat Island and the main shore. From the 14th to the 16th, the American Falls were practically dry and many adventurous persons walked across the rocky channel. On the Canadian side the International Railway power plant was out of commission and ice would stand in the bottom of the Canadian Niagara Power Company's ice run. This was the minimum low water level since 1848 and within three months was experienced the lowest and highest levels within a generation.

THE PARK PROPER.

With the opening of Spring considerably later than usual much work had to be crowded into the first weeks of dry weather. The roads were found to be in very bad repair and the surface was completely broken through from intermittent frost action. Repair work was commenced in May and completed by the first week in June. The main foot path from the entrance to join the concrete walk at the Administration Building was given a coating of cinders and well rolled to take the place of stone dust which proved objectionable from the continual spray which formed a spongy mass of the surface. This will require to be done with several paths south of the Horseshoe Falls, and an extension of the brick pavement to the intake of the International Railway would greatly improve conditions for carriage traffic. The roadways from this point are for the most part outside of the spray zone.

Much of the surfacing from the Falls to the Dufferin Islands has been done with no thought of grade or level, and the main driveway requires trimming up both in plan and section to present a pleasing effect to the eye. It is only late this last Fall that this work has been taken up owing to the pressing needs of other parts of the growing system under our care. But now the abrupt changes in grade are receiving attention and the curves flattened to a gentle sweep. Much thought is being given to this narrow space nearly a mile in length in an endeavour by sufficient planting of high class design to attract the attention of visitors from the unsightly works and excavations in the rear that must go on for extra power development and for this purpose the piles of rock and earth have been kept as much in the background as possible to give opportunity for working out such a plan.

It will be many months before the land now occupied by buildings, material, plant and excavated rock and earth will be available for park work and the several years gained in planting of trees and shrubs are completely lost, so that while it was reported last year that the whole of the park area was under cultivation again, one-third of the space is now given over and another start will require to be made.

In the northern area from the Administration Building the trees and shrubs have for some time been altogether too crowded for effective display and much damage is resulting both to the larger and smaller specimens. Some work of transplanting has been accomplished but much still remains to be done, and the staff will be kept busy as soon as this work can be performed in the Spring. In this area we are now doing a great amount of tree pruning in the attempt to prevent the spread of disease so readily carried from affected branches to other parts and to distant specimens. When limbs have been cut and left without treatment we have invariably found disease spreading to the trunk and their short ends must be again cut and scraped out and treated, and sometimes concreted to keep out the moisture. All of this work is being carried on diligently, and the effect will be seen and appreciated.

To connect with the park path along the edge of the cliff the old wooden walk between the Upper Steel Arch Bridge and the entrance has been renewed in concrete to conform with the change in grade of the Electric Railway tracks. Solidly embedded in the concrete is a substantial pipe railing with woven wire along the foot, and taken as a whole the approach to the park is now in accord with the surroundings.

One of the works of a permanent nature partially completed and reported last year was the system of lighting, along the iron trolley poles of the International Railway. This has proved very effective and fills a much felt want for the space adjacent to the railway line. Several additions could very well be made to points of interest and with no large outlay for capital cost or maintenance.

One of the most attractive features of Park work in so far as visitors are concerned comes from the judicious planting of herbaceous material and indeed many persons are willing to give praise or withhold it according to the pleasure they derive from the bedding design and the careful blend of the colour scheme. To prepare for the summer season propagating houses of spacious proportions must be within reach and the contents carefully planned in advance for use in the early spring if any degree of success is to be attained. Add to these, conservatories for showing to advantage various winter blooming plants and tropical species not inured to our rigorous climate and horticulture may be made an interesting and instructive department, amply repaying the cost of the skilled workmen needed in the cultivation of plant life. Our facilities are and have been inadequate for some years while the quantity of bedding material required is increasing greatly with the extension of the park system. Unfortunately the time is not opportune for constructing a new and modern greenhouse plant, owing to the location coming within the area required for power plant extension. Temporary wooden houses 28 feet by 40 feet are therefore being added to the present group to give space for immediate needs and several years to come. These are light and roomy for their use but will be razed when the larger question comes up and a new plant is constructed.

While the majority of visitors think only of the pleasure derived from beautiful effects in plant and shrub life, some come as students of nature and many others would seek information if the planting were so arranged and properly labelled as to readily show the genus and species of a tree or shrub, with its uses. Some attempt has been made in this direction in the past but not of a systematic form and it is now desirable to make a beginning designed to extend to all parts of the outlying areas. A sheet lead label with names stamped by steel die would be durable and neat as well as moderate in cost.

