History of Water Level Gauges

Lower Great Lakes
and
International Section of the
St. Lawrence River

by
The Coordinating Committee
on
Great Lakes Basic Hydraulic and Hydrologic Data

March 1987

HISTORY OF WATER LEVEL GAUGES

LOWER GREAT LAKES
AND
INTERNATIONAL SECTION OF THE
ST. LAWRENCE RIVER

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LOWER GREAT LAKES

AND

INTERNATIONAL SECTION OF THE

ST. LAWRENCE RIVER

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LAKE ERIE GAUGES

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NIAGARA RIVER GAUGES

HISTORY OF WATER LEVEL GAUGES LOWER GREAT LAKES AND INTERNATIONAL SECTION OF THE ST. LAWRENCE RIVER

INTRODUCTION

Requirement for internationally coordinated hydraulic and hydrologic data. The Great Lakes-St. Lawrence River system extends southerly and easterly from the headwaters of tributary streams in northern Minnesota and western Ontario some 2,000 miles to the Gulf of St. Lawrence in the Atlantic Ocean. The system drains a great interior basin of more than 295,000 square miles to the outlet of Lake Ontario, reaches almost halfway across the North American continent, and borders upon eight states of the United States and two provinces of Canada. This vast series of lakes and rivers is shared by the United States and Canada. The joint use of these waters poses numerous international problems in the solution of which the two countries need coordinated basic data.

Prior to 1953, data pertaining to the hydraulic and hydrologic factors of the Great Lakes and St. Lawrence River were collected and compiled independently by the responsible federal agencies in Canada and the United States, with only superficial and informal correlation of some of the data. As a consequence, the data in many instances were developed on different bases and datum planes and were divergent in many respects. This situation resulted in a large volume of study and evaluation by each country of the data used by the other in the solutions of international problems.

Establishment of international study. The quantity and scope of the international problems were greatly increased by the advent of extremely high lake levels in 1952 and by the imminent power and navigation development in the St. Lawrence River system. Recognizing that continued independent development of the basic data was illogical under the circumstances and that early agreement upon the hydraulic and hydrologic factors was of paramount importance, the Corps of Engineers, United States Army, and the Departments of Transport, Mines and Technical Surveys, and Resources and Development, Canada, opened negotiations early in 1953 for the purpose of establishing a basis for development and acceptance by both countries of identical data. The negotiations culminated in a meeting of representatives of the interested agencies at Ottawa on 7 May 1953.

At the meeting, the Coordinating Committee on Great Lakes Basic Hydraulic and Hydrologic Data was formed to study the problem and to establish a basis of procedure. This Committee was established advisory to the agencies of the United States and Canada who are charged with the responsibility for collecting and compiling the Great Lakes hydraulic and hydrologic data. The Committee was constituted as follows:

CANADA	UNITED STATE
T. M. Patterson Water Resources Division Department of Resources and Development Chairman	G. A. Hathaway Corps of Engineers Department of the Army Chairman
J. E. R. Ross Geodetic Survey of Canada Department of Mines and Technical Surveys	E. W. Nelson Corps of Engineers Department of the Army
D. M. Ripley Special Projects Branch Department of Transport	W. T. Laidly Corps of Engineers Department of the Army

The present membership of the Coordinating Committee is as follows:

CANADA	UNITED STATES
D. F. Witherspoon Inland Waters Directorate Environmental Conservation Service Ontario Region, Environment Canada Chairman	D. J. Leonard Corps of Engineers Department of the Army Chairman
B. J. Tait Ocean and Aquatic Sciences Fisheries and Oceans, Canada	P. C. Morris National Oceanic and Atmospheric Administration Department of Commerce
P. P. Yee Inland Waters Directorate Environmental Conservation Service Ontario Region, Environment Canada Secretary	R. E. Wilshaw Corps of Engineers Department of the Army Secretary

Messrs. C. M. Cross, A. T. Prince, R. H. Smith, and W. D. Forrester have also served as Canadian members of the Committee while Messrs. L. D. Kirshner, F. F. Snyder, H. F. Lawhead, F. A. Blust, B. G. DeCooke, and C. I. Thurlow have served as United States members of the Committee.

Four working groups, designated the River Flow Subcommittee, the Vertical Control Subcommittee, the Lake Levels Subcommittee, and the Physical Data Subcommittee, were formed to assist the Coordinating Committee in its work. These subcommittees were directed to conduct the required technical studies through collaboration of the appropriate agencies of Canada and the United States. In September 1969, the Vertical Control and the Lake Levels Subcommittees were combined into one body known as the Vertical Control-Water Levels

Subcommittee. The Subcommittee was normally composed of three members from Canada and three from the United States. The following persons served as members at various times during the progress of the work reported herein:

CANADA	UNITED STATES
G. C. Dohler	B. G. De Cooke
L. P. Robertson	C. F. Feldscher
B. E. Russell	C. F. Ellingwood
E. A. MacDonald	R. M. Berry
J. M. Murakami	D. R. Rondy
M. H. Quast	H. A. Lippincott
B. J. Tait	R. E. Wilshaw
F. W. Young	C. T. Whalen
R. Gareau	
D. A. St. Jacques	

Authority. The Committee instructed its Vertical Control-Water Level Subcommittee to prepare a report in detail on all gauges used in obtaining water levels of Lakes Erie and Ontario, and their outflow channels.

Purpose and Scope. The purpose of this report is to document the history of the operation of water level gauges on the lower two Great Lakes and their outflow rivers. Detailed information about the water levels available is given for each gauging station. This report supercedes and updates information on water level gauges published earlier in two volumes by the Coordinating Committee.

Acknowledgements. The Coordinating Committee acknowledges and expresses its appreciation of the cooperation received from the Canadian Hydrographic Service, Department of Fisheries and Oceans; the Water Survey of Canada, Department of the Environment; the Detroit District, U. S. Army Corps of Engineers and the National Ocean Survey, (National Ocean Survey reorganized as National Ocean Service in November 1982) National Oceanic and Atmospheric Administration of the United States. The information used in compiling this report has been taken from the files of the two principal agencies concerned, the Canadian Hydrographic Service and the National Ocean Survey. The operation and records of Great Lakes water level gauging stations were transferred from the United States Lake Survey (U.S.L.S.), U.S. Army Corps of Engineers, to the National Ocean Survey in October 1970. The individual efforts of Robert A. Mace, Frank M. Sullivan, James S. Moore, Leonard T. Schutze, and Harry A. Lippincott are gratefully acknowledged by the Committee in researching and compiling the information in this report. In addition, the Committee is particularly grateful to Brenda S. Vostreys for typing revisions of the manuscript.

PRESENTATION OF DATA

Presented herein are the histories of all Canadian and United States gauging stations that the Committee considered have provided useful water level data on the lower Great Lakes, the International Section of the St. Lawrence River and the Niagara River for various periods of time through December 1982. For each station the following data are given:

1. A comprehensive statement as to how datums were established.

2. A chronological table listing the period when water level observations were made, the controlling bench mark and its elevation, the type of record, and the abbreviation for the operating agency during each observation period. See Plates ___ for the periods of operation of water level gauging stations. The following agency abbreviations have been used in the text.

C.H.S.	- Canadian Hydrographic Service
D.W.C.	- Deep Waterways Commission
D. of R. and C.	- Department of Railways and Canals
D.O.T.	- Department of Transport
D.P.W.	- Department of Public Works
D.W.P.B.	- Dominion Water and Power Bureau
W.R.B.	- Water Resources Branch
O.P. Co.	- Ontario Power Company
H.E.P.C.O.	- Hydro-Electric Power Commission of Ontario
O.H.E.	- Ontario Hydro-Electric
P.A.S.N.Y.	- Power Authority of the State of New York
Shipbldg. Co.	- Kingston Shipbuilding Company
T.H.C.	- Toronto Harbour Commission
L.C.A.	- Lake Carriers Association
U.S.C. & G.S.	- United States Coast and Geodetic Survey
U.S.E.O.	- United States Engineering Office
U.S.L.S.	- United States Lake Survey
N.O.S.	- National Ocean Service

3. Elevation of the controlling bench mark on International Great Lakes Datum, IGLD (1955). Elevations in this publication are shown in the measurement unit accepted during each period of water level observations. The conversion to the equivalent customary or metric unit is shown in parenthesis. National and agency policies in the United States and Canada for conversion to the exclusive use of the metric unit are different. At present, United States policy is to plan increasing use and to coordinate the voluntary conversion to the metric system. Canada policy was to investigate, plan, schedule and implement a metric conversion program to be completed by 1980. This target date was achieved.

4. Description and location of the gauging station sites for which adequate information is available. See Plates 1-4 for general location and Plates 30-165 for detailed location.

For more detailed information regarding these gauges and their records consult the Canadian Hydrographic Service in Ottawa, Ontario, for gauges in Canada, and the National Ocean Service in Rockville, Maryland, for gauges in the United States.

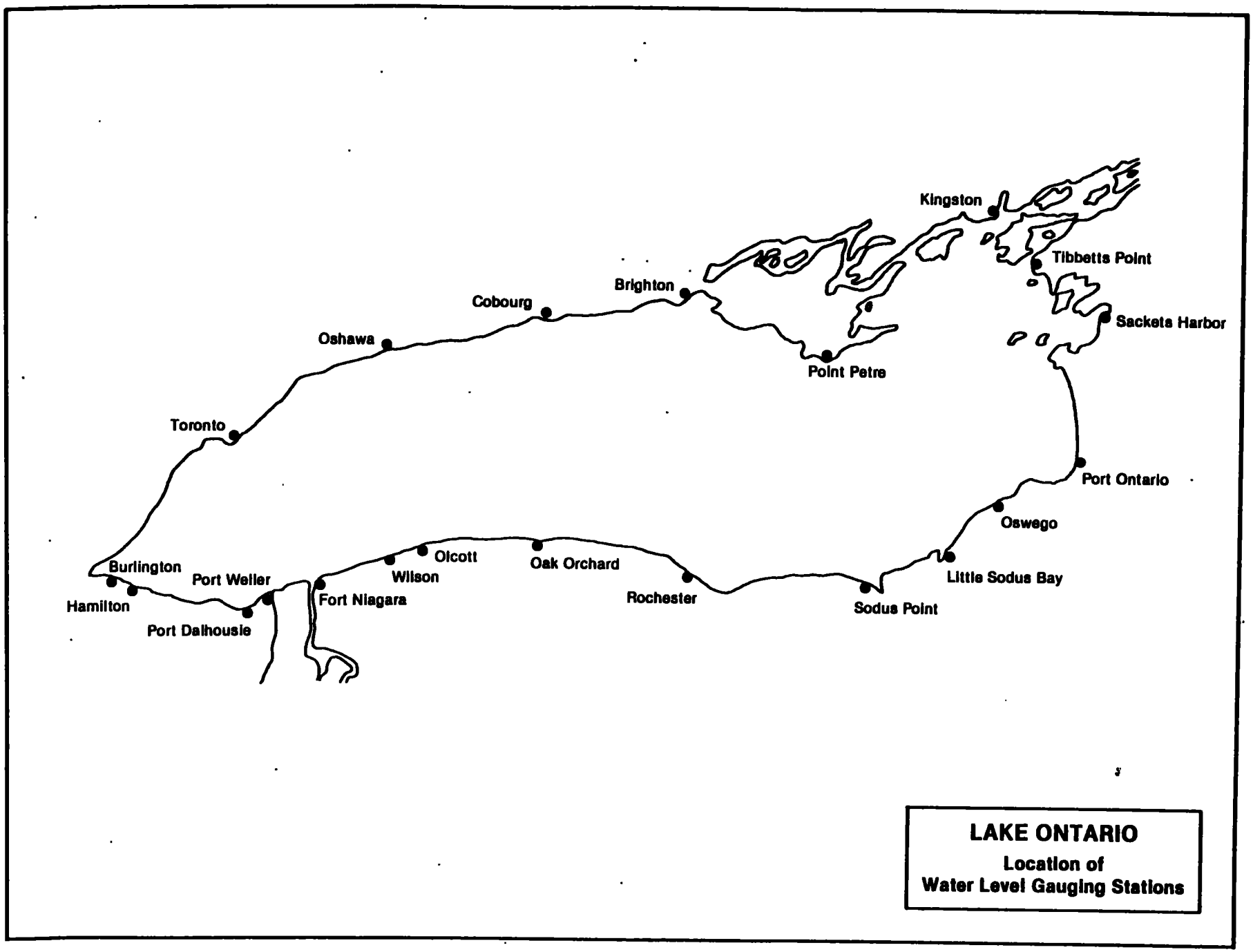

Kingston
Tibbetts Point
Brighton
Cobourg
Sackets Harbor
Oshawa
Point Petre
Toronto
Port Ontario
Oswego
Burlington
Port Weller
Olcott
Wilson
Oak Orchard
Little Sodus Bay
Hamilton
Fort Niagara
Rochester
Sodus Point
Port Dalhousie
LAKE ONTARIO
Location of
Water Level Gauging Stations

PLATE 1

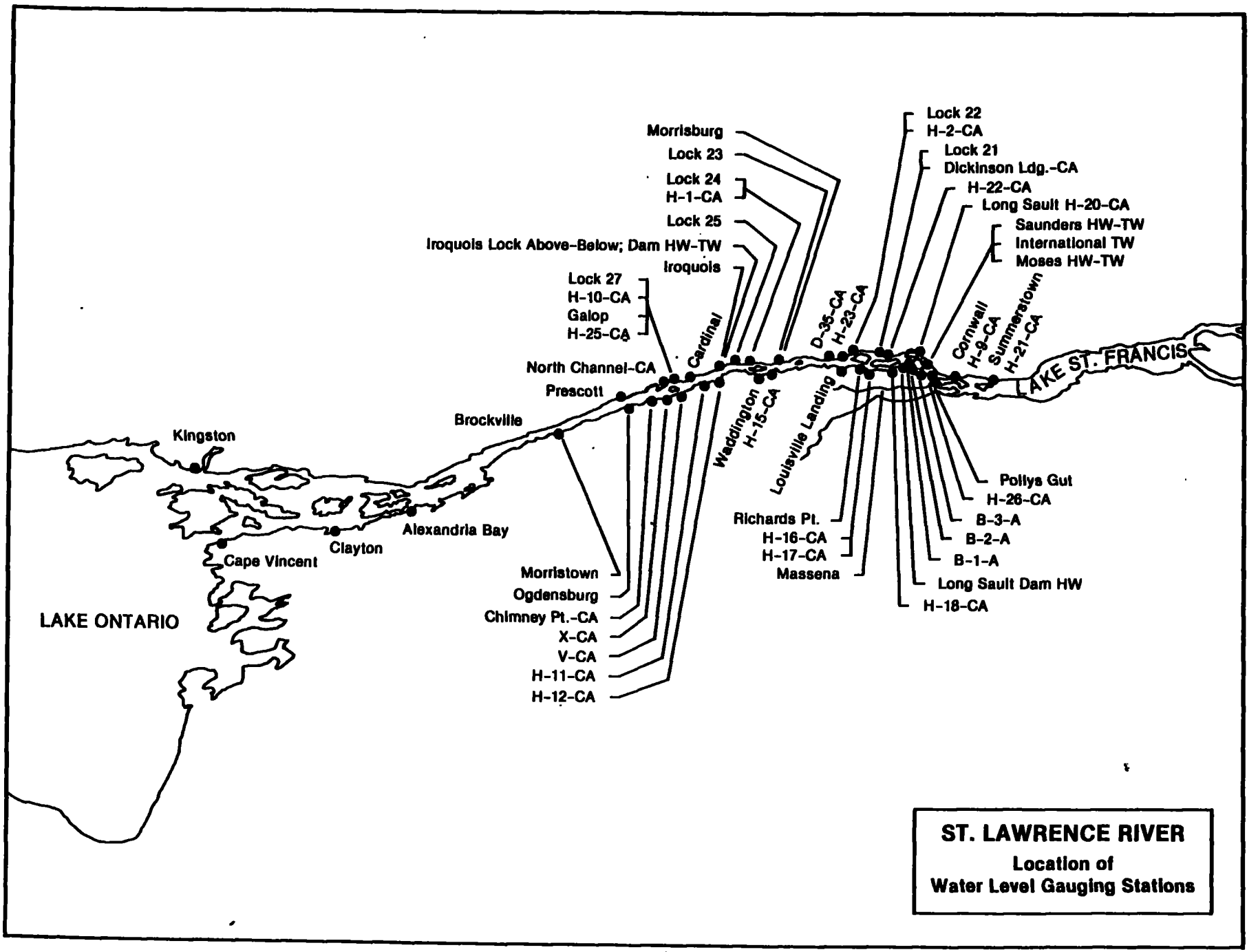

Morrisburg
Lock 23
Lock 24
H-1-CA
Lock 25
Iroquois Lock Above-Below; Dam HW-TW
Iroquois
Lock 27
H-10-CA
Galop
H-25-CA
Cardinal
North Channel-CA
Prescott
Brockville
Kingston
Alexandria Bay
Clayton
Cape Vincent
LAKE ONTARIO
Morristown
Ogdensburg
Chimney Pt.-CA
X-CA
V-CA
H-11-CA
H-12-CA
Waddington
H-15-CA
Louisville Landing
Richards Pt.
H-16-CA
H-17-CA
Massena
D-35-CA
H-23-CA
Lock 22
H-2-CA
Lock 21
Dickinson Ldg.-CA
H-22-CA
Long Sault H-20-CA
Saunders HW-TW
International TW
Moses HW-TW
Cornwall
H-9-CA
Summerstown
H-21-CA
LAKE ST. FRANCIS
Pollys Gut
H-26-CA
B-3-A
B-2-A
B-1-A
Long Sault Dam HW
H-18-CA
ST. LAWRENCE RIVER
Location of
Water Level Gauging Stations

PLATE 2

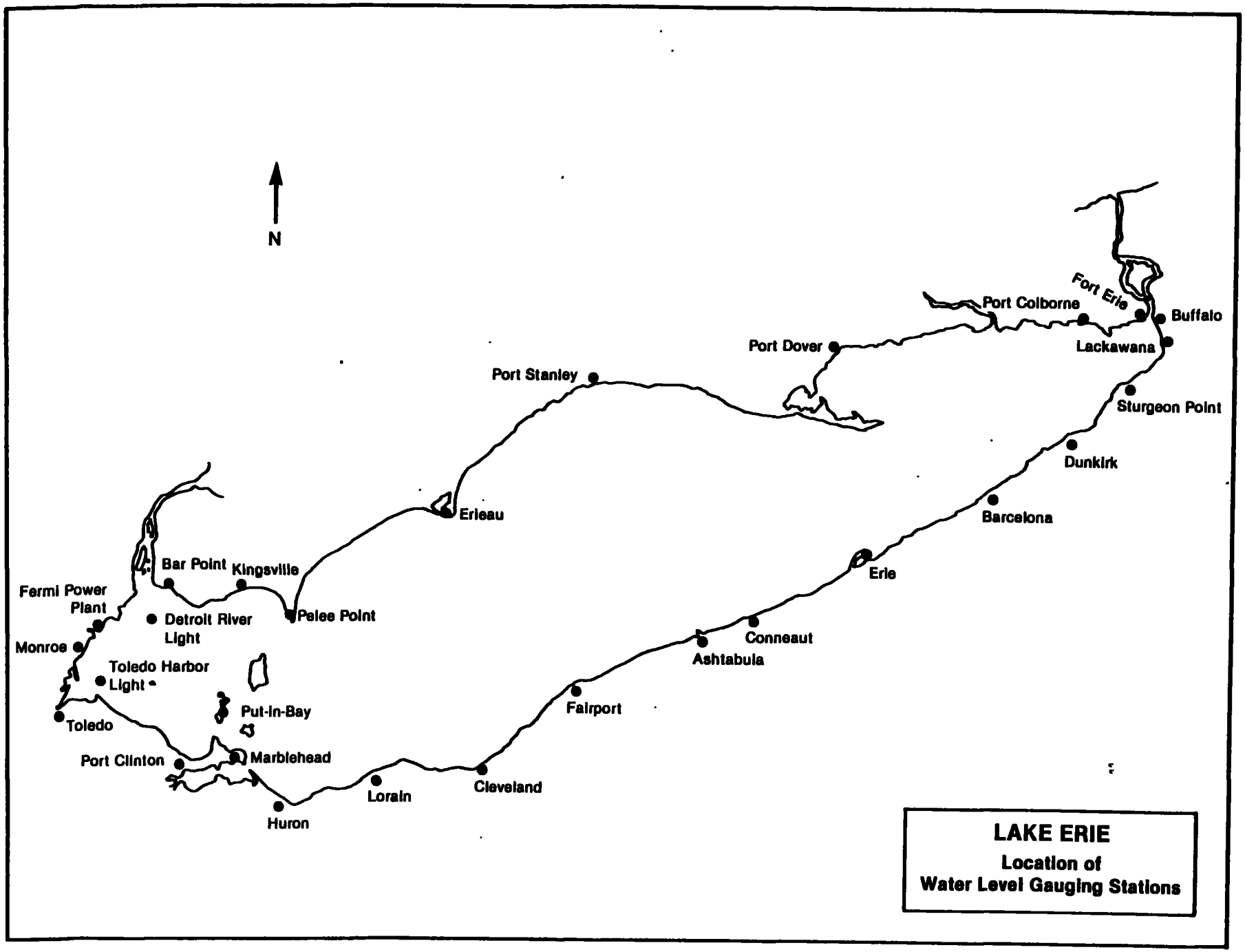
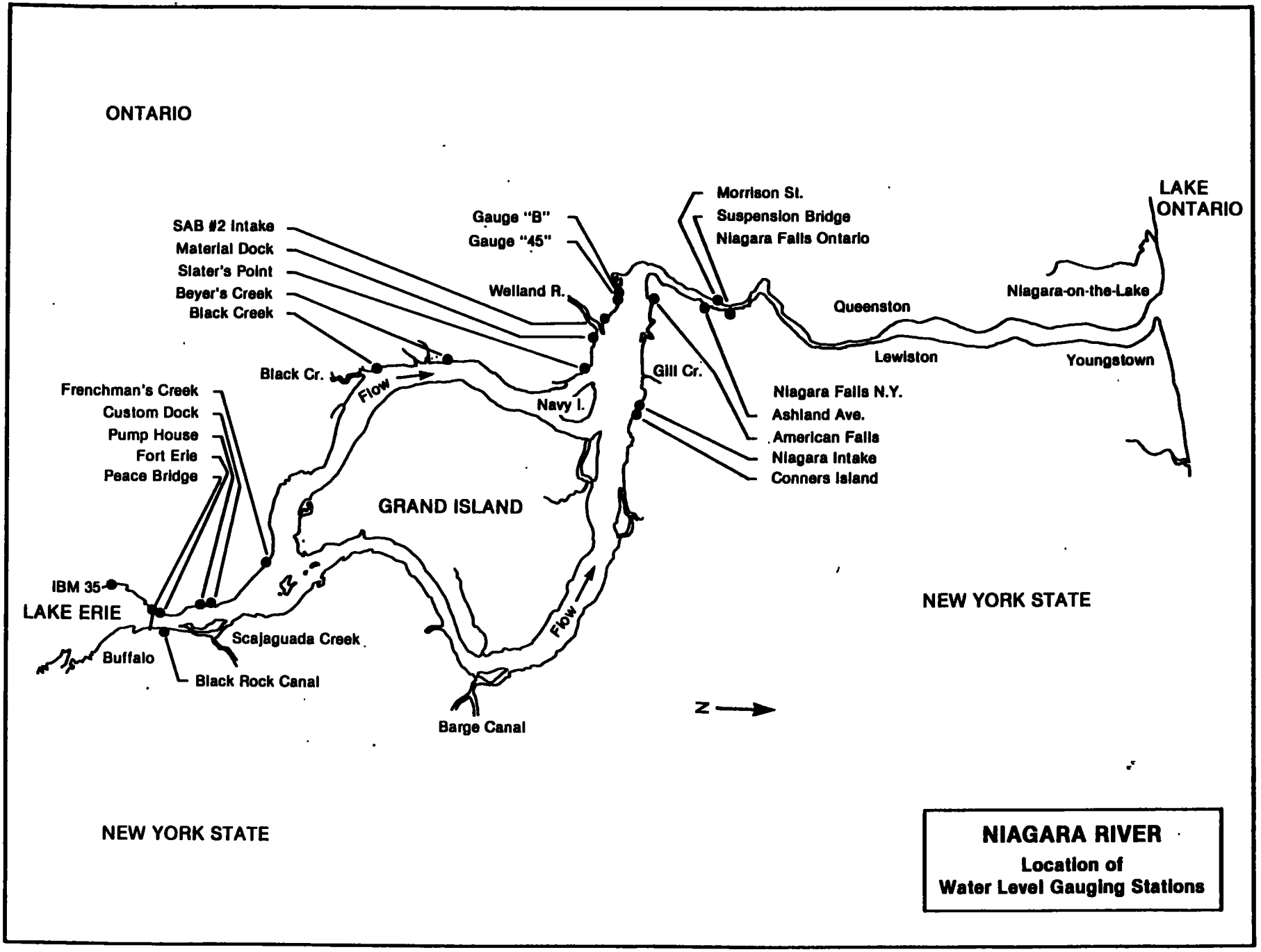

N
Fort Erie
Port Colborne
Buffalo
Lackawana
Port Dover
Port Stanley
Sturgeon Point
Dunkirk
Barcelona
Erieau
Erie
Bar Point
Kingsville
Fermi Power Plant
Detroit River Light
Pelee Point
Monroe
Conneaut
Ashtabula
Toledo Harbor Light
Put-In-Bay
Fairport
Toledo
Port Clinton
Marblehead
Cleveland
Lorain
Huron
LAKE ERIE
Location of
Water Level Gauging Stations

PLATE 3


ONTARIO
SAB #2 Intake
Material Dock
Slater's Point
Beyer's Creek
Black Creek
Gauge "B"
Gauge "45"
Welland R.
Morrison St.
Suspension Bridge
Niagara Falls Ontario
LAKE ONTARIO
Niagara-on-the-Lake
Queenston
Lewiston
Youngstown
Black Cr.
Flow
Navy I.
Gill Cr.
Niagara Falls N.Y.
Ashland Ave.
American Falls
Niagara Intake
Conners Island
Frenchman's Creek
Custom Dock
Pump House
Fort Erie
Peace Bridge
GRAND ISLAND
IBM 35
LAKE ERIE
Scajaguada Creek
Buffalo
Black Rock Canal
Barge Canal
Flow
N
NEW YORK STATE
NEW YORK STATE
NIAGARA RIVER
Location of
Water Level Gauging Stations

WATER LEVEL RECORDS PRIOR TO 1860

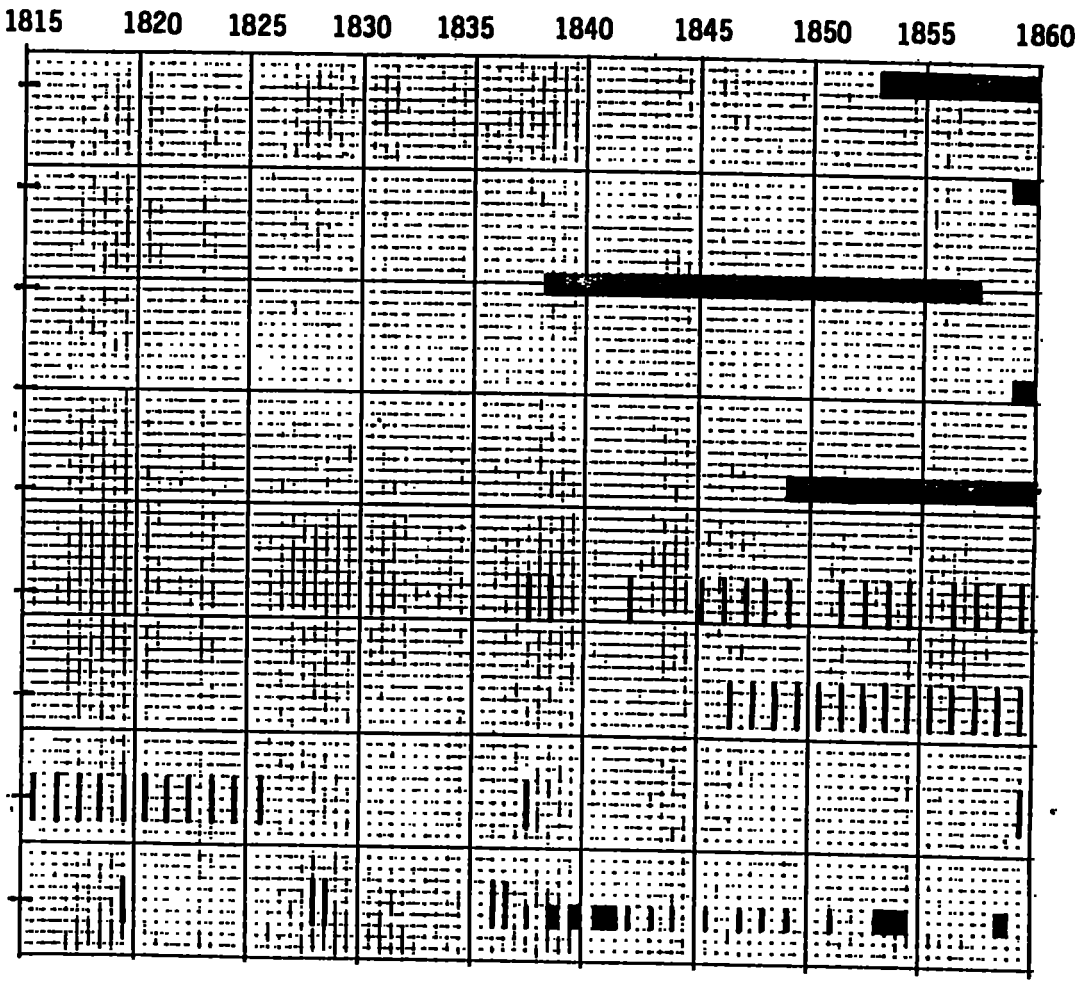
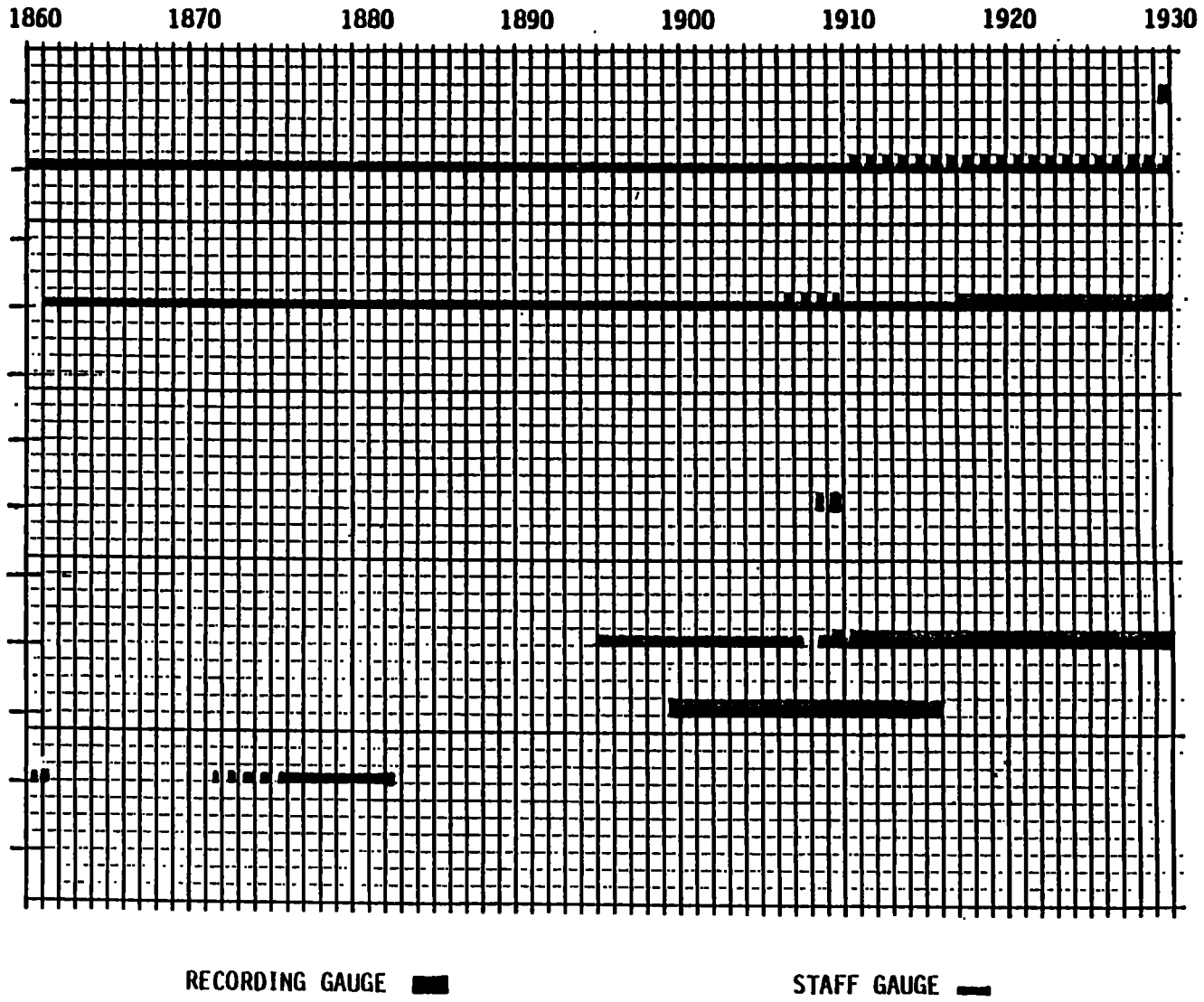


PLATE 5

LAKE ONTARIO

WATER LEVEL RECORDS 1860-1930



LAKE ONTARIO

WATER LEVEL RECORDS 1930- TO DATE

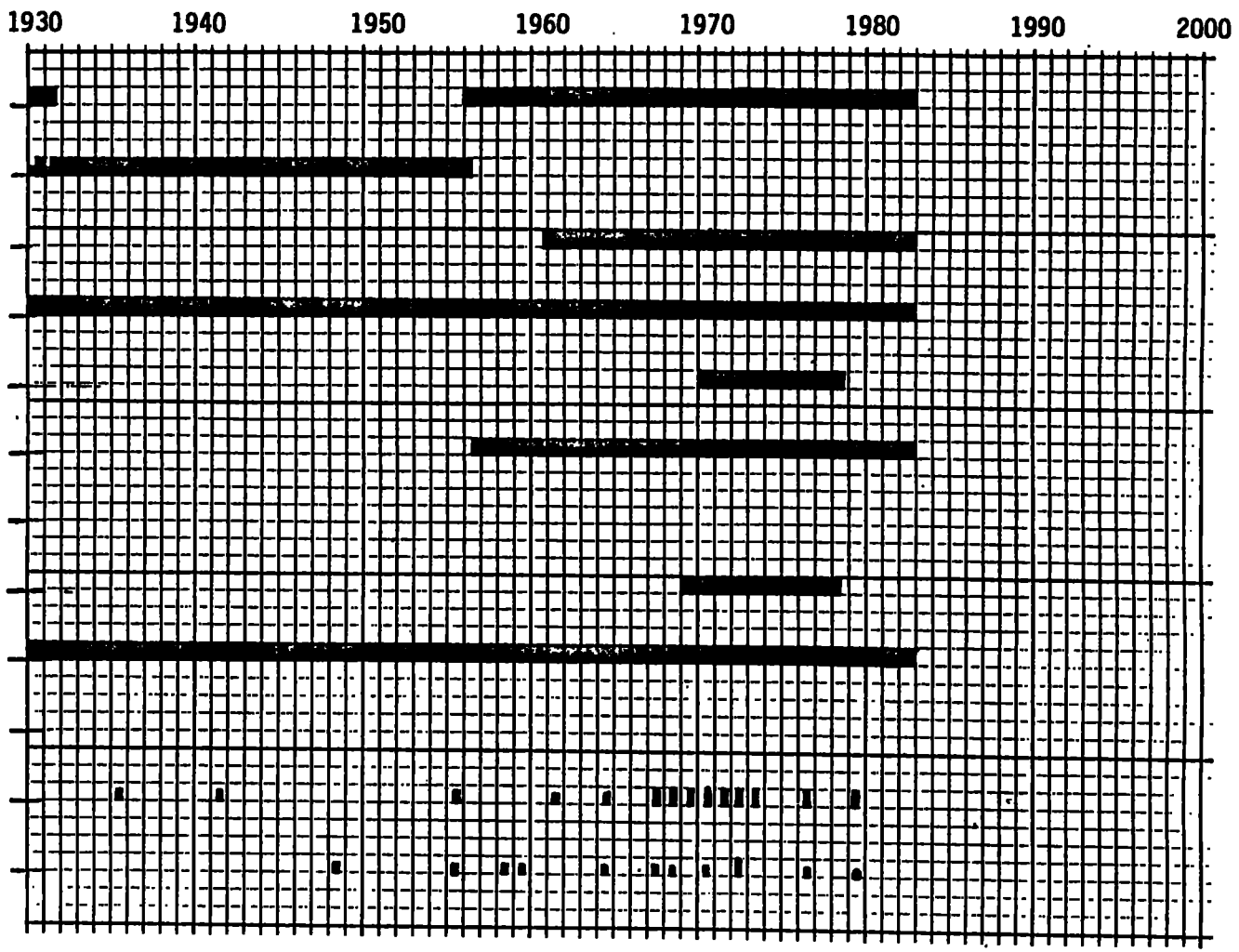
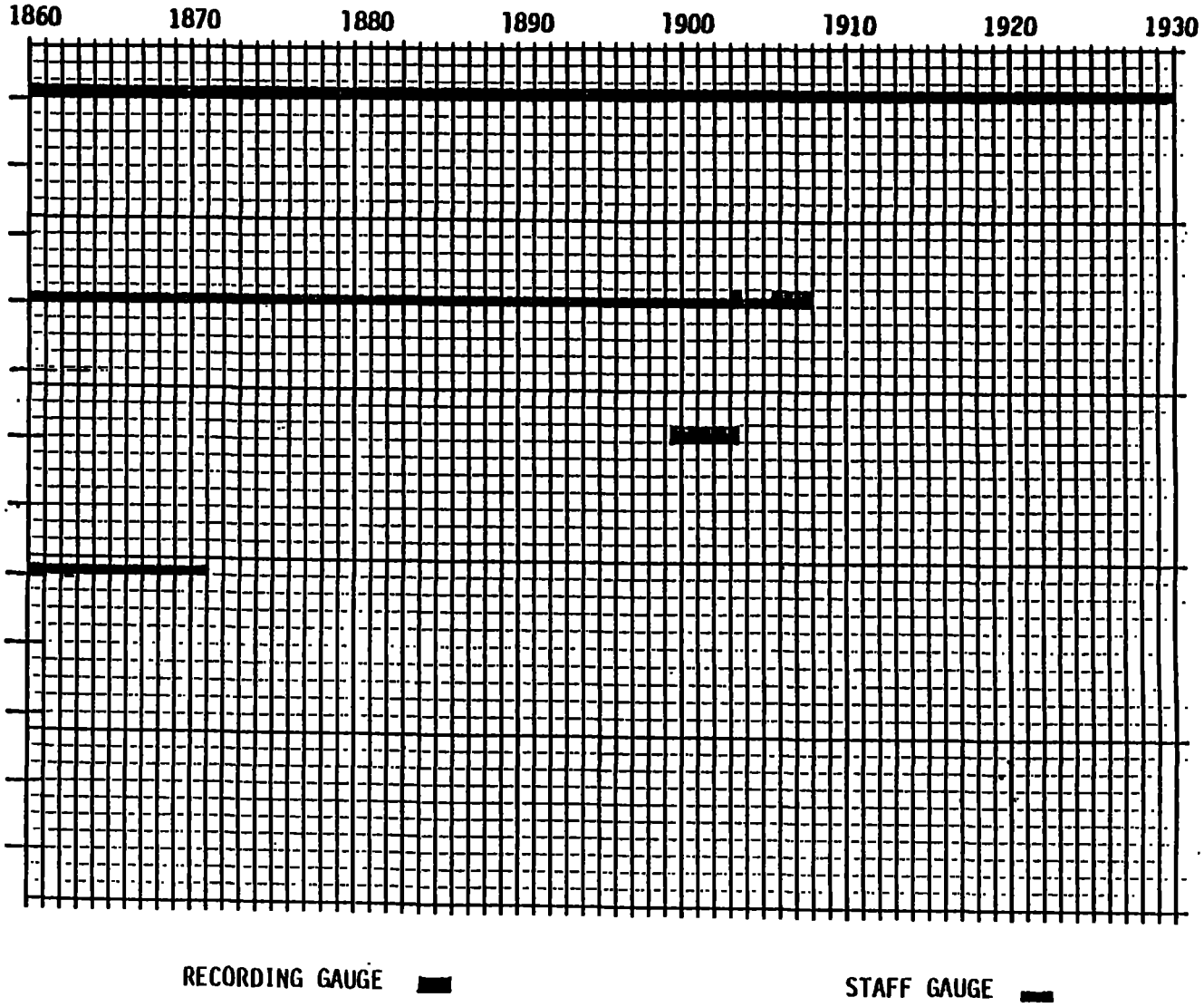