To advance this educational feature it would be very desirable to secure the services of young men capable of being trained and ready to learn the business of horticulture in the various phases that are met with in such a system of parks as the Queen Victoria Niagara Falls Park. It does not appear that the opportunities in this honourable avocation are realized by Canadians notwithstanding that well trained men are constantly being sought out and good positions remain open or are indifferently filled from lack of skilled men to choose from. We do not pay the attention to training that is given in England, nor is the youth encouraged to make a life work of plant culture and botanical knowledge. Why could not a system of training be adopted, beginning in a small way, whereby qualified gardeners could be made available for those requiring such services? True, it would be small indeed to start with but I believe that it would be successful and this Government Park could be made to take an authoritative position in horticultural work just as the Guelph College does in Agriculture. Without increasing the staff as it is now constituted some theory could be imparted and practical work taught to several students and the larger things would come in proper time as progress was made. But above all there would be men capable of taking up the larger things that will develop with the next few years.

ONTARIO POWER COMPANY.

In the month of September after the close of the summer season the Ontario Power Company, having obtained permission to proceed with the second stage of its power development, commenced active operations to excavate the trench for laying No. 2 conduit required in supplying the water for another 60,000 horsepower. This extension was rendered necessary for the constantly increasing load in the development of its business and particularly to supply the current for the Ontario Government scheme to transmit power to the net-work of municipalities west of Niagara Falls that are availing themselves of the conditions made possible by the legislation creating the Hydro-Electric Power Commission. The works now under way contemplate the construction of another conduit of similar capacity to No. 1 conduit leading from the Forebay already built at Dufferin Islands through the park to the vicinity of the Administration Building. Thence the water is led by distributors to the water wheels in the Power House in the gorge at level of the lower river.

The only important alteration in design to note is in the section of the conduit and the material to be used in the construction. No. 1 conduit was circular in form, eighteen feet in diameter, and built of steel plates riveted together with a concrete envelope about the exterior. The new conduit will be oblate in section, horizontal axis 19 ft. 3 in., vertical axis 16ft. 6in., and 254.5 square feet in area, equal to an eighteen foot diameter circle, and constructed of concrete reinforced with steel, the largest pipe to be attempted in this material.

The generator station will be extended northerly to house the new units run from the second pipe, and with the completion of the present installation two-thirds of the ultimate capacity of the plant will have been reached and the head works are already complete for the full requirements.

The attempt is being made to accomplish the heavy part of the construction before the opening of the season this year, and to have water running by the month of July and to this end the organization was completed quickly and kept at high pressure all during the severe winter with the rock excavation in the heavy cuts at north and south ends. The power used for construction purposes is for the most part electric and where the steam engine is necessary, for train hauling, coke and anthracite coal are utilized to avoid the smoke and dirt nuisance.

QUEENSTON HEIGHTS.

This popular resort appreciated by local visitors and tourists from a distance has been kept up to its usual state of attractiveness and increases in favour with all. Some improvements of a permanent nature have been completed, much to the betterment of the general appearance of the grounds. The cut stone gateway at the Lodge Building very infrequently visited has been removed and set up on substantial foundations at the pedestrian entrance to the park and is an imposing structure in full view of Belt Line cars as they pass around the Gorge. The foot-path formerly leading from an entrance through the shrubs has been reduced in grade and widened so as not to become congested by the traffic. New drainage has been constructed and the pathway newly surfaced and oiled. The spring water system has been extended to the hot water supply house and a pump installed for service, while the small restaurant building has had a kitchen added with refrigerator accommodation. The large shelter but recently erected will require some atten-

tion to be effective in time of heavy rain storms, when it is swept by strong winds. Either canvas drop awnings or movable sashes can be used, and if the latter it would be of service for storing materials during the winter season. Some planting and sodding has been done at the entrance, and during the late fall and winter the trees have been attended to. An avenue of young maples that the wind and lack of stakes has affected were taken in hand, with much promise that the treatment would be successful. The splendid view of the rural district stretching out to Lake Ontario has been opened up and extended east and west to show the escarpment.

The maintenance of the outlying parks constantly presses to the fore with increased demands for thought to improve the areas and funds to repair the yearly wear and tear, and each new road, path or lawn adds to the upkeep charges for all time to come. This will be all the more evident with the completion of the road construction from the Park proper to Bridgeburg, and the taking over of the small plots at Butler's Burying Ground and Lundy's Lane Burying Ground. The work undertaken in the outlying areas has been confined to keeping the premises in order and preserving the grounds and structures from acts of vandalism, but much still remains to be done in planting and landscape design to perfect the whole into a system of parks with boulevard connections bordering the whole of the Niagara Frontier.