PLATE 7

LAKE ONTARIO

WATER LEVEL RECORDS 1860-1930



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LAKE ONTARIO

WATER LEVEL RECORDS 1930- TO DATE

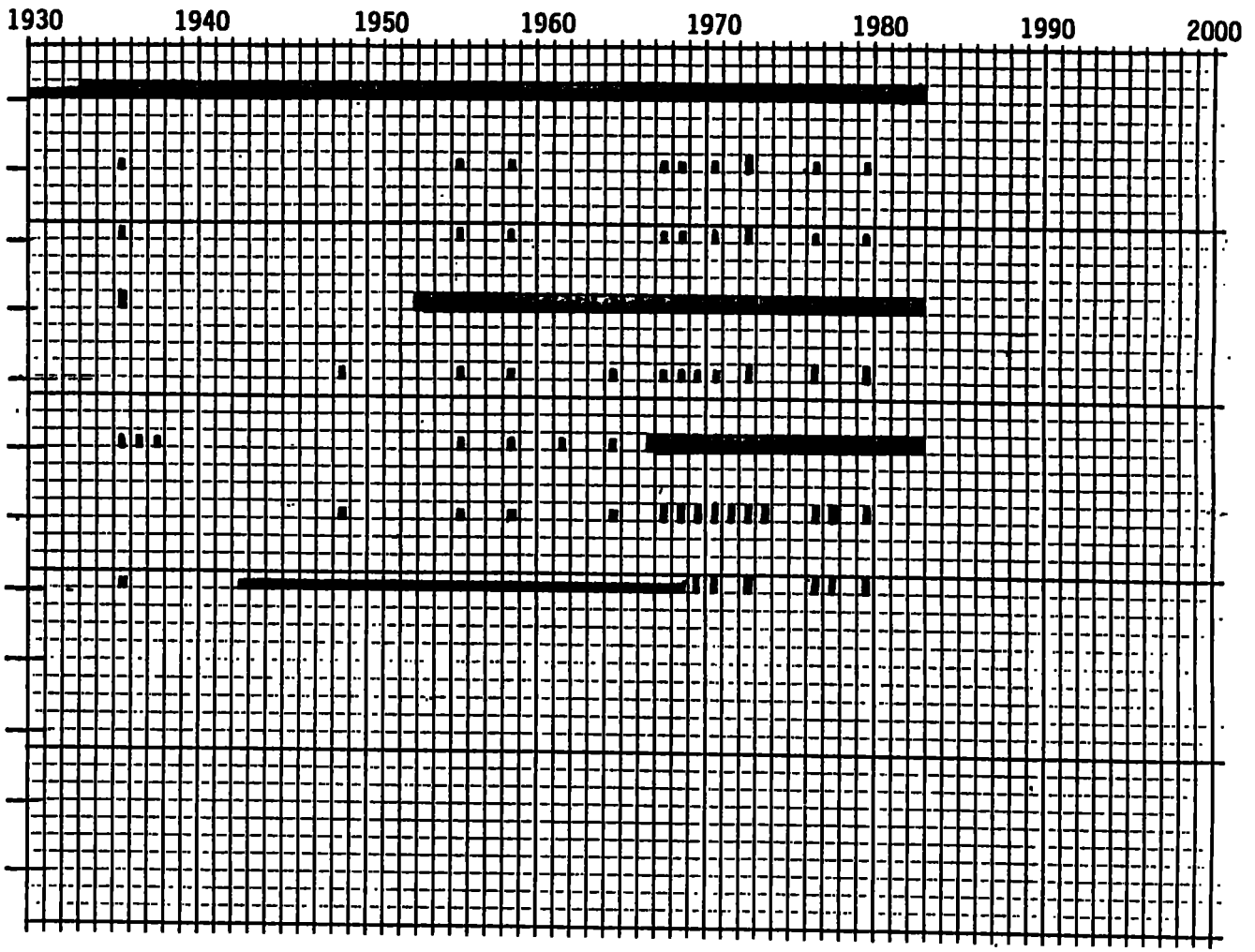

PLATE 9

ST. LAWRENCE RIVER

WATER LEVEL RECORDS 1860-1930

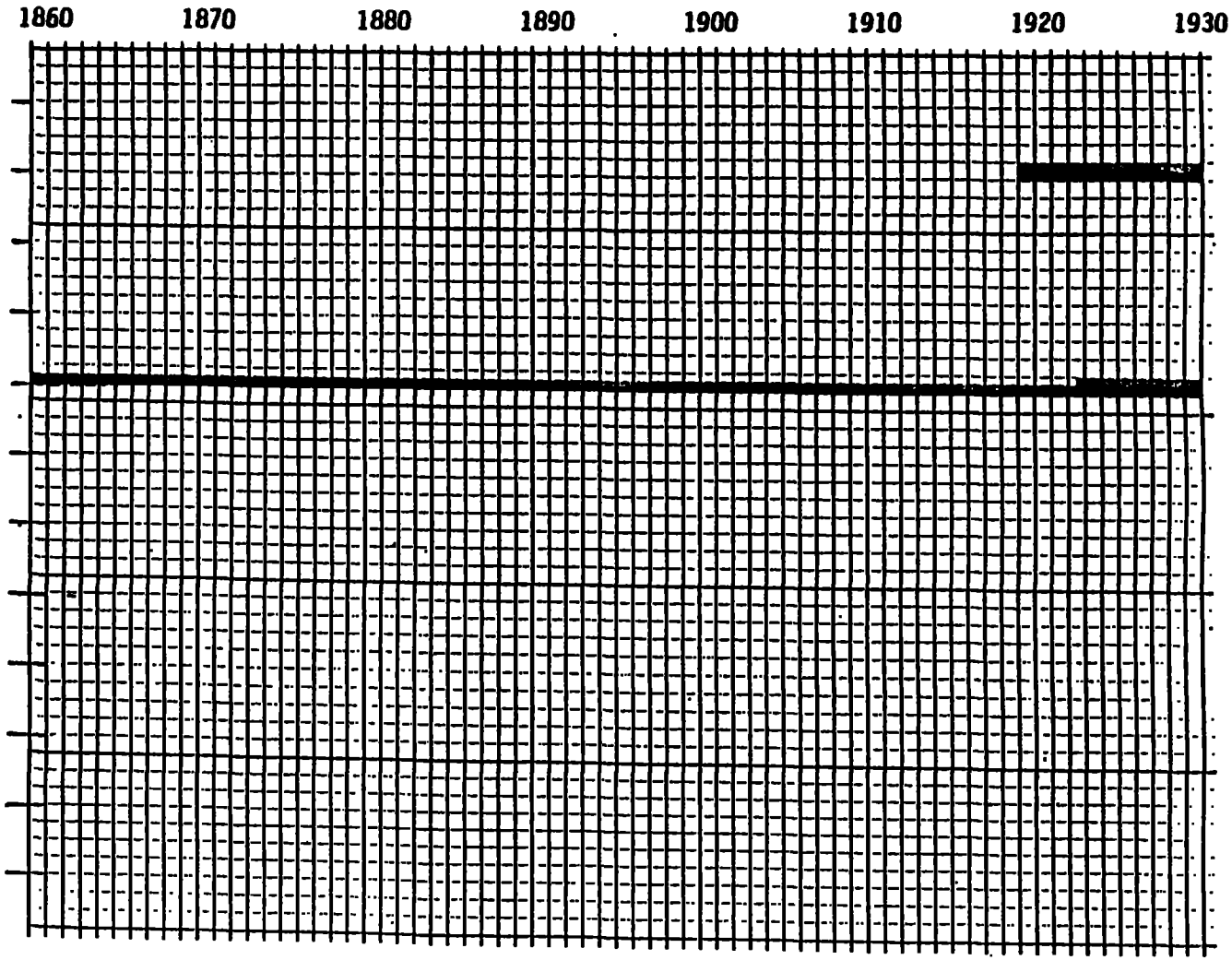

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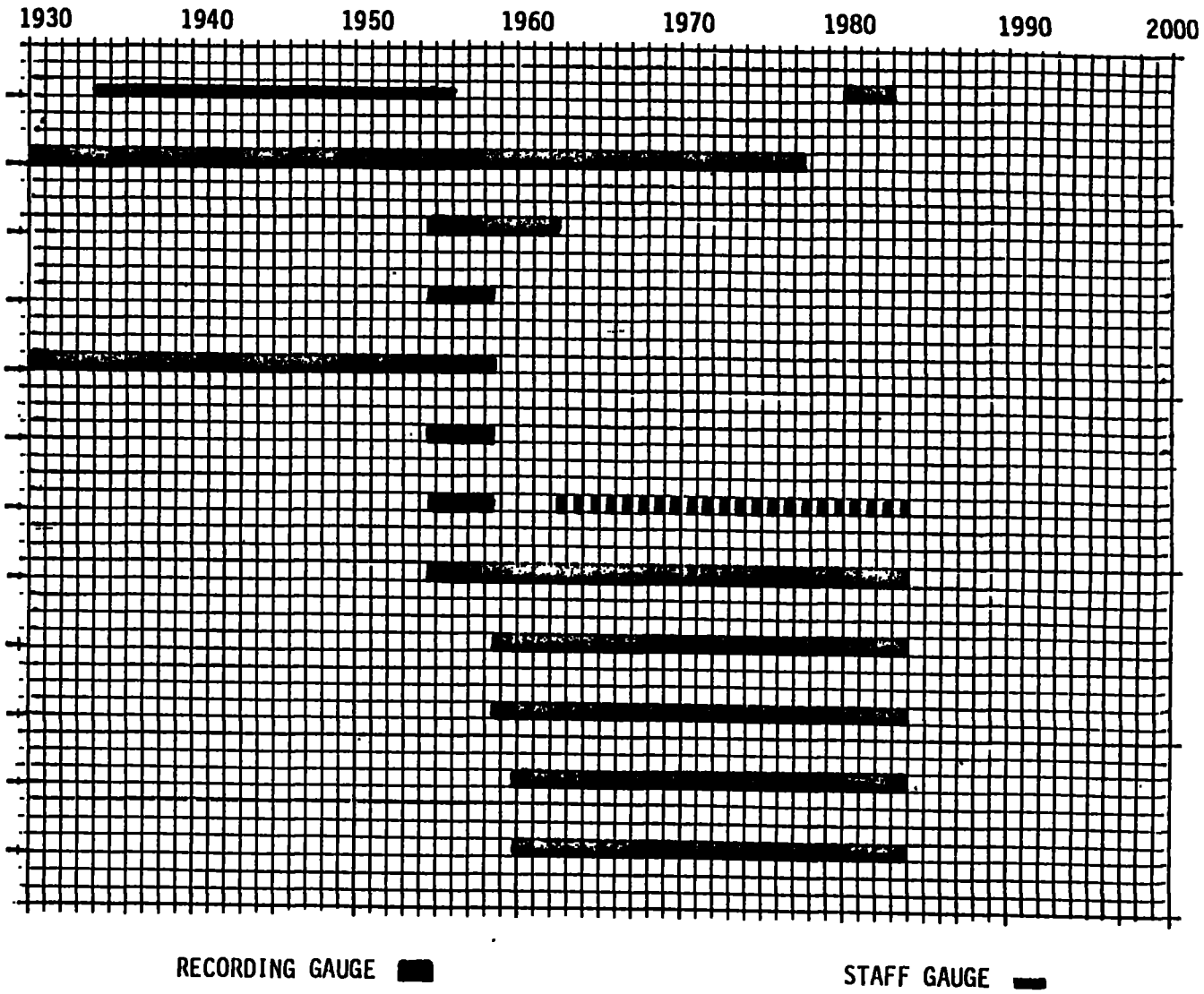
PLATE 10

ST. LAWRENCE RIVER

WATER LEVEL RECORDS 1930 - TO DATE



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ST. LAWRENCE RIVER

WATER LEVEL RECORDS 1860-1930

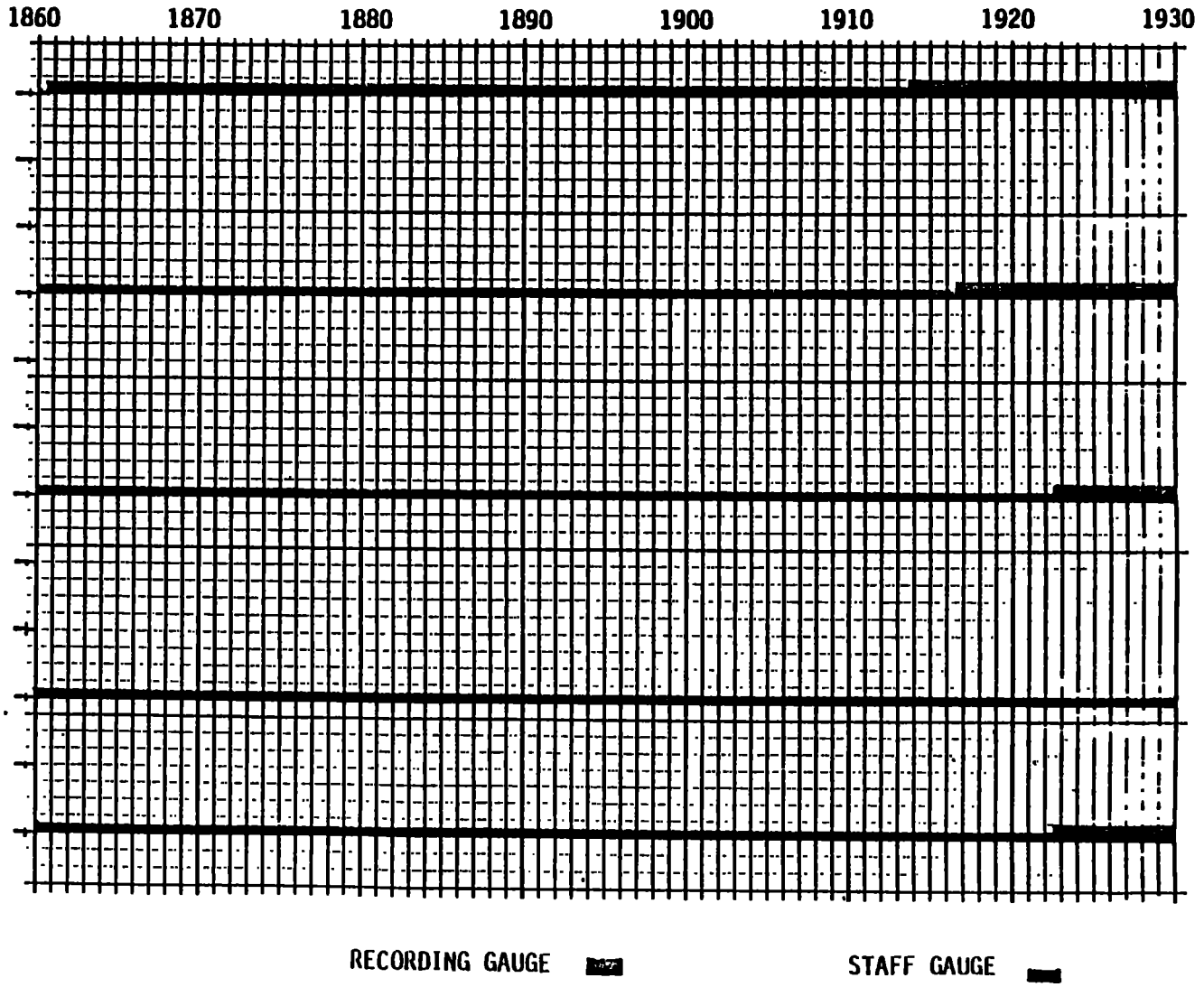


PLATE 12

ST. LAWRENCE RIVER

WATER LEVEL RECORDS 1930- TO DATE

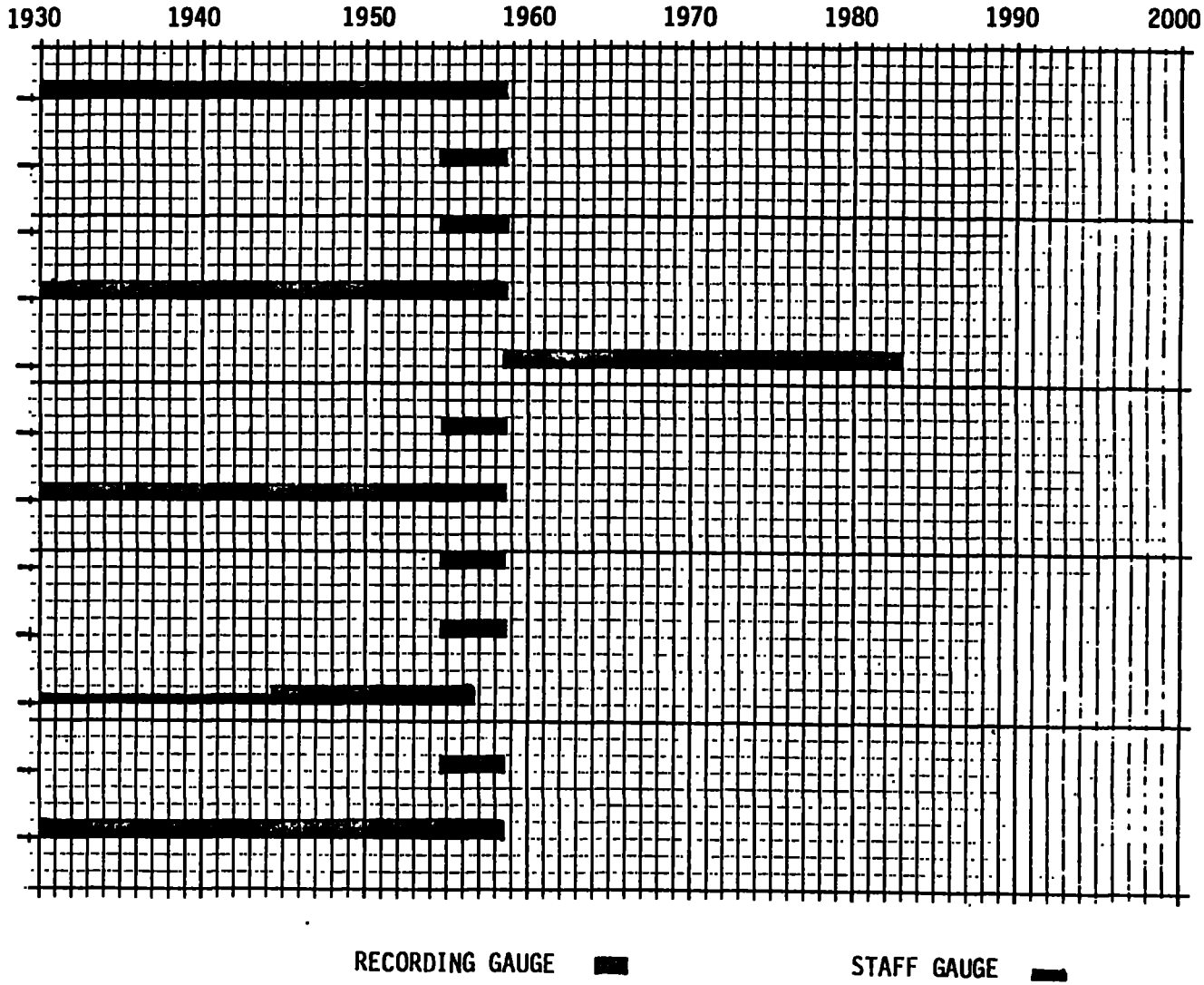
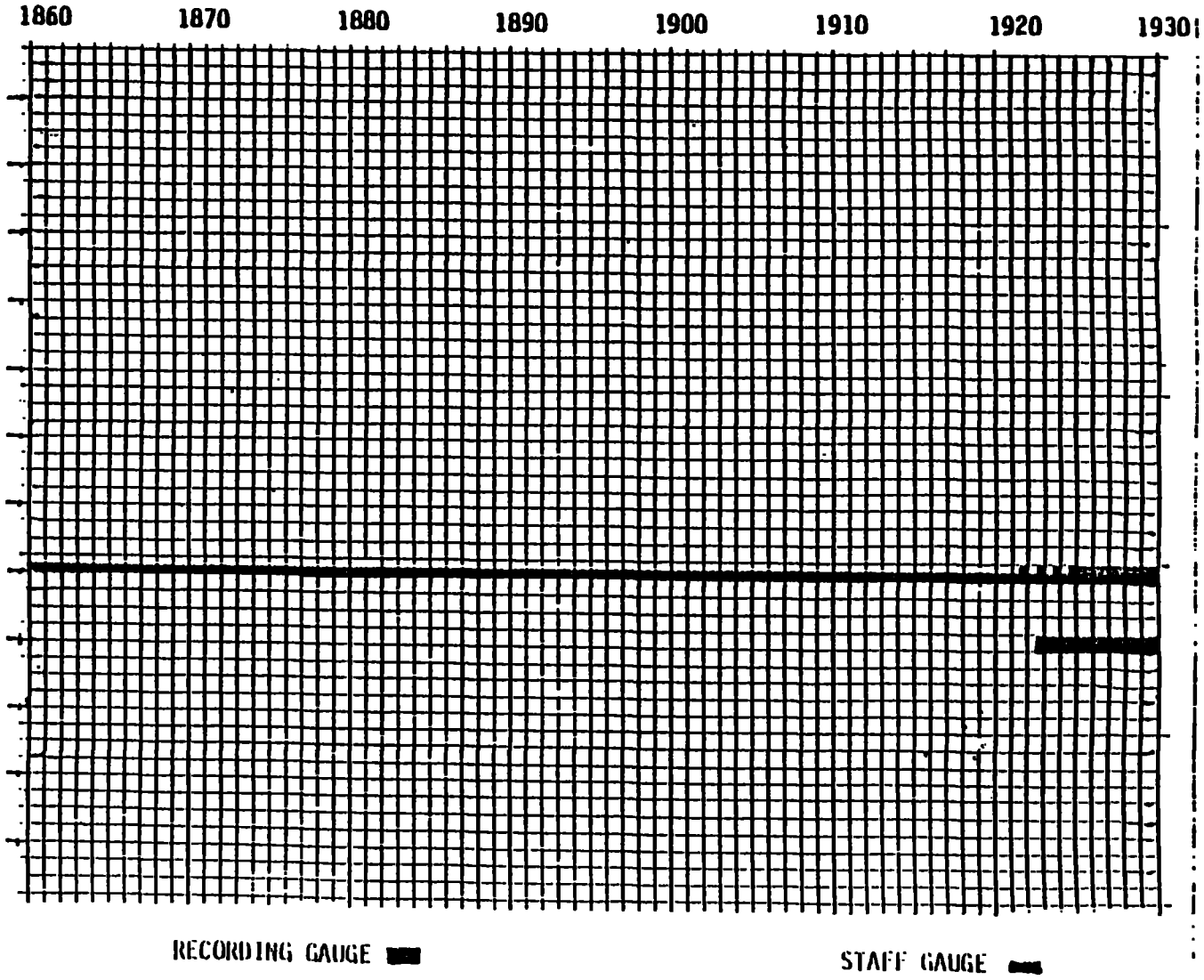


PLATE 13

ST. LAWRENCE RIVER

WATER LEVEL RECORDS 1860-1930



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ST. LAWRENCE RIVER

WATER LEVEL RECORDS 1930 - TO DATE

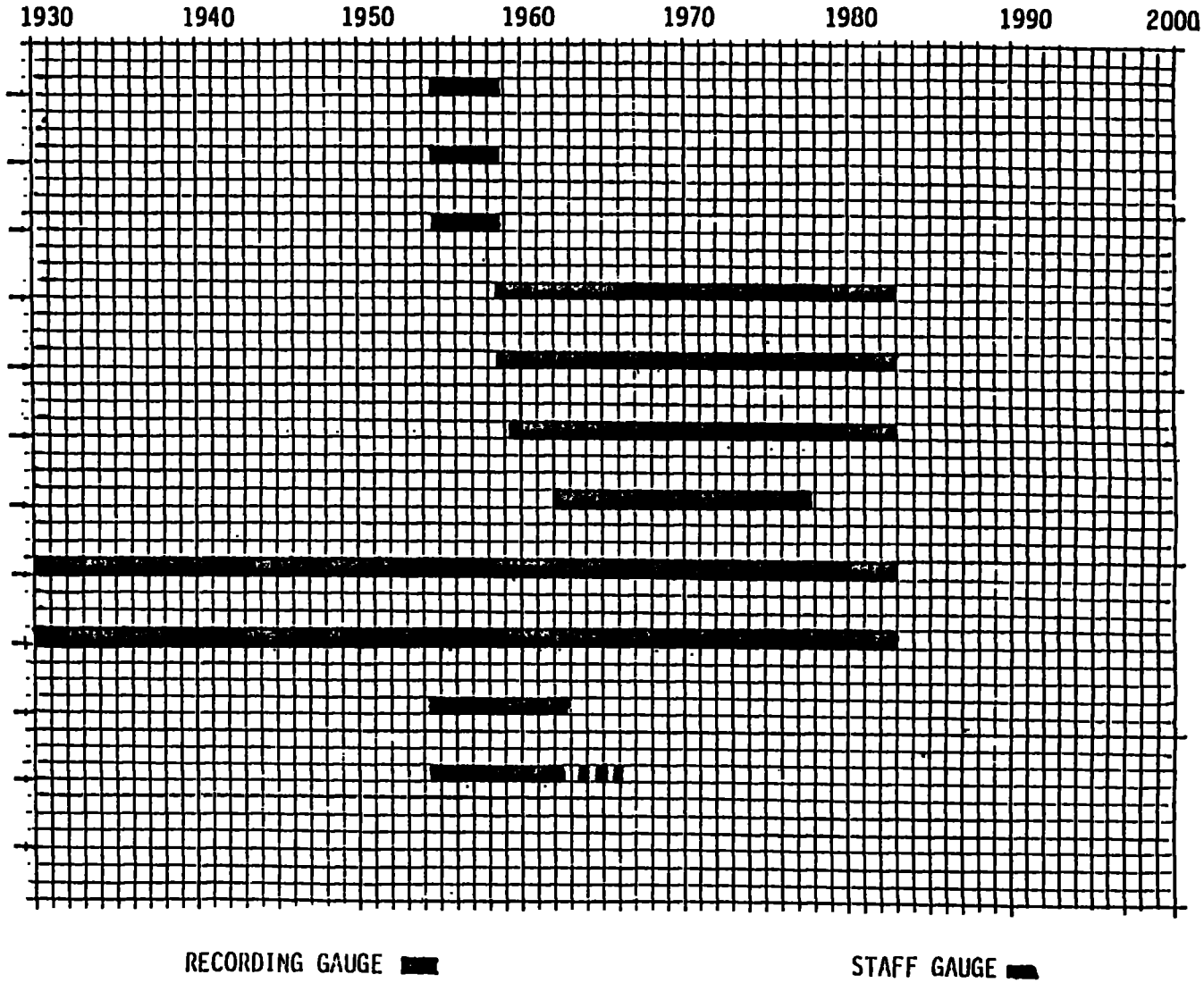


PLATE 15

ST. LAWRENCE RIVER

WATER LEVEL RECORDS 1930 - TO DATE

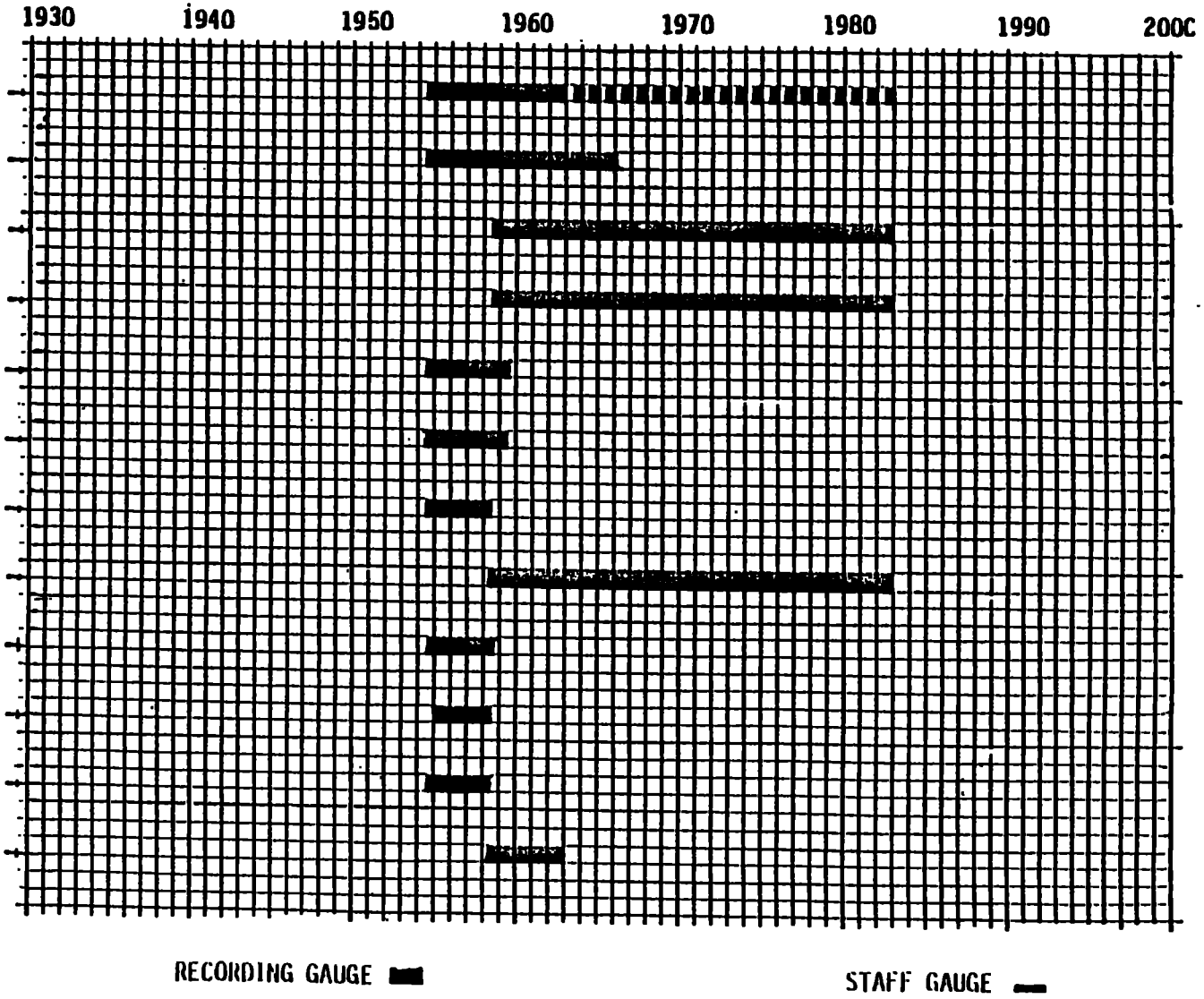


PLATE 16

ST. LAWRENCE RIVER

WATER LEVEL RECORDS 1860-1930

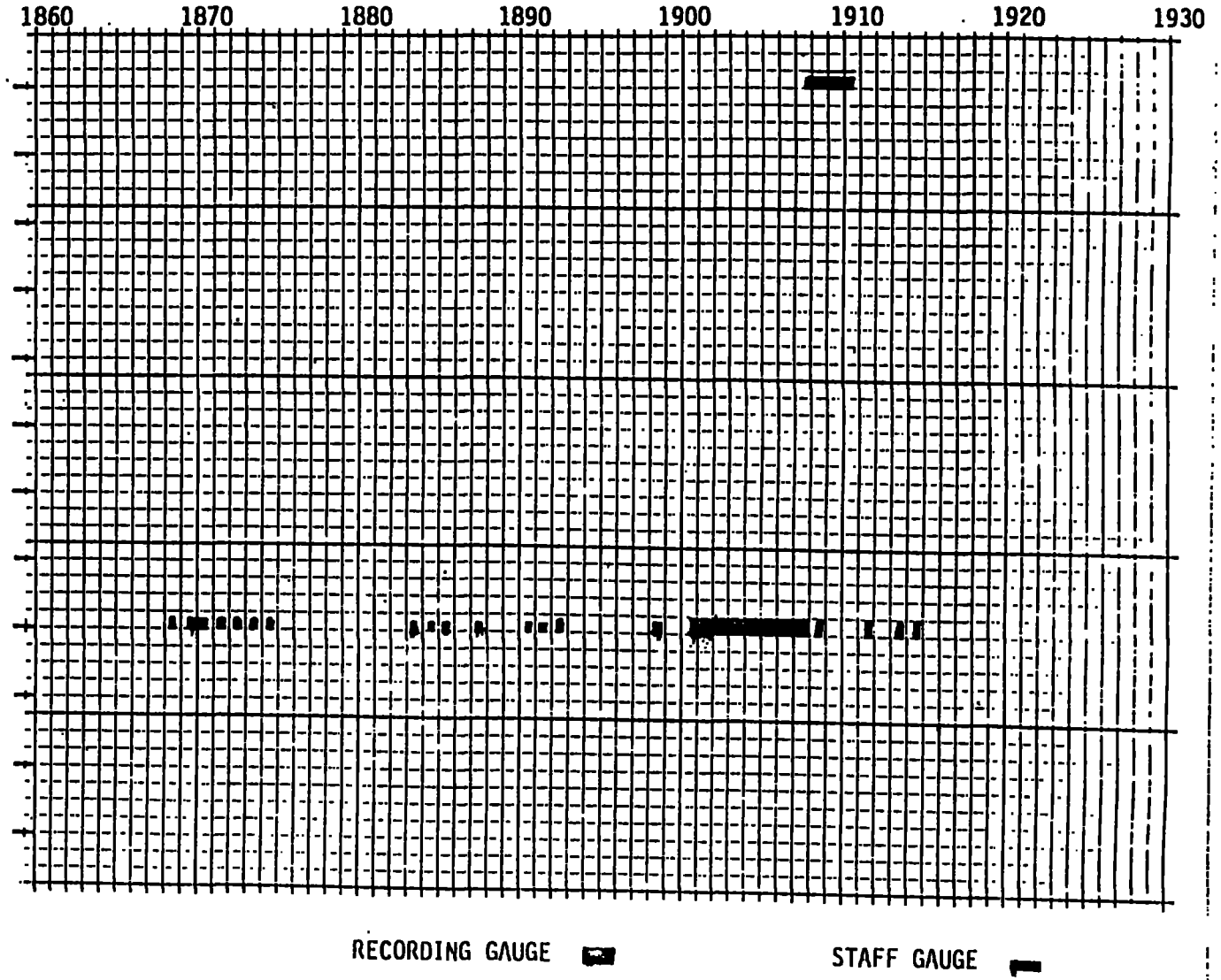


PLATE 17

ST. LAWRENCE RIVER

WATER LEVEL RECORDS 1930 - TO DATE

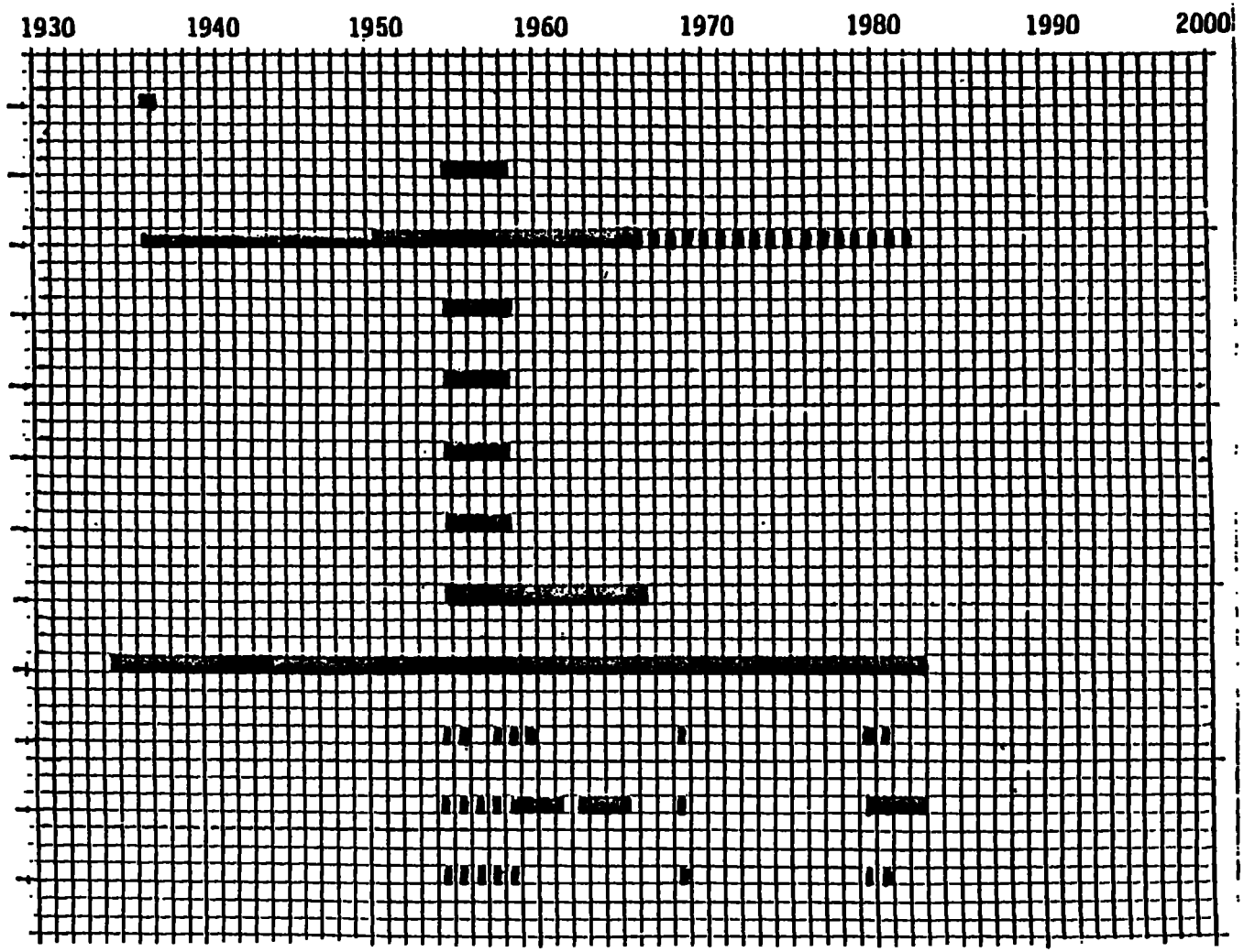
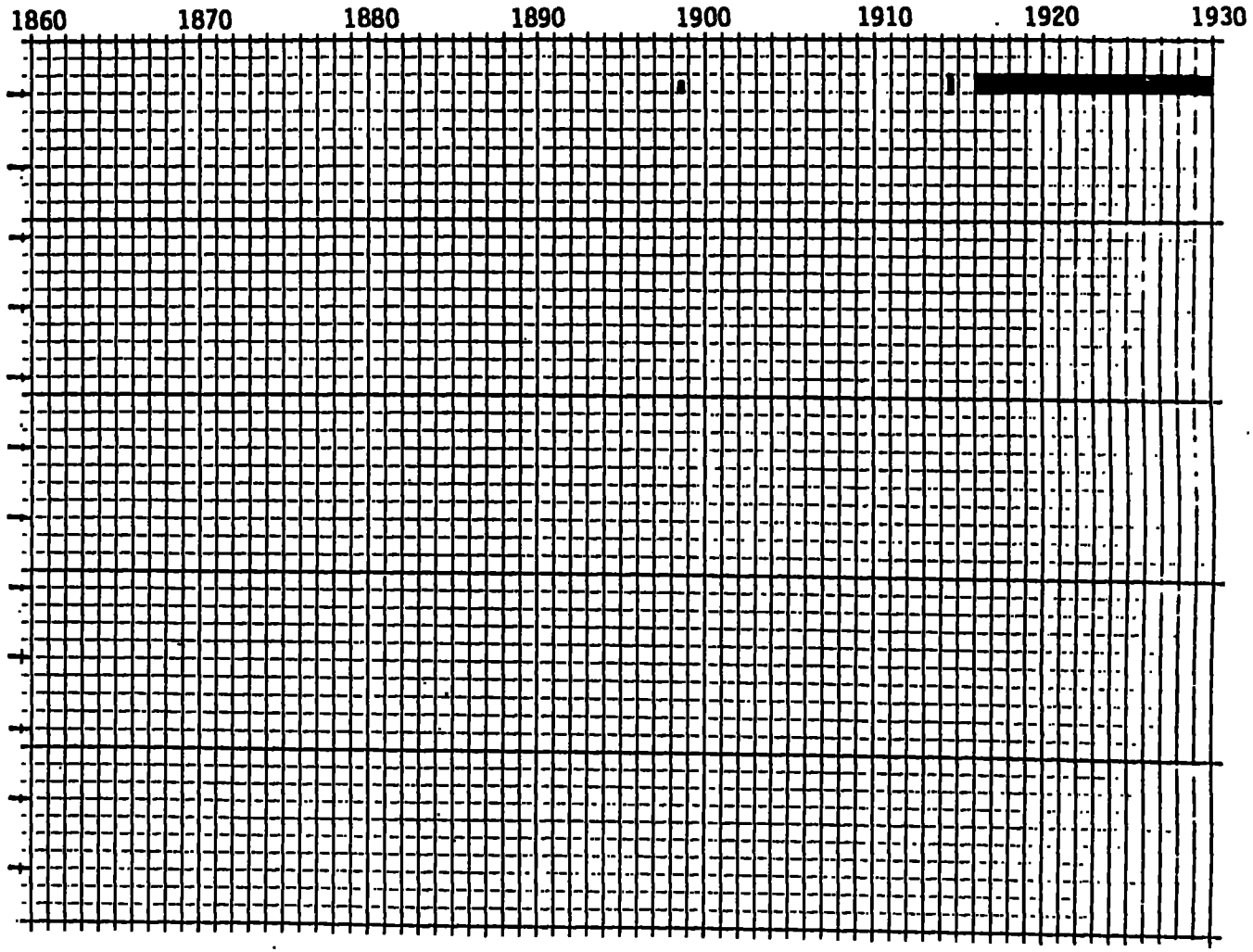