Niagara Glen, with its immense wealth of plant specimens, has attracted the botanists of the district and from the surrounding cities to study its flora, and tourists in increasing numbers visit it to view the natural scenery for which it is unsurpassed. In addition to the caretaker, police protection is now provided during the summer months and parties are guided where the intricate paths might lead to confusion and much of the wanton destruction of ferns and flowers by careless parties is avoided. All of the paths have been maintained and the river pathway repaired and built up after the damage from the ice jam in the Spring.

It is desirable to design and plant the small plot at Whirlpool Point overlooking the Whirlpool and the lower rapids, and make it more attractive as a view point. The iron railing protection should be extended for some distance to make it perfectly safe. During the year this iron pipe fence has been continued northerly to the Niagara Falls City boundary and the use of this frontage by large numbers on Sundays is very noticeable.

BOULEVARD.

Although the land purchases along the upper river were very slow in being settled and no new contracts were entered into for constructing the macadam roadway, the two sections awarded in 1908 were pushed to completion during the summer and are now ready for use. Our roadway 30 feet in width has a 6-foot gutter on either side with 18 feet of macadam roadway for traffic. The foundation is large stone laid upon the subgrade excavated to the levels given, and after rolling and compacting a middle course of crushed stone is spread and rolled to place. This is followed by the top course puddled with screenings by means of water and rolled to the grade of the finished roadway. Owing to the length of the work and the large amount of material to move and replace with stone the construction work is necessarily slow and cannot be accelerated as a building may be when the whole

plant can be concentrated at one point. The roadway is being drained in advance of the construction and so designed as to extend when the planting is proceeded with.

All respectfully submitted,

JOHN H. JACKSON,

Superintendent.

APPENDIX B.

AGREEMENT FOR WATER MAIN.

THIS AGREEMENT made this 26th day of March, in the year 1910.

BY AND BETWEEN the Corporation of the City of Niagara Falls, in the Province of Ontario, hereinafter described and styled, The City, and

The Commissioners for the Queen Victoria Niagara Falls Park, hereinafter described and styled the Commissioners.

WITNESSETH that for and in consideration of the sum of Three Thousand One Hundred Dollars paid by the Commissioners to the City, the City doth covenant and agree with the Commissioners subject to the provisions and stipulations hereinafter contained in manner following:

1. That the City will extend as soon as reasonably practicable their water works system into the Park, by means of (1) a main distribution pipe of not less than twelve inches in diameter to extend from a point on the existing main within the Park near the Pump House of the City thence through the Park northerly to join the existing main of the City on Ferry Road, and (2) an auxiliary main of not less than four (4) inches in diameter from a point near the northerly to join the existing main of the City on Ferry Road, and (2) an on the accompanying plan.

2. The said main distribution pipe and the service pipes for Park use and purposes shall be constructed by the City and the cost of maintenance and upkeep of the same shall be borne by the said City so long as the said main distribution pipe shall be used by the City.

3. The location of the said main distribution pipe as hereinbefore described within the Park shall be as pointed out by the Commissioners, and no other location or change of such location shall be made at any time hereafter except by the consent of the Commissioners.

4. In addition to such hydrants as the City may deem to be requisite and necessary the City shall place hydrants and service pipes in the Park at points as marked on the map hereunto attached, as the Commissioners may require, the cost of such hydrants, service pipes and connections to be borne and maintained by the City.

5. The Commissioners shall have the right at any time to obtain a supply of water by a four inch main from the Pump House to the Dufferin Islands, to be put down by and maintained at the cost of the Commissioners for Park purposes.

6. The water to be obtained or supplied by means of the aforesaid works or system shall be free to the Commissioners for Park use and purposes so long as the City shall continue to use such main for the purposes of the City and if at any time the main should be abandoned by the City, the said main with piping and appurtenances shall remain for the use of the Commissioners.

7. The expression for use of Park or for Park purposes shall mean the use of water for all Park buildings, works and grounds, and for the domestic use of

persons employed by the Commissioners in and about the Park, but not to the use and consumption of water by any tenant of the Commissioners or occupant under them in respect of any tenement whereof rental is to be paid or liability incurred for use and occupation.

IN WITNESS WHEREOF the parties hereto have hereunto set their hands and seals the day and year first above written.

THE QUEEN VICTORIA NIAGARA FALLS
PARK COMMISSION,
J. W. LANGMUIR,
Chairman.