PLATE 18

ST. LAWRENCE RIVER

WATER LEVEL RECORDS 1860-1930

CAPE VINCENT, NEW YORK



RECORDING GAUGE

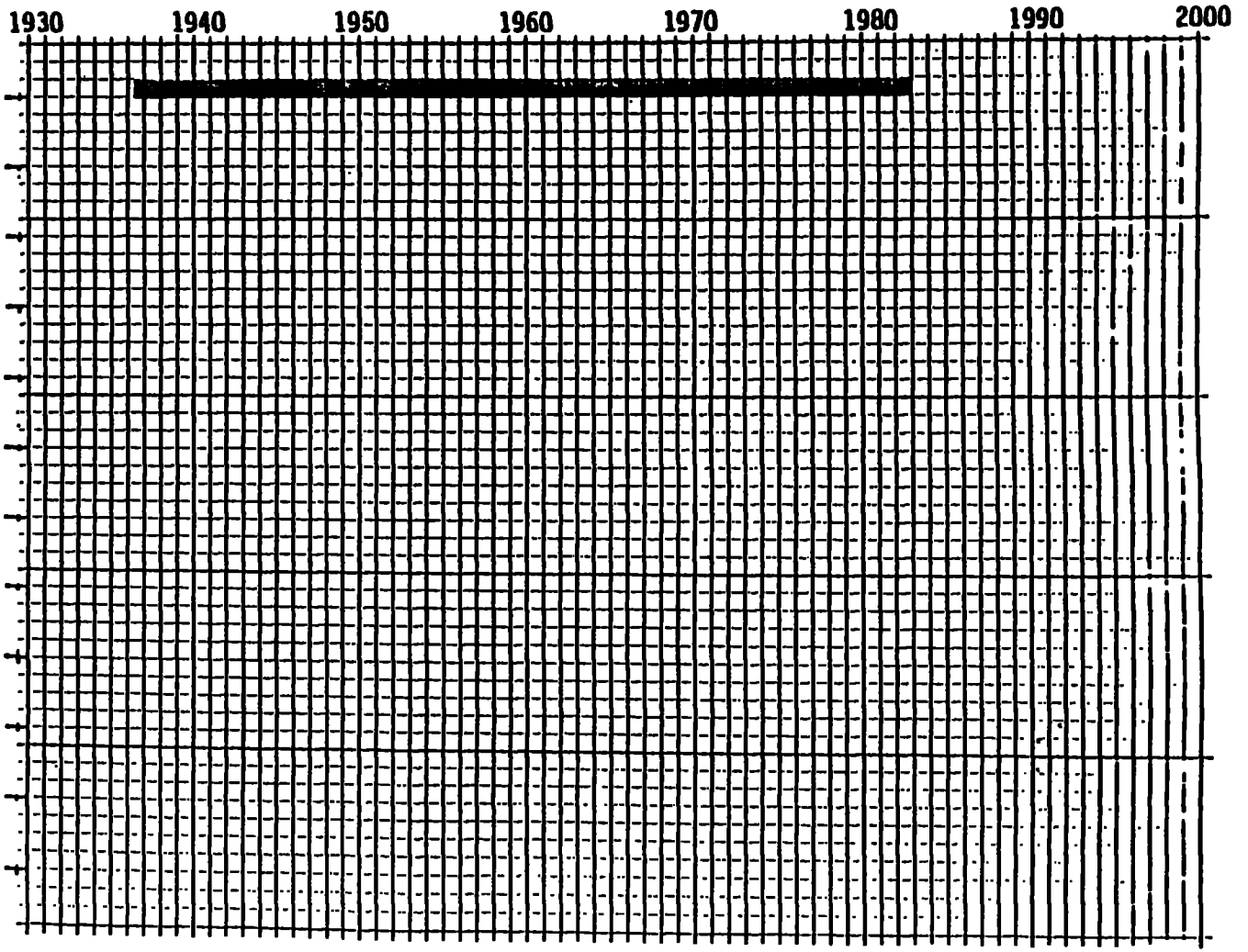
STAFF GAUGE

PLATE 19

ST. LAWRENCE RIVER

WATER LEVEL RECORDS 1930-TO DATE

CAPE VINCENT, NEW YORK



RECORDING GAUGE ▬ STAFF GAUGE ▬

PLATE 20

LAKE ERIE

WATER LEVEL RECORDS 1860-1930

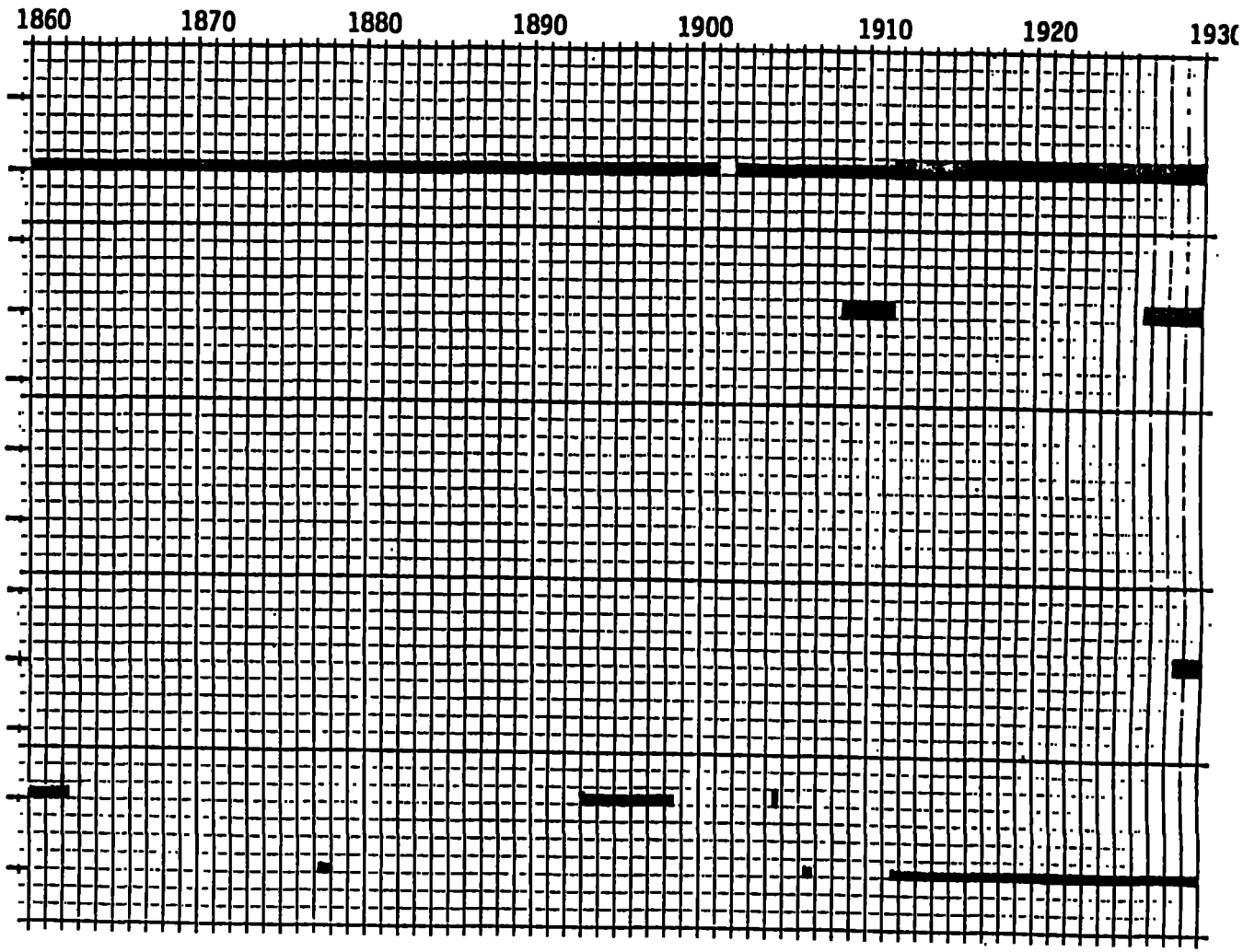


PLATE 21

LAKE ERIE

WATER LEVEL RECORDS 1930- TO DATE

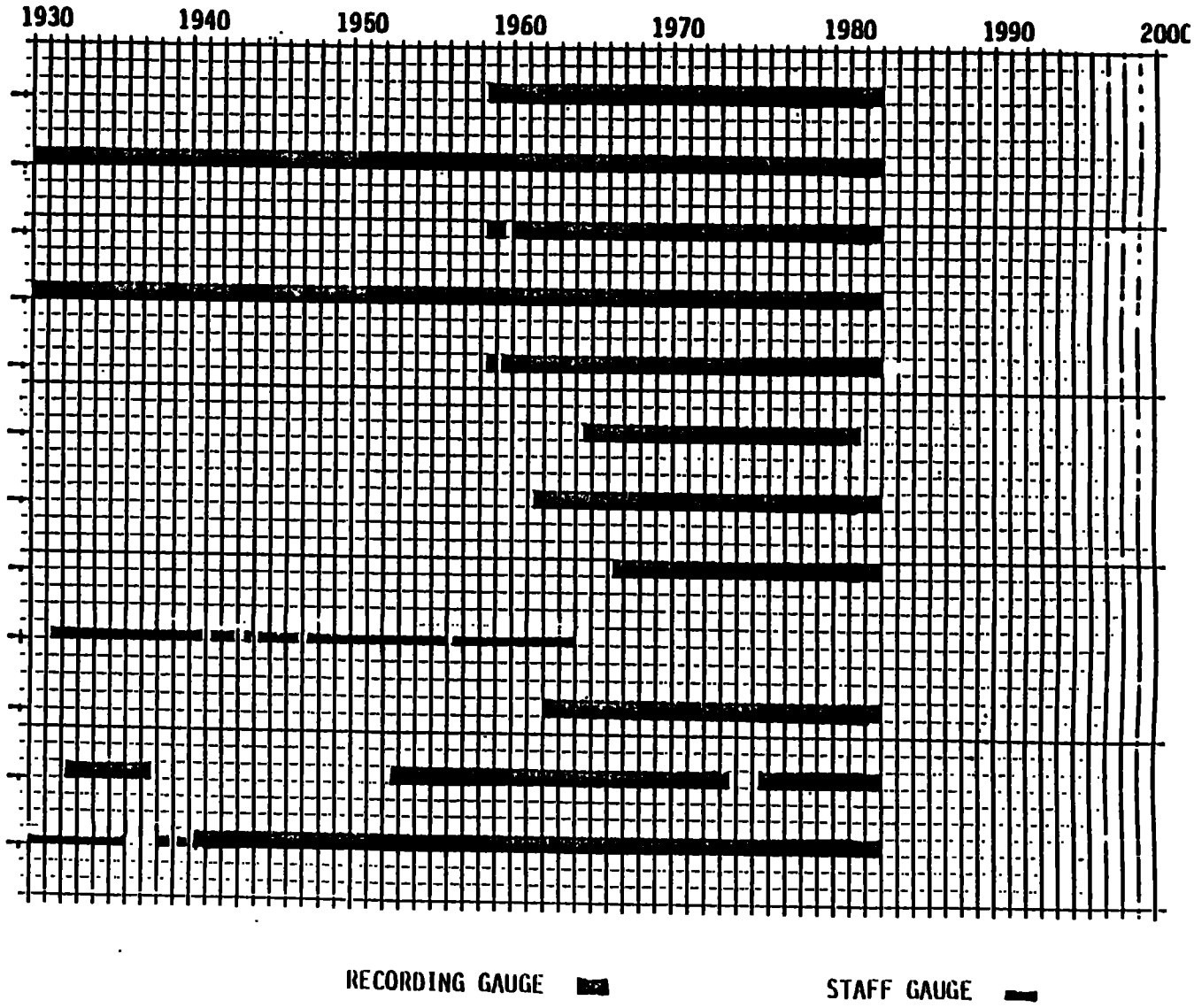
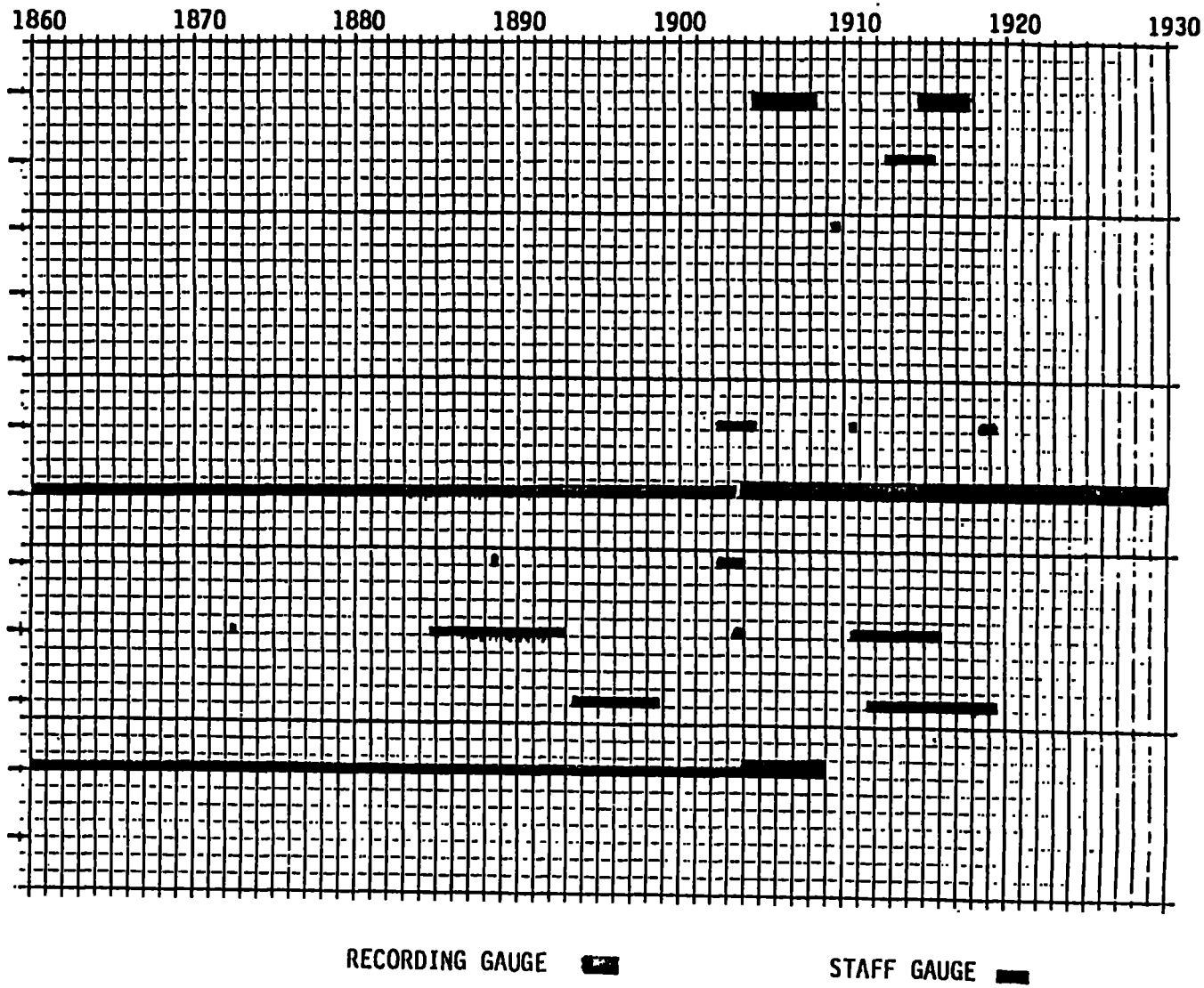


PLATE 22

LAKE ERIE

WATER LEVEL RECORDS 1860-1930



LAKE ERIE

WATER LEVEL RECORDS 1930- TO DATE

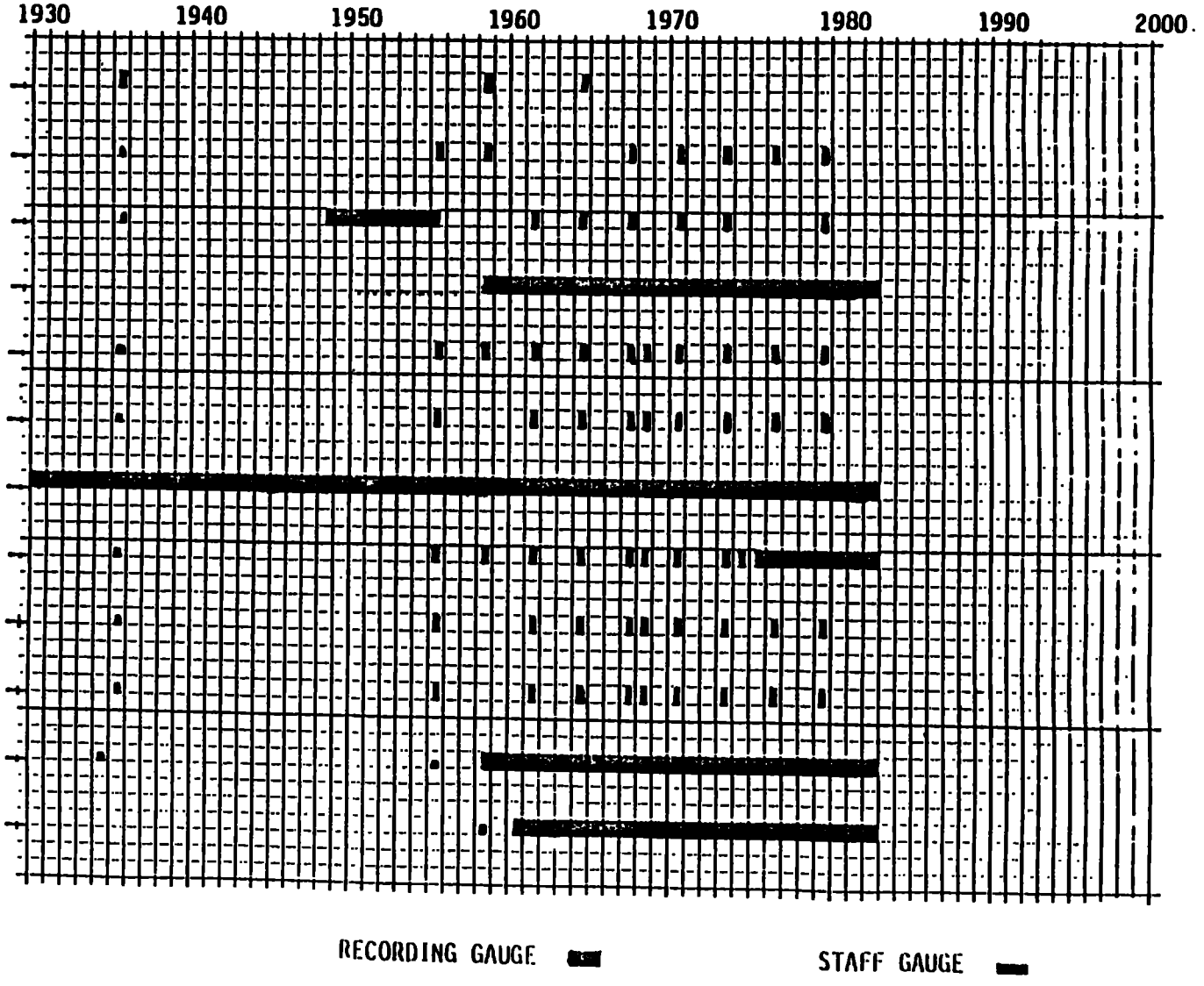


PLATE 24

LAKE ERIE

WATER LEVEL RECORDS 1860-1930

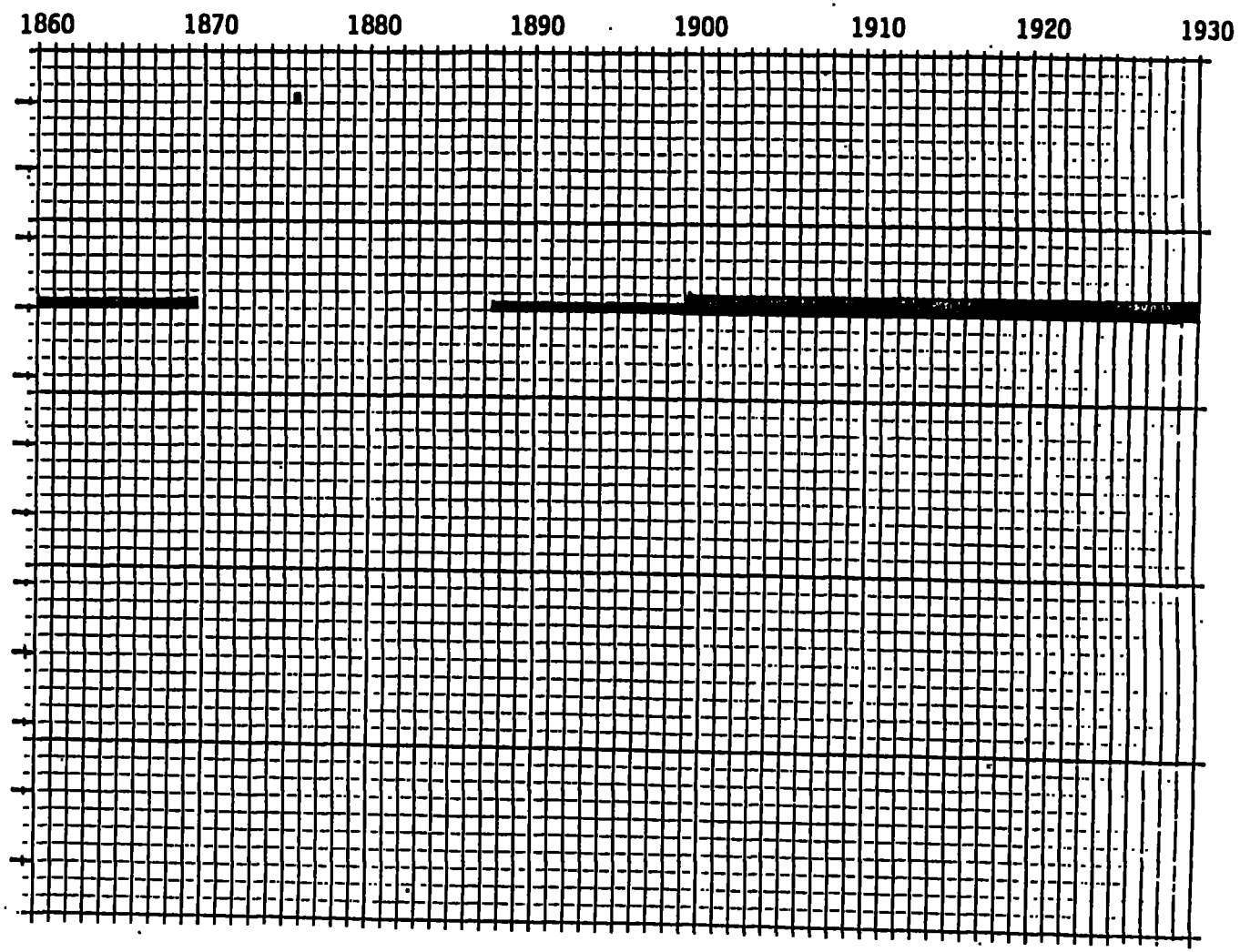


PLATE 25

LAKE ERIE

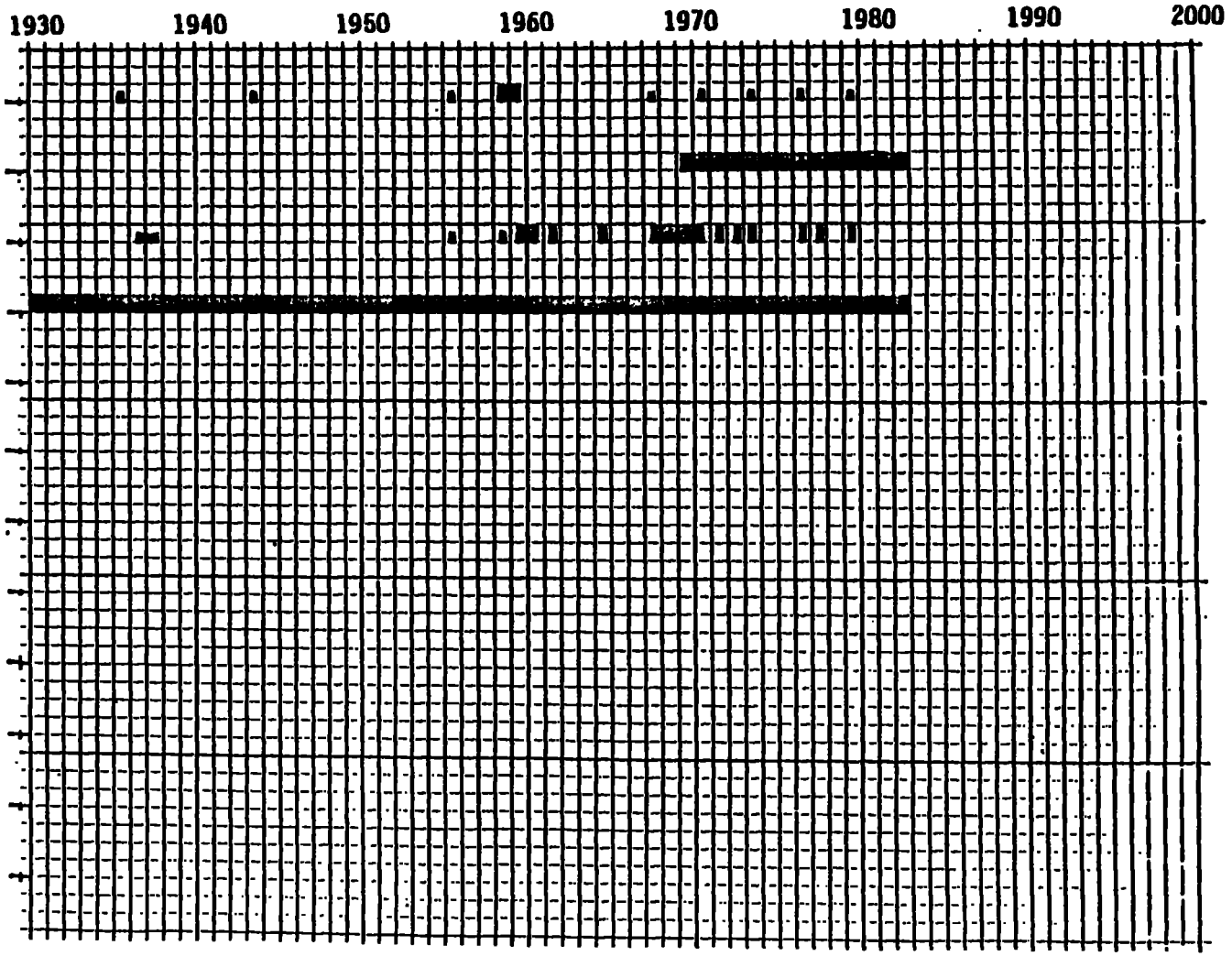
WATER LEVEL RECORDS 1930- TO DATE

DUNKIRK, NEW YORK

STURGEON POINT, NEW YORK

LACKAWANNA, NEW YORK

BUFFALO, NEW YORK



RECORDING GAUGE ▬ STAFF GAUGE ▬

NIAGARA RIVER

WATER LEVEL RECORDS 1860-1930

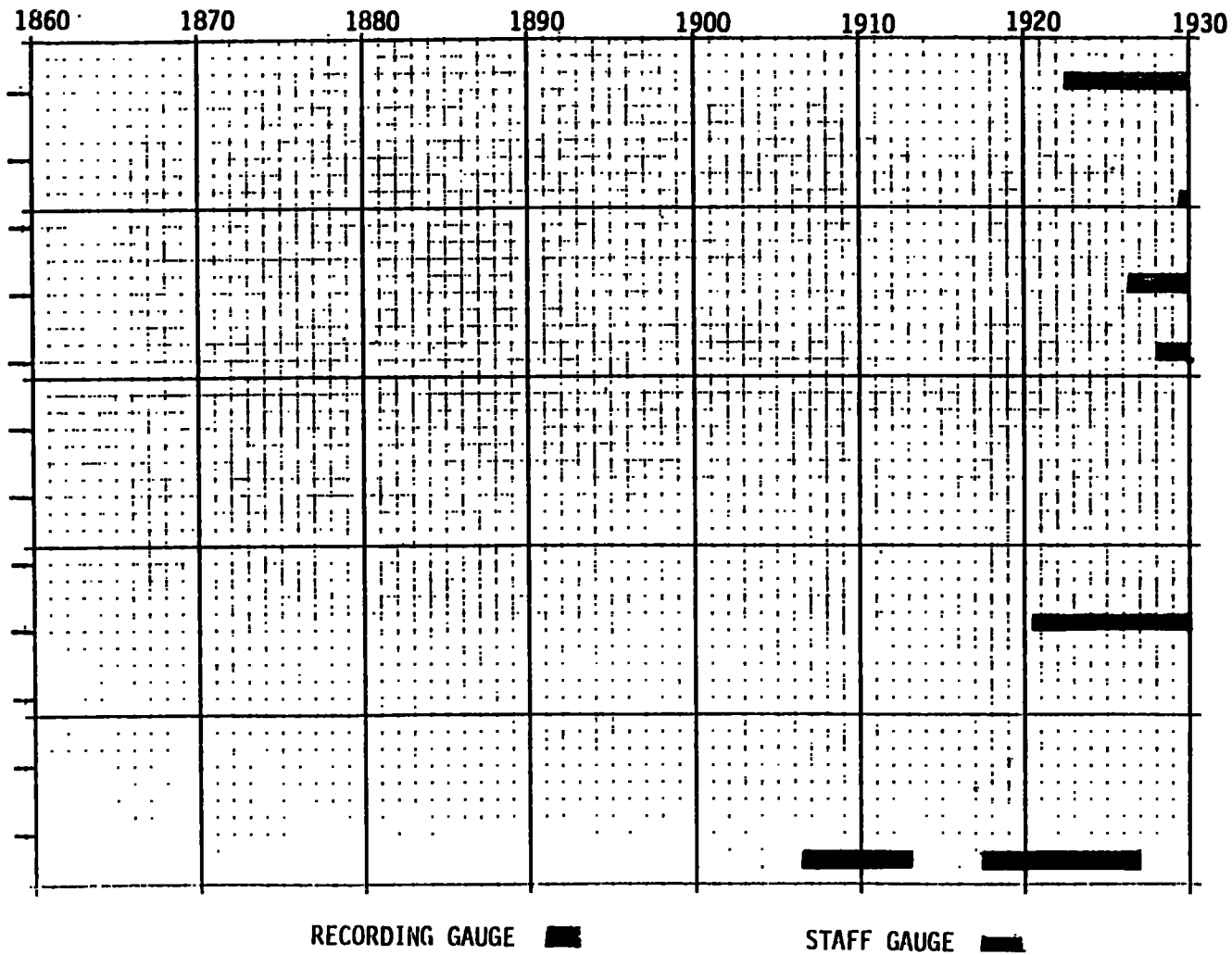


PLATE 27

NIAGARA RIVER

WATER LEVEL RECORDS 1930 - TO DATE

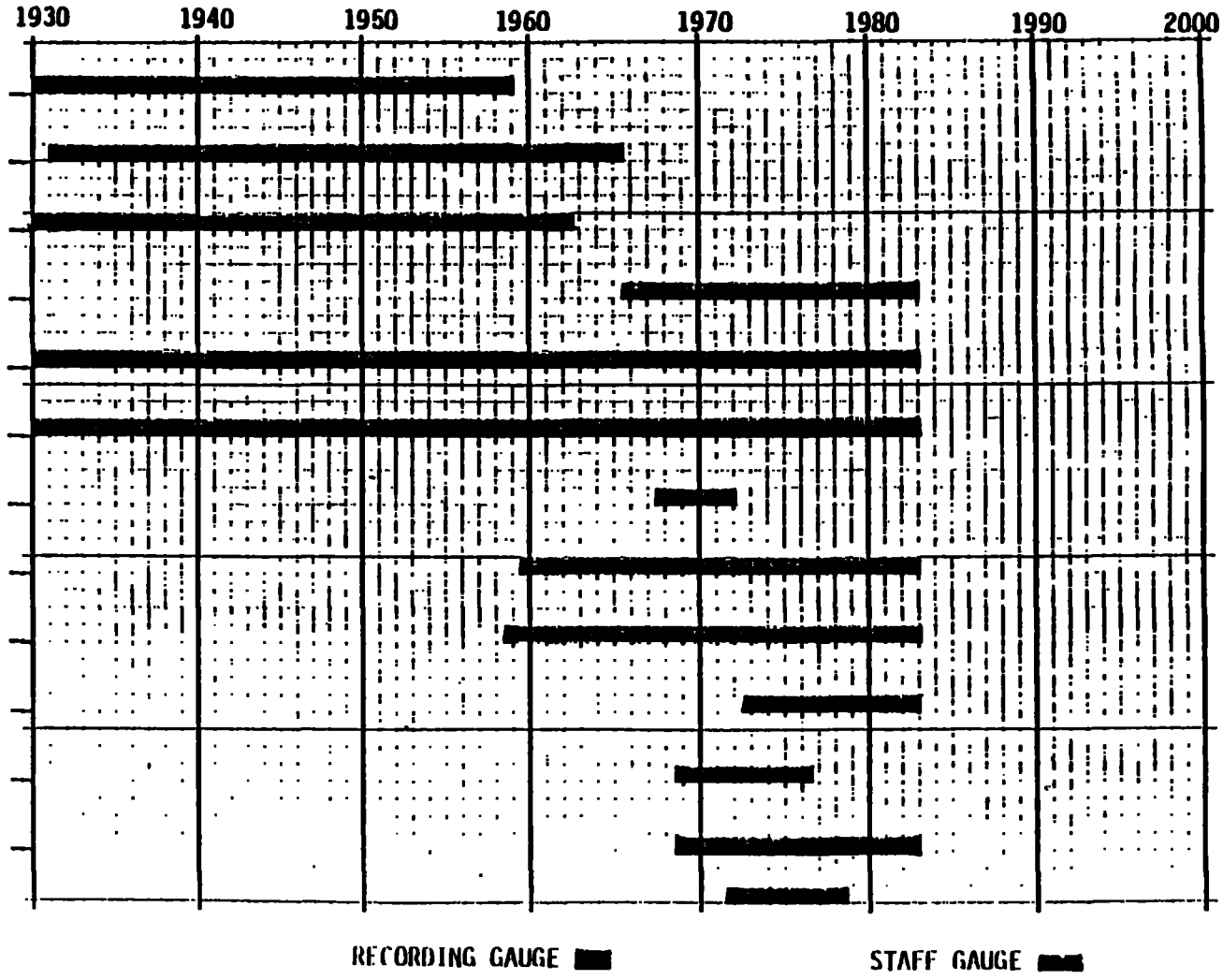


PLATE 28

NIAGARA RIVER

WATER LEVEL RECORDS 1930 - TO DATE

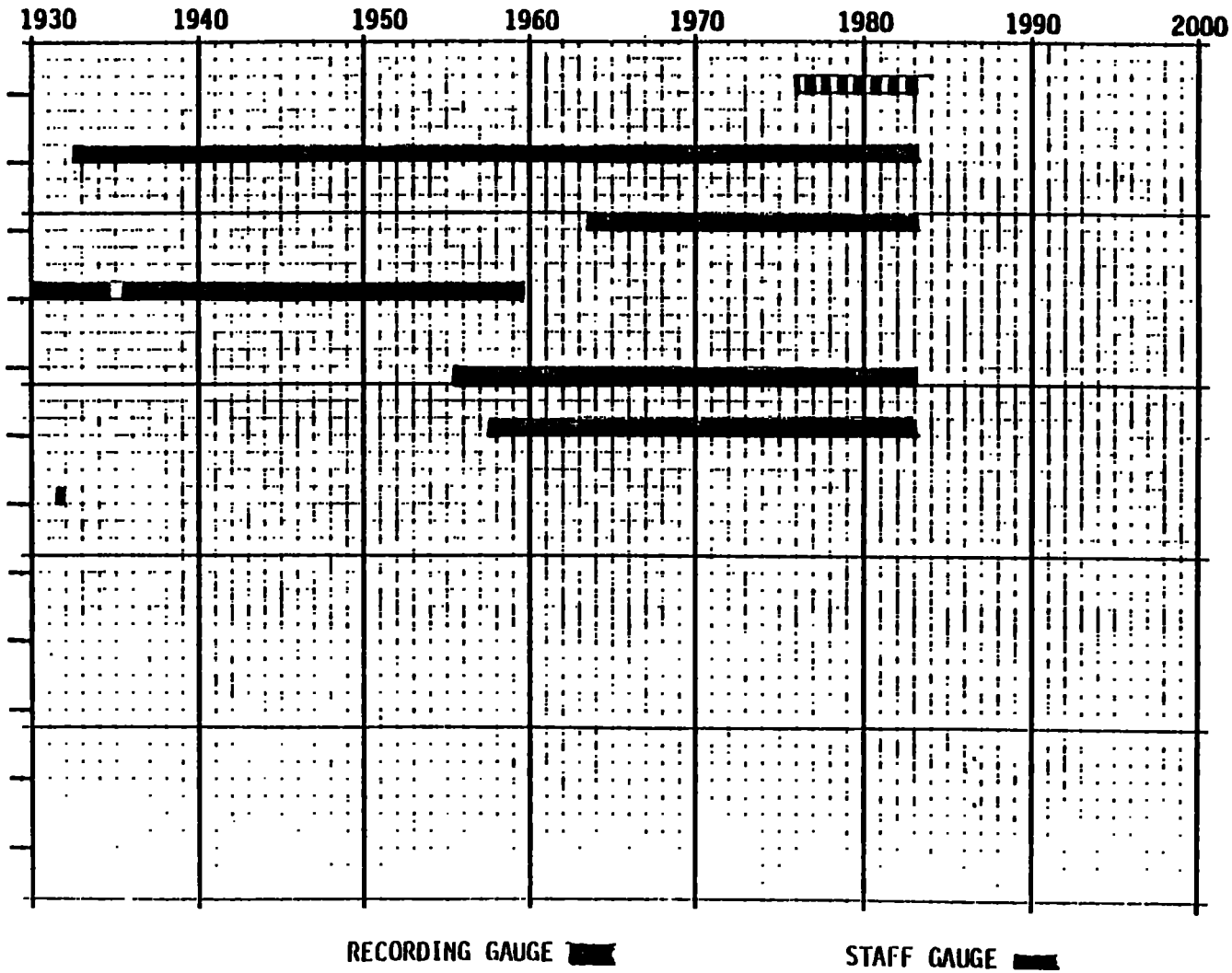


PLATE 29

GAUGE HISTORY

Port Weller, Ontario

Elevations at Port Weller on 1903 Datum as used from 1929 to 1931 depend on B.M. "MMDV1" at elevation 295.038 feet (89.928 meters) based on a comparison of float gauge readings for 1929 with water surface elevations at Port Dalhousie. The 1903 Datum as used from 1956 to 1959 depend on B.M. "MMDVI" at elevation 295.104 feet (89.948 meters) derived by adding 0.384 feet to the published Geodetic Survey of Canada elevation of B.M. "MMDVI." This correction of 0.384 feet is taken to be the same as that used at Port Dalhousie which was determined by water level transfer from Kingston 1914-1917. Elevations at Port Weller on 1903 Datum as used from October 1959 to July 1965 depend on B.M. "MMDVI" at elevation 295.053 feet (89.932 meters). This elevation was derived by adding 0.318 feet to the published Geodetic Survey of Canada elevation of B.M. "MMDVI". IGLD (1955) elevations at Port Weller depend on B.M. "MMDVI" at elevation 293.844 feet (89.564 meters) as published in Appendix A, Establishment of International Great Lakes Datum published in September 1961 by the Coordinating Committee.

CHRONOLOGICAL TABLE

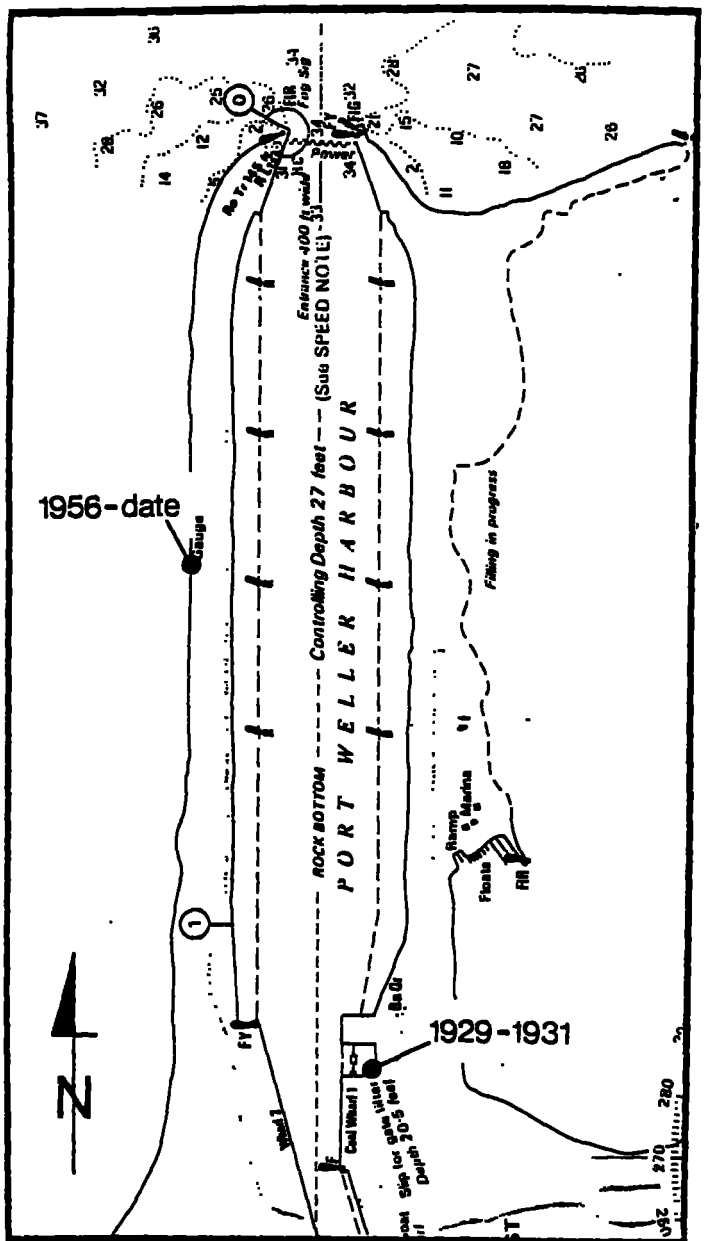
PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Aug 1929-Oct 1931	MMDVI	293.829 feet (89.559 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Jan 1956-Oct 1959	MMDVI	293.895 feet (89.579 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Nov 1959-Jun 1961	MMDVI	293.844 feet (89.564 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Jul 1961-Jul 1965	MMDVI	293.844 feet (89.564 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Aug 1965-May 1971	H.S.3	257.392 feet (78.452 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Jun 1971-Sep 1976	3526	288.161 feet (87.831 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Oct 1975-Date	H.S.3	78.452 meters (257.392 feet)	Recording Gauge, Hourly Scalings	C.H.S.

NOTE: Analogue recording gauges used before 1970. Since that date, digital recording gauges have been used. Telemetering service was installed at Port Weller in May 1979.

Gauging Station Sites (see Plate 30, page 39):

(a) August 1929-October 1931: A recording gauge located over a special well in Section 15-E of the east-pier of the new Welland Ship Canal. Section 15-E is at the southeast corner of the storage basin.

(b) November 1956-Date: A recording gauge was located over a new concrete well near the lightkeeper's house on the west side of the new Welland Ship Canal.



WATER LEVEL GAUGE LOCATION

PORT WELLER, ONTARIO
1929-DATE

1982

GAUGE HISTORY

Port Dalhousie, Ontario

Elevations at Port Dalhousie on 1903 Datum depend on B.M. "MMDIII" and "Lower Sill of Old Lock #1" at elevations 263.402 feet (80.285 meters) and 232.79 feet (70.954 meters) respectively. Elevations at Port Dalhousie also depend on leveling from B.M. "C" at elevation 257.635 feet (78.527 meters) in 1920 and 1927. IGLD (1955) elevations at Port Dalhousie depend on B.M. "MMDIII" at elevation 262.149 feet (79.903 meters) as published in Appendix A, Establishment of International Great Lakes Datum published in September 1961 by the coordinating committee.

CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Jun 1849-May 1910	LOWER SILL OF OLD LOCK #1	231.537 feet (70.572 meters)	Staff Gauge, Once Daily	D. of R. and C.
Jun 1910-Nov 1910	MMDIII	262.149 feet (79.903 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Dec 1910-May 1911	LOWER SILL OF OLD LOCK #1	231.537 feet (70.572 meters)	Staff Gauge, Once Daily	D. of R. and C.
Jun 1911-Nov 1911	MMDIII	262.149 feet (79.903 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Dec 1911-May 1912	LOWER SILL OF OLD LOCK #1	231.537 feet (70.572 meters)	Staff Gauge, Once Daily	D. of R. and C.
Jun 1912-Dec 1912	MMDIII	262.149 feet (79.903 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Jan 1913-May 1913	LOWER SILL OF OLD LOCK #1	231.537 feet (70.572 meters)	Staff Gauge, Once Daily	D. of R. and C.

Recording gauge operated June-December and staff gauge operated January-May until May 1917

Jun 1917-Nov 1917	MMDIII	262.149 feet (79.903 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Dec 1917-May 1918	LOWER SILL OF OLD LOCK #1	231.537 feet (70.572 meters)	Staff Gauge, Once Daily	D. of R. and C.

Jun 1918-Dec 1918	MMDIII	262.149 feet (79.903 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Jan 1919-May 1919	LOWER SILL OF OLD LOCK #1	231.537 feet (70.572 meters)	Staff Gauge, Once Daily	D. of R. and C.

Recording gauge operated June-December and staff gauge operated January-May until March 1921

Apr 1921-Dec 1921	MMDIII	262.149 feet (79.903 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Jan 1922-Mar 1922	LOWER SILL OF OLD LOCK #1	231.537 feet (70.572 meters)	Staff Gauge, Once Daily	D. of R. and C.

Recording gauge operated April-December and staff gauge operated January-March until March 1931

Apr 1931-Oct 1956	MMDIII	262.149 feet (79.903 meters)	Recording Gauge, Hourly Scalings	C.H.S.

Gauge discontinued October 1956

Gauging Station Sites (see Plate 31, page 42):

(a) June 1849-May 1910: and the winter months thereafter until 1931; staff gauge reading over the sill of Old Lock #1.

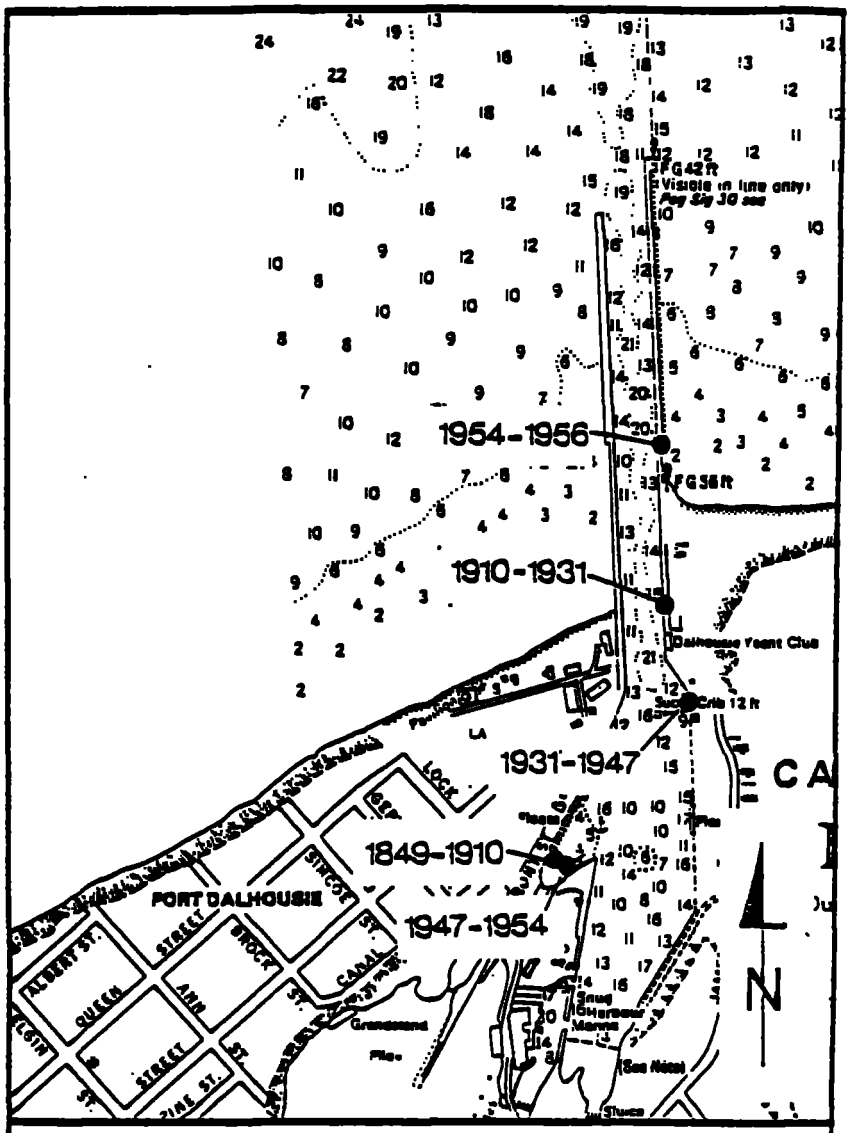
(b) June 1910-October 1931: except for the winter months (i.e. December to May): recording gauge located on the concrete approach pier on the east side of the entrance to the Welland ship canal about 200 feet north of a coal hoist.

(c) November 1931-October 1947: A recording gauge over the well in the embarkment on the east side of the harbor at the angle where the entrance widens into the harbour.

(d) November 1947-July 1954: A recording gauge on the east coping and over the chain well for the lower gate of Old Lock #1.

(e) June 1954-October 1956: A recording gauge on the outside of the eastern approach pier, set in the recess about 200 feet north of the inner range light.