(SEAL
The Queen Victoria
Niagara Falls Park

THE CORPORATION OF NIAGARA FALLS
WATER COMMISSION.
O. E. DORES,
Chairman.

(SEAL
Niagara Falls, Ontario.
Water Commission.

APPENDIX C.

AGREEMENT FOR CONDUIT No. 2.

THIS AGREEMENT made the 22nd day of September, 1909,
BETWEEN The Commissioners of the Queen Victoria Niagara Falls Park,
hereinafter called "the Commissioners," of the first part; and

The Ontario Power Company of Niagara Falls, hereinafter called "the Company," of the second part;

WITNESSETH AS FOLLOWS:

1. The Commissioners agree with the Company that the Company may forthwith proceed with the construction of its pipe or Conduit Number 2, from a point at or near its gate house to a point as far north approximately as the northernmost point of the retaining wall surrounding the Company's present overflow building, and may at the same time break and loosen the rock for a distance of approximately twenty-five feet northerly from the northernmost end of the pipe construction now to be proceeded with.

2. The Company agrees with the Commissioners to proceed with the construction of said pipe or Conduit Number 2, in accordance with Plan Number 1 Proposed Intake, dated 10th December, 1902, being one of the plans submitted by the Company for approval to the Commissioners and Lieutenant-Governor of Ontario, and approved by order-in-council of 23rd December, 1902.

3. The Company agrees with the Commissioners that the indemnity contained in the several agreements by the Company to the Commissioners shall be and it is hereby extended to the acts of the Company in respect of such breaking and loosening of rocks and any matters resulting therefrom.

4. The Company agrees with the Commissioners that nothing herein contained shall in any way prejudice, vary or effect any existing obligation of the Company that the location and design of the overflows for pipes Numbers 2 and 3 shall be submitted for the approval of the Commissioners and shall not be proceeded with until such approval is obtained.

IN WITNESS WHEREOF the corporate seal of the Commissioners has been hereunto affixed by the Chairman, who has also signed these presents in certification of due execution hereof by the Commissioners, and the corporate seal of the Company has been hereunto affixed by the President, who has also signed these presents in certification of due execution hereof by the Company on the day and year aforesaid.

SIGNED, SEALED AND DELIVERED:

In the presence of

The Commissioners of the
QUEEN VICTORIA NIAGARA FALLS PARK

J. W. LANGMUIR,

Chairman.

(SEAL)

The Queen Victoria Niagara Falls Park.

THE ONTARIO POWER COMPANY OF
NIAGARA FALLS.

J. J. ALBRIGHT,

President.

(SEAL)

The Ontario Power Company
of Niagara Falls.

Attest.,

R. C. BOARD; Secretary.

RESOLUTION.

WHEREAS the Company intends presently proceeding with the construction of its pipe or Conduit No. 2, from a point at or near its gate house to a point as far north approximately as the northernmost point of the retaining wall surrounding the Company's present overflow building and at the same time intends to break and loosen the rock for a distance of approximately 25 feet northerly from the northernmost end of the pipe construction now to be proceeded with, and the Commissioners of the Queen Victoria Niagara Falls Park have requested that this resolution be passed,

IT IS HEREBY RESOLVED that the construction of said pipe or Conduit No. 2 be in accordance with Plan No. 1, Proposed intake, dated 10th December, 1902, being of the plans submitted by the Company for approval to the Commissioners and Lieutenant-Governor of Ontario and approved by Order-in-Council of 23rd December, 1902; and the breaking and loosening of rock to the extent above mentioned, extending the indemnity contained in the several agreements by the Company to the Commissioners, to the Acts of the Company in respect of such breaking and loosening of rocks and any matters resulting therefrom and any matter herein contained shall not in any way prejudice, vary or affect any existing obligation of the Company that the location and design of the overflows for pipes Nos. 2 and 3 shall be submitted for the approval of the Commissioners and shall not be proceeded with until such approval is obtained.

AND IT IS FURTHER RESOLVED that a certified copy of this resolution be filed with the Commissioners and that this resolution be embodied in an agreement to be executed between the Commissioners and Company.

I, Robert C. Board, Secretary of the Ontario Power Company of Niagara Falls, hereby certify that the foregoing is a true and correct copy of a resolution adopted at a meeting of the Board of Directors duly and regularly called and held at the office of the Company, Buffalo, N.Y., on the 22nd day of September, 1909, at which meeting a quorum was present.

(SEAL)

The Ontario Power Company
of Niagara Falls, Ontario.

ROBT. C. BOARD,
Secretary.

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