NOTE: There is an overlap of 2 1/2 months in the last two gauge positions.



WATER LEVEL GAUGE LOCATION

PORT DALHOUSIE, ONTARIO

1849-1956

1982

GAUGE HISTORY

Hamilton, Ontario

1903 datum was never established at Hamilton. IGLD (1955) elevations at Hamilton depend on B.M. "MMCCCCXXXII" at elevation 262.445 feet (79.993 meters) as published in Appendix A, Establishment of International Great Lakes Datum published in September 1961 by the Coordinating Committee.

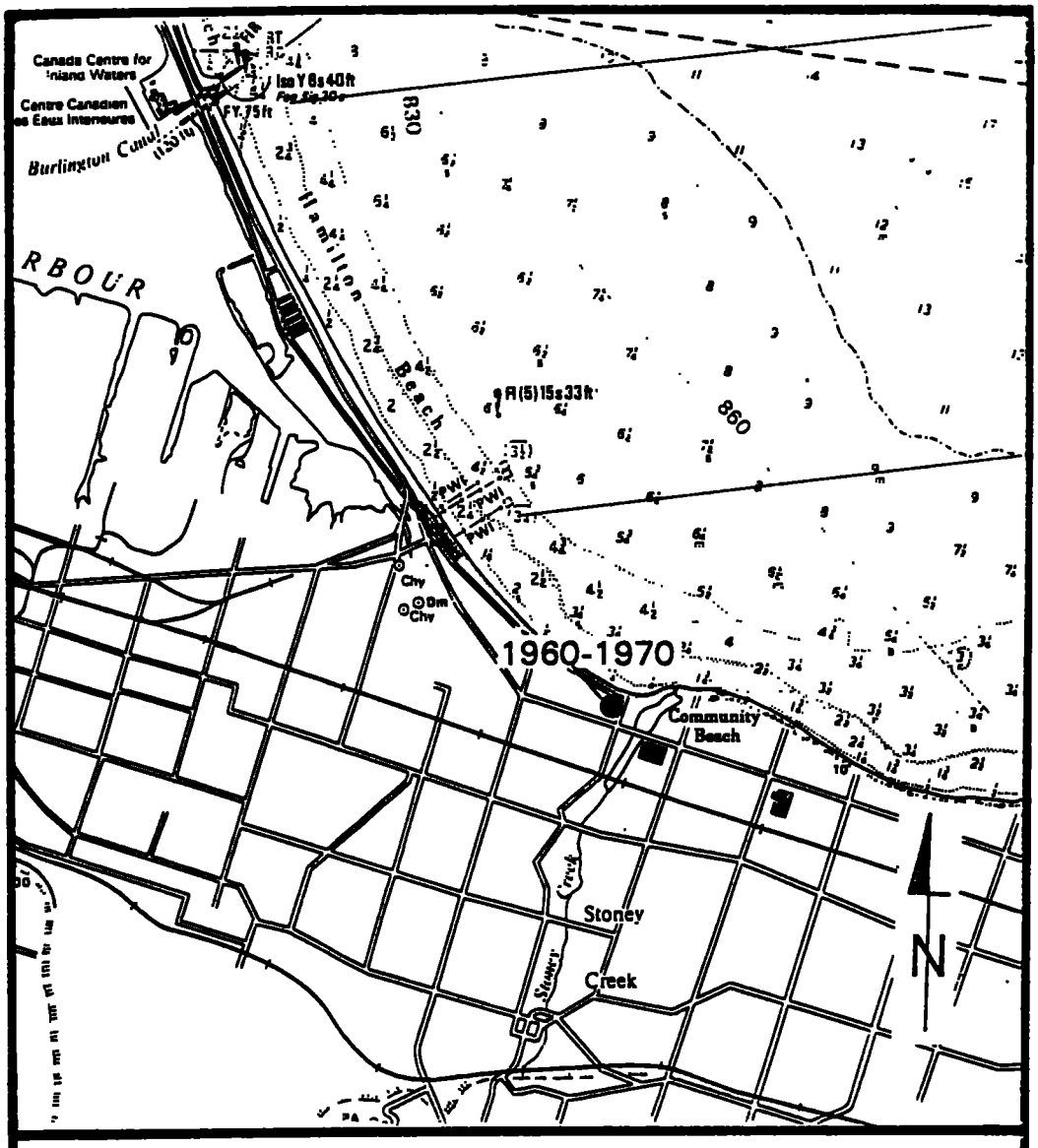
CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Dec 1960-Jun 1961	MMCCCCXXXII	Arbitrary	Recording Gauge, Hourly Scalings	C.H.S.
Jun 1961-May 1970	MMCCCCXXXII	262.445 feet (79.993 meters)	Recording Gauge, Hourly Scalings	C.H.S.

NOTE: This station was relocated in May 1970 and renamed Burlington.

Gauging Station Site (see Plate 32, page 44):

(a) November 1960-May 1970: A analogue recording gauge located immediately in front of the Old Stoney Creek pumping station on the shore of Lake Ontario, approximately 1 1/2 miles southern end of the Burlington Skyway (overpass).



Metres 1000 0 3000

Feet 5000 0 25000

WATER LEVEL GAUGE LOCATION

HAMILTON, ONTARIO

1960-1970.

1982

GAUGE HISTORY

Burlington, Ontario

1903 datum was never established at Burlington. IGLD (1955) elevations at Burlington depend on B.M. "3484" and "60 U 3327" at elevations 255.330 feet (77.825 meters) and 251.480 feet (76.652 meters) respectively as established by level line run in 1965 by Geodetic Survey of Canada.

CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
May 1970-Jun 1982	3484	255.330 feet (77.825 meters)	Recording Gauge, Hourly Scalings	C.H.S.
May 1981-Date	60 U 3327	76.652 meters (251.480 feet)	Recording Gauge, Hourly Scalings	C.H.S.

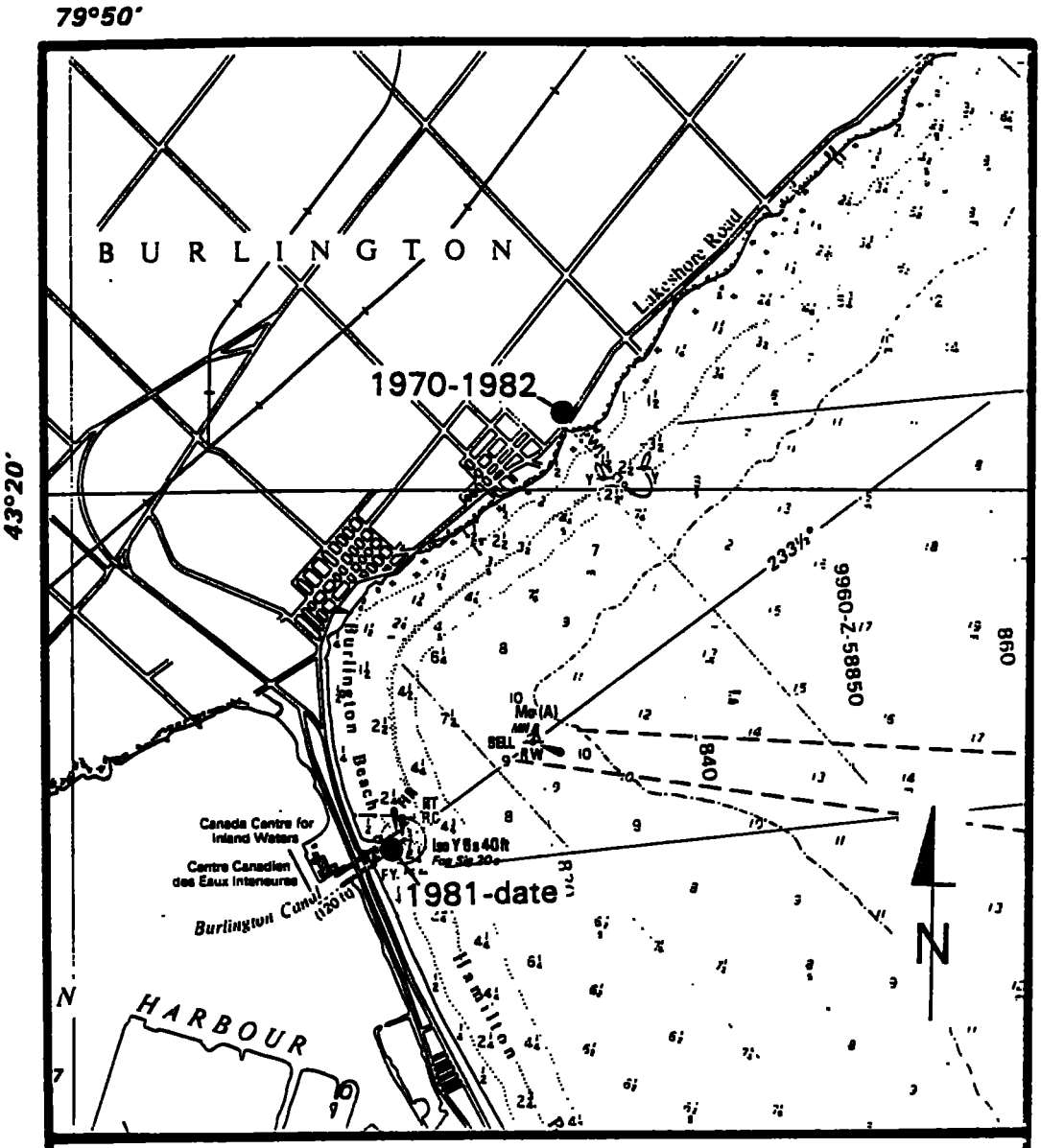
NOTE: Analogue and digital recording gauges have been used at this location. Telemetering service was installed at Burlington in December 1980.

Gauging Station Sites (see Plate 33, page 46):

(a) May 1970-June 1982: Recording gauge located in the Burlington Filtration plant, 2.4 miles northeast of the Joseph Brant Hospital. Gauge located in an abandoned well.

(b) May 1981-Date: Recording gauge located in a concrete block house shelter on the southeast side of Burlington pier, 100 meters from lift bridge at the entrance of the Hamilton Harbour.

NOTE: There is an overlap of 13 months of records in the two locations above.



WATER LEVEL GAUGE LOCATION

BURLINGTON, ONTARIO
1970-DATE

1982

GAUGE HISTORY

Toronto, Ontario

Elevations at Toronto on 1903 Datum depend on B.M. "646 1/2" and on B.M. "BENCH PLATE" at elevations 254.16 feet (77.468 meters) and 255.061 feet (77.743 meters) respectively. Datum was based on comparisons of the float gauge readings from 1907 to 1909 with water surface elevations at Tibbett's Point and from 1917 to 1925 with water surface elevations at Kingston. It is not clear how these elevations came to change to 254.15 ft (77.465 meters) and 255.054 feet (77.740 meters). IGLD (1955) elevations at Toronto depend on B.M. "BENCH PLATE" and B.M. "579 F" at elevations 253.833 feet (77.368 meters) and 252.124 feet (76.847 meters) respectively as published in Appendix A, Establishment of International Great Lakes Datum published in September 1961 by the Coordinating Committee.

CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Jan 1861-May 1906	STAFF ZERO	243.573 feet (74.241 meters)	Staff Gauge, Once Daily	T.H.C.
Jun 1906-Nov 1906	646 1/2	252.929 feet (77.093 meters)	Recording Gauge, Hourly Scalings	D.P.W.
Dec 1906-May 1907	STAFF ZERO	243.573 feet (74.241 meters)	Staff Gauge, Once Daily	T.H.C.
Jun 1907-Nov 1907	646 1/2	252.929 feet (77.093 meters)	Recording Gauge, Hourly Scalings	D.P.W.
Dec 1907-May 1908	STAFF ZERO	243.573 feet (74.241 meters)	Staff Gauge, Once Daily	T.H.C.
Jun 1908-Oct 1908	646 1/2	252.093 meters) (77.093 meters)	Recording Gauge, Hourly Scalings	D.P.W.
Nov 1908-Apr 1909	STAFF ZERO	243.573 feet (74.241 meters)	Staff Gauge, Once Daily	T.H.C.
May 1909-Oct 1909	646 1/2	252.929 feet (77.093 meters)	Recording Gauge, Hourly Scalings	D.P.W.
Nov 1909-Dec 1916	STAFF ZERO	243.573 feet (74.241 meters)	Staff Gauge, Once Daily	T.H.C.
Jan 1917-Jun 1926	NO LEVELING RECORD		Recording Gauge, Hourly Scalings	T.H.C.

Jul 1926-Sep 1926	STAFF ZERO	243.573 feet (74.241 meters)	Staff Gauge, Once Daily	T.H.C.
Oct 1926-Dec 1959	BENCH PLATE	253.833 feet (27.368 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Jan 1960-Jan 1970	BENCH PLATE	253.833 feet (77.368 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Jan 1970-Nov 1976	579 F	252.129 feet (76.849 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Nov 1976-Date	579 F	76.849 meters (252.129 feet)	Recording Gauge, Hourly Scalings	C.H.S.

NOTE: Analogue recording gauges used before 1970. Since that date, digital recording gauges have been used. Telemetering service was installed at Toronto in May 1979.

Gauging Station Sites (see Plates 34-36, pages 49-51):

(a) January 1861-May 1906: A Toronto Harbour Commission Staff Gauge fastened to the south face of Queen's Wharf about 200 feet from the west end. The gauge staff occupied at least one other position during that period, but was never far enough from the above location to be considered as a separate location.

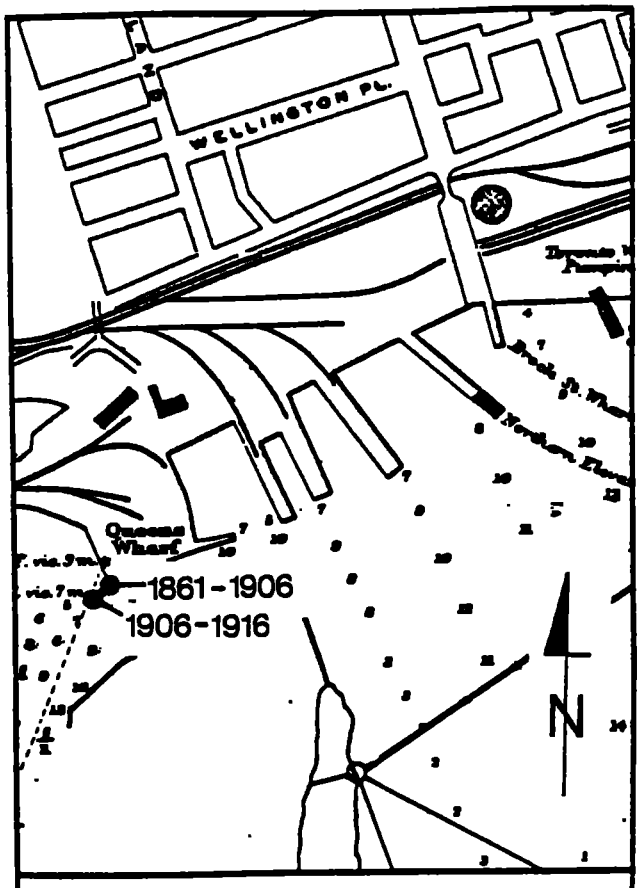
(b) July 1906-December 1916: A Public Works recording gauge and a Toronto Harbour Commission staff Gauge operated in a shed about 60 feet from the west end of Queen's Wharf.

(c) January 1917-June 1926: A recording gauge operated in the basement of the Toronto Harbour Commission Administration building at the foot of Bay Street.

(d) July 1926-September 1926: A staff gauge. Its location is uncertain.

(e) September 1926-January 1960: A recording gauge operated in or near the Toronto Harbour Commission garage on the slip at the foot of York Street.

(f) January 1960-Date: A recording gauge operated at the foot of York Street approximately 50 feet in a westerly direction from the old location in the boat house.



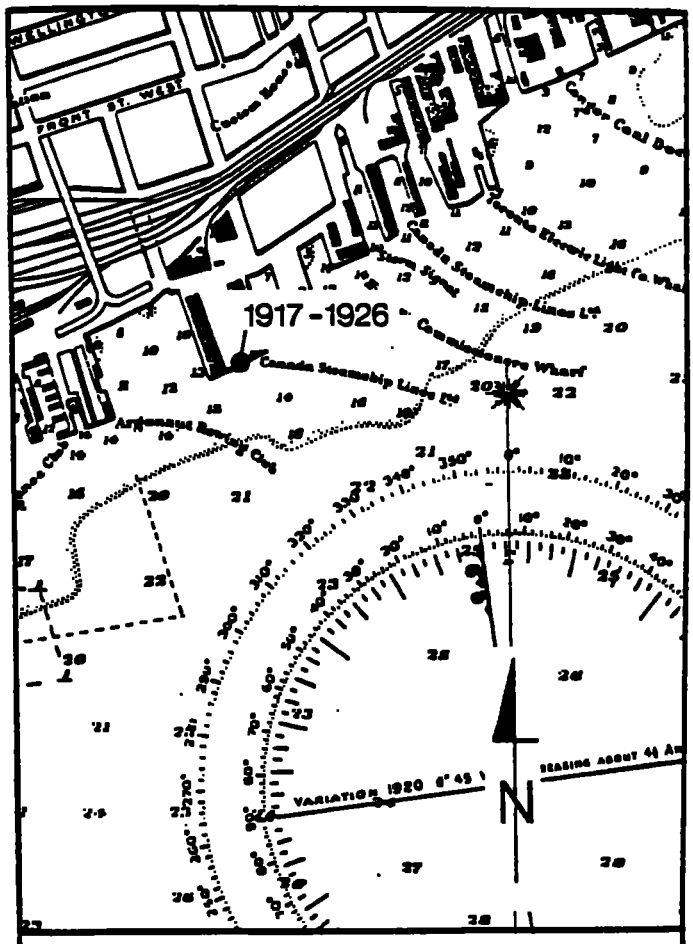
0 2000 Feet

WATER LEVEL GAUGE LOCATION

TORONTO, ONTARIO

1861-1916

1982



0 2000 Feet

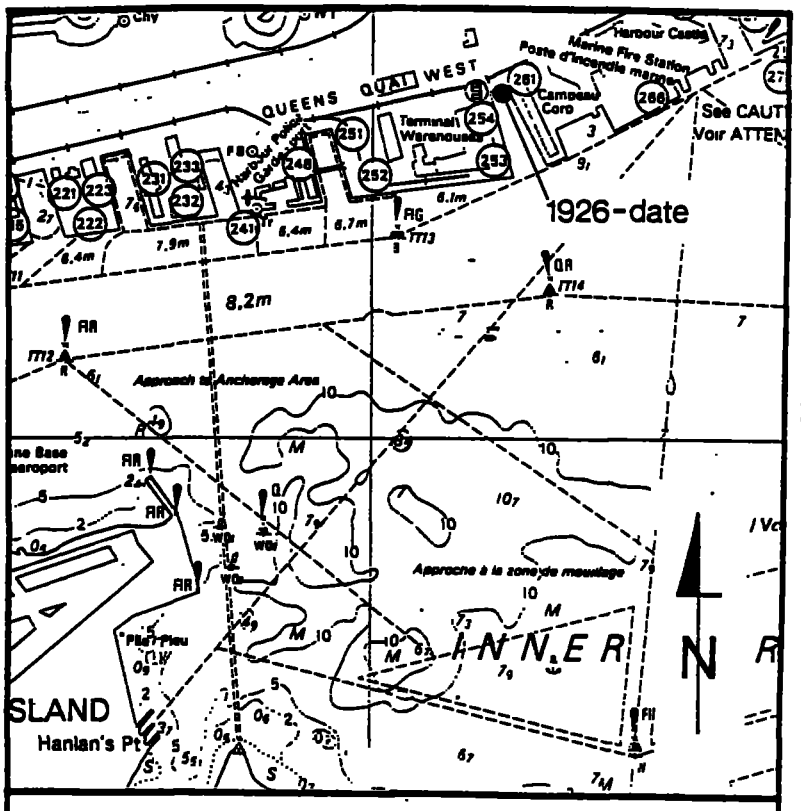
WATER LEVEL GAUGE LOCATION

TORONTO, ONTARIO

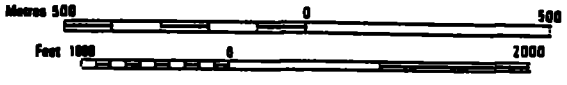
1917-1926

1982

79°23'



43°38'



WATER LEVEL GAUGE LOCATION

TORONTO, ONTARIO

1926-DATE

1982

GAUGE HISTORY

Oshawa, Ontario

1903 datum was never established at Oshawa. IGLD (1955) elevations at Oshawa depend on B.M. "67 U 041" at elevation 345.093 feet (105.184 meters). IGLD (1955) elevations at Oshawa were established by using the latest level line from Bench Mark "STEEL RIVET" at Kingston.

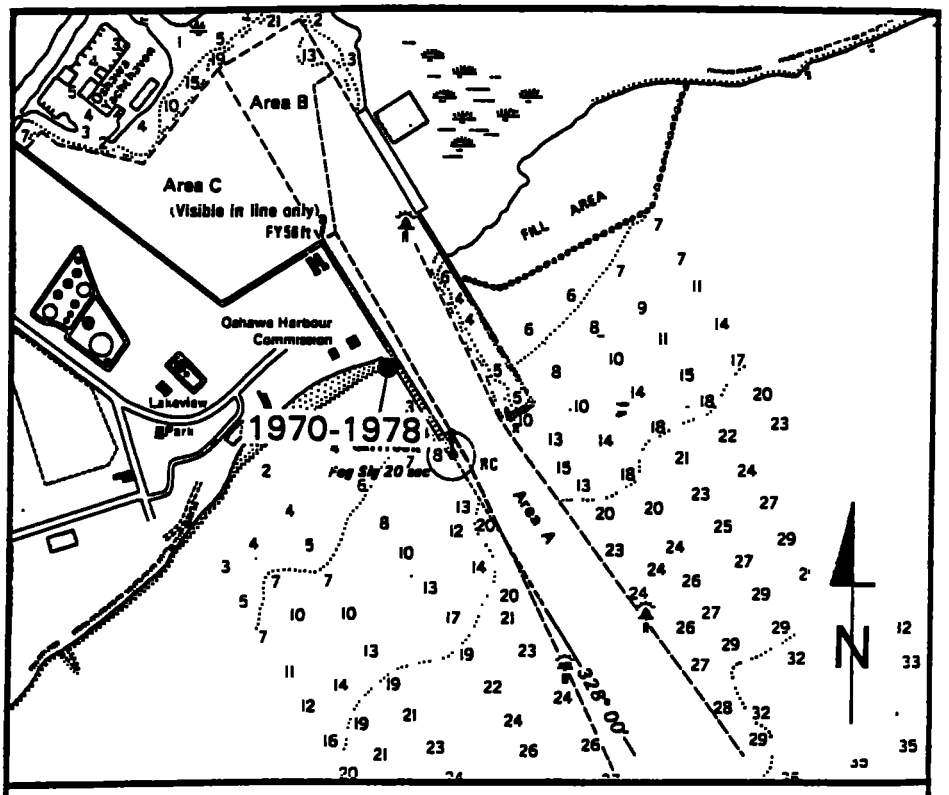
CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Aug 1970-May 1975	67 U 041	345.093 feet (105.184 meters)	Recording Gauge, Hourly Scalings	C.H.S.
May 1975-Nov 1976	67 U 020	249.568 feet (76.071 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Nov 1976-Sep 1978	62 U 020	249.590 feet (76.075 meters)	Recording Gauge, Hourly Scalings	C.H.S.

NOTE: Digital recording gauges have been used at this station.

Gauging Station Site (see Plate 37, page 53):

(a) August 1970-September 1978: A recording gauge at the north west corner of pier in the Oshawa Harbour.



Metres 100 0 500

Feet 1000 0 1000

WATER LEVEL GAUGE LOCATION

OSHAWA, ONTARIO

1970-1978

1982

PLATE 37

GAUGE HISTORY

Cobourg, Ontario

Elevations at Cobourg on 1903 Datum depend on B.M. "171" at elevation 263.809 feet (80.409 meters). Elevations at Cobourg on 1903 Datum were derived by adding 0.522 feet to the published Geodetic Survey of Canada elevation of B.M. "171." This correction of 0.522 feet is taken to be the same as that at Brighton which was determined by water transfer from Tibbett's Point during the period 1908-1909. IGLD (1955) elevations at Cobourg depend on B.M. "171" at elevation 262.750 feet (80.086 meters) as published in Appendix A, Establishment of International Great Lakes Datum published in september 1961 by the Coordinating Committee. IGLD (1955) elevations at Cobourg also depend on B.M. "COB02" and "67 U 057" at elevations 250.243 feet (76.274 meters) and 253.806 feet (77.360 meters) respectively as established by level line run in 1975 by Geodetic Survey of Canada.

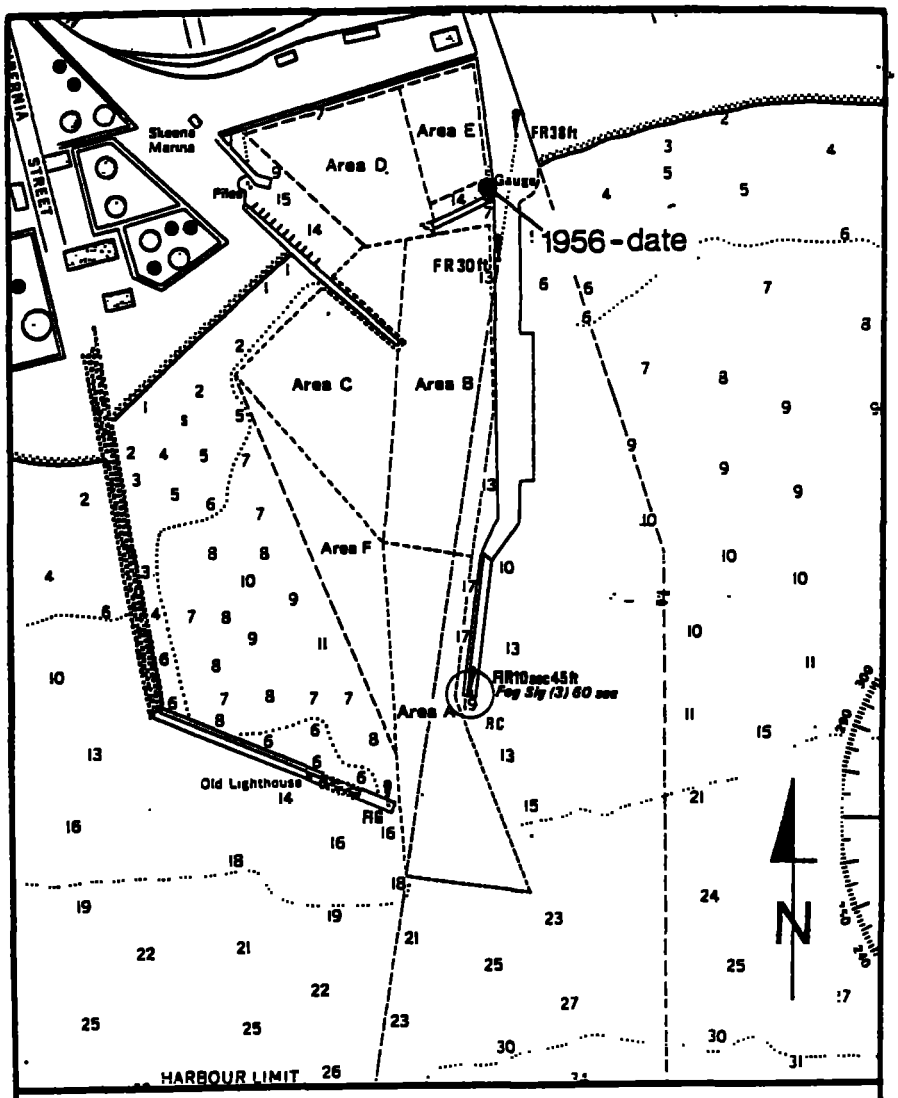
CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Jul 1956-Jun 1961	171	262.750 feet (80.086 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Jun 1961-Nov 1976	171	262.750 feet (80.086 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Nov 1976-Aug 1980	COB02	250.243 feet (76.274 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Aug 1980-Date	67 U 057	77.360 meters (253.806 feet)	Recording Gauge, Hourly Scalings	C.H.S.

NOTE: Analogue recording gauges used before 1970. Since that date, digital recording gauges have been used. Telemetering service was installed at Cobourg in May 1979.

Gauging Station Site (see Plate 38, page 55):

(a) July 1956-Date: A recording gauge on the east side of dock, next to the Department of Public Works' boat house.



WATER LEVEL GAUGE LOCATION

COBOURG, ONTARIO

1956-DATE

1982

GAUGE HISTORY

Brighton, Ontario

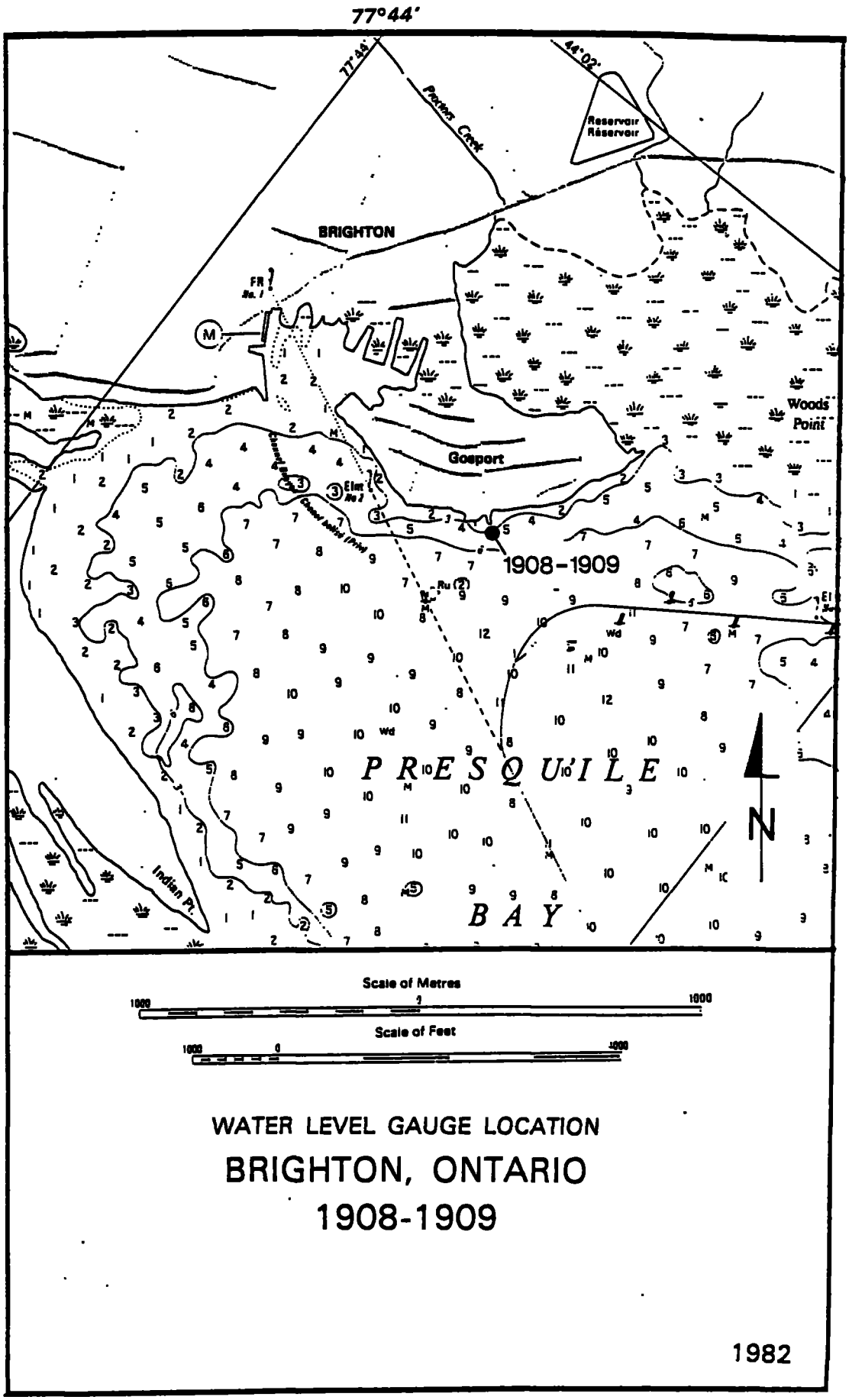
Elevations at Brighton on 1903 Datum depend on B.M. "MCXCVIII" at elevation 256.572 feet (78.203 meters) based on a comparison of float gauge readings for 1908 and 1909 with water surface elevations at Tibbetts Point. IGLD (1955) elevations at Brighton depend on B.M. "MCXCVIII" at elevation 255.509 feet (77.879 meters) as published in Appendix A, Establishment of International Great Lakes Datum published in September 1961 by the Coordinating Committee.

CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Jun 1908-Oct 1908	MCXCVIII	255.509 feet (77.879 meters)	Recording Gauge, Hourly Scalings	C.H.S.
May 1909-Nov 1909	MCXCVIII	255.509 feet (77.879 meters)	Recording Gauge, Hourly Scalings	C.H.S.

Gauging Station Site (see Plate 39, page 57):

(a) June-October 1908 and May-November 1909: A recording gauge located on the Brighton Wharf.



WATER LEVEL GAUGE LOCATION

BRIGHTON, ONTARIO

1908-1909

1982

GAUGE HISTORY

Point Petre, Ontario

1903 datum was never established at Point Petre. IGLD (1955) elevations at Point Petre depend on B.M. "67 U 155" and B.M. "NO 1" at elevation 252.626 feet (77.000 meters) and 255.899 feet (77.998 meters) as established by level line run in 1967 by Geodetic Survey of Canada.

CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Jan 1969-Sep 1976	67 U 155	252.626 feet (77.000 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Sep 1976-Sep 1978	NO 1	255.899 feet (77.998 meters)	Recording Gauge, Hourly Scalings	C.H.S.

NOTE: Analogue recording gauges used before 1975. Since that date, digital recording gauges have been used.

Gauging Station Site (see Plate 40, page 59):

(a) January 1969-September 1978: A recording gauge located 2,000 feet north of Point Petre lighthouse.

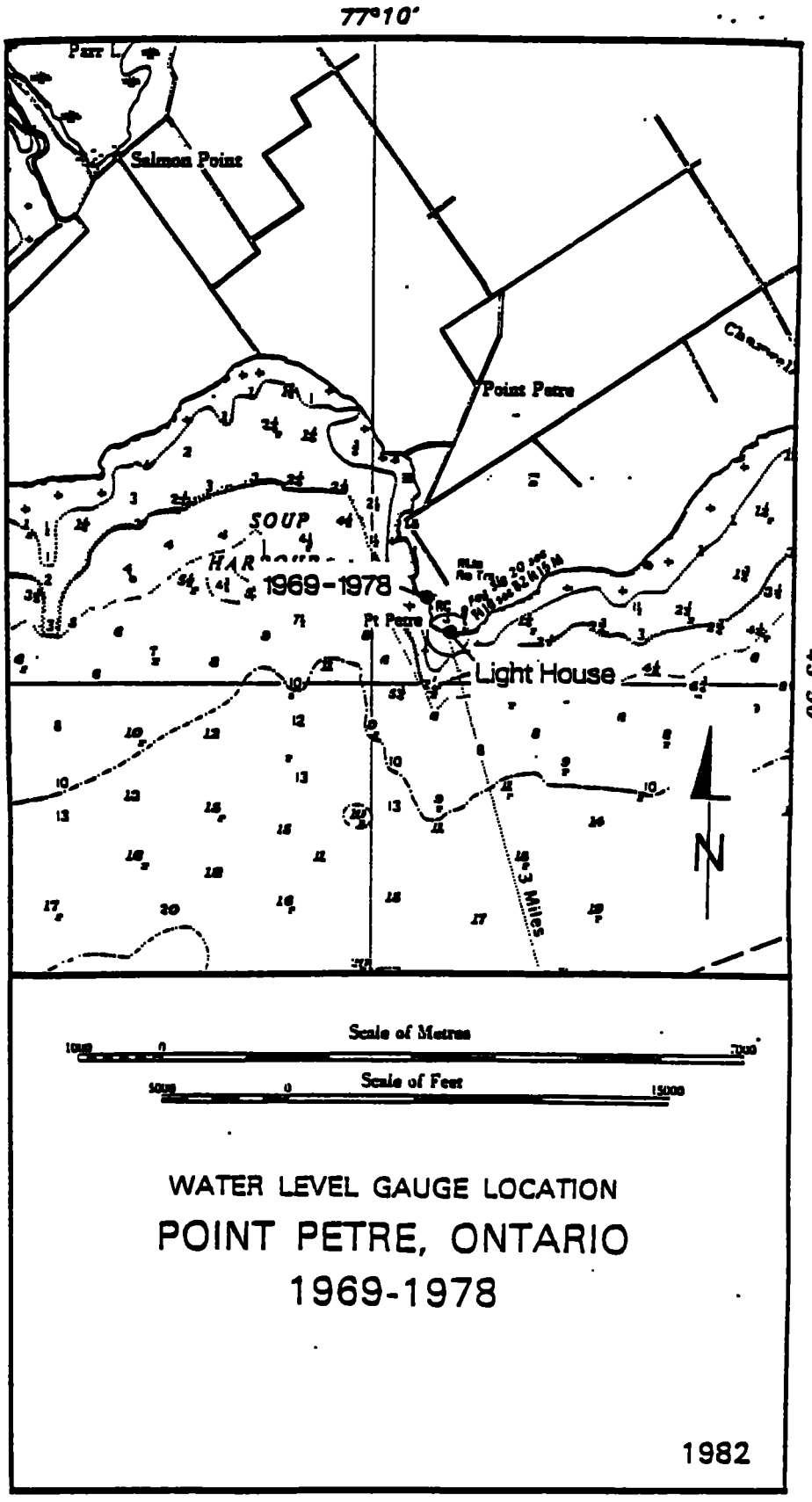

77°10'
Salmon Point
Point Petre
SOUP
HAR
1969-1978
Pt Petre
Light House
43°50'
N
3 Miles
Scale of Metres
Scale of Feet
WATER LEVEL GAUGE LOCATION
POINT PETRE, ONTARIO
1969-1978
1982

PLATE 40

GAUGE HISTORY

Kingston, Ontario

Elevations at Kingston on 1903 Datum depend on B.M. "STEEL RIVET" at elevation 252.710 feet (77.026 meters) based on a comparison of float gauge readings for 1909 and 1911 to 1915 with water surface elevations at Tibbett's Point. The sill elevation of 229.300 feet (69.891 meters) was obtained by instrumental leveling from B.M. "STEEL RIVET". IGLD (1955) elevations at Kingston depend on B.M. "STEEL RIVET" at elevation 251.664 feet (76.707 meters) as published in Appendix A, Establishment of International Great Lakes Datum published in September 1961 by the Coordinating Committee. IGLD (1955) elevations at Kingston also depend on B.M. "35" and B.M. "75 U 502" at elevations 264.615 feet (80.655 meters) and 250.879 feet (76.469 meters) respectively as established by level line run from B.M. "STEEL RIVET" by Geodetic Survey of Canada.

CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Jan 1895-Sep 1907	DRYDOCK SILL	228.254 feet (69.527 meters)	Staff Gauge, Once Daily	Ship Bldg Co. (?)
Aug 1908-Apr 1909	DRYDOCK SILL	228.254 feet (69.527 meters)	Staff Gauge, Once Daily	Ship Bldg Co. (?)
May 1909-Dec 1909	STEEL RIVET	251.664 feet (76.707 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Jan 1910-Mar 1910	DRYDOCK SILL	228.254 feet (69.527 meters)	Staff Gauge, Once Daily	Ship Bldg Co. (?)
Apr 1910-Aug 1962	STEEL RIVET	251.664 feet (76.707 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Sep 1962-Aug 1974	35	264.615 feet (80.655 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Aug 1974-Jul 1977	67 U 197	251.364 feet (76.616 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Jul 1977-Date	75 U 502	76.469 meters (250.879 feet)	Recording Gauge, Hourly Scalings	C.H.S.

NOTE: Analogue recording gauges used before 1971. Since that date, digital recording gauges have been used. Telemetering service was installed at Toronto in 1979.

Gauging Station Sites (see Plate 41, page 62):

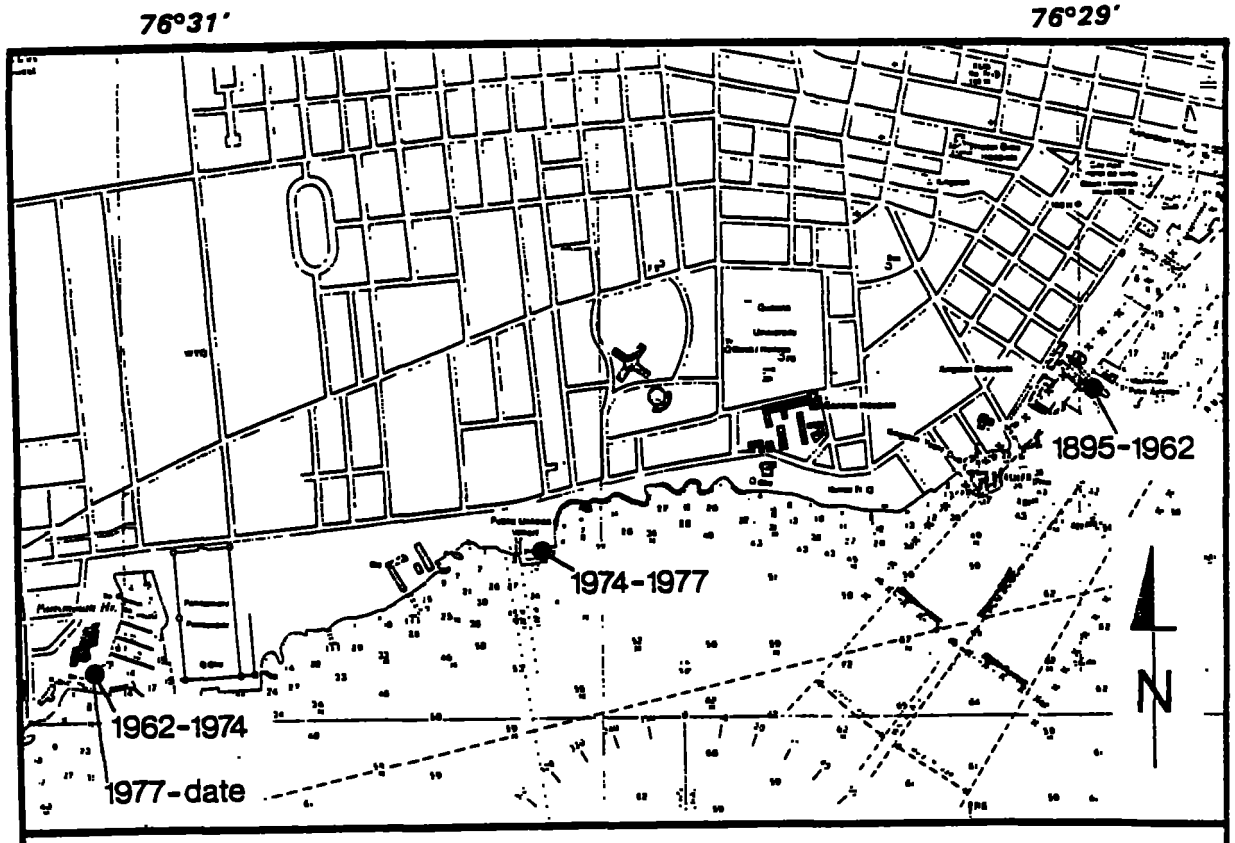
(a) January 1895-December 1907, August 1908-April 1909, and January 1910-March 1910: A glass tube gauge in the pump house of the Kingston Shipbuilding Company's drydock.

(b) May 1909-December 1909 and April 1910-August 1962: A recording gauge inside the pump house of the Kingston Shipbuilding Company's dry dock.

(c) September 1962-August 1974: A recording gauge in brick veneer gauge house over well on north face of Government Wharf at Portsmouth.

(d) August 1974-July 1977: A recording gauge in a STELCO gauge house over well on the inner wall of the water purification plant's wharf; one mile upstream of the Portsmouth gauge location.

(e) July 1977-Date: A recording gauge over a well located in Portsmouth Olympic Harbour building in Kingston.



WATER LEVEL GAUGE LOCATION

KINGSTON, ONTARIO

1895-date

1982

GAUGE HISTORY

Tibbetts Point, New York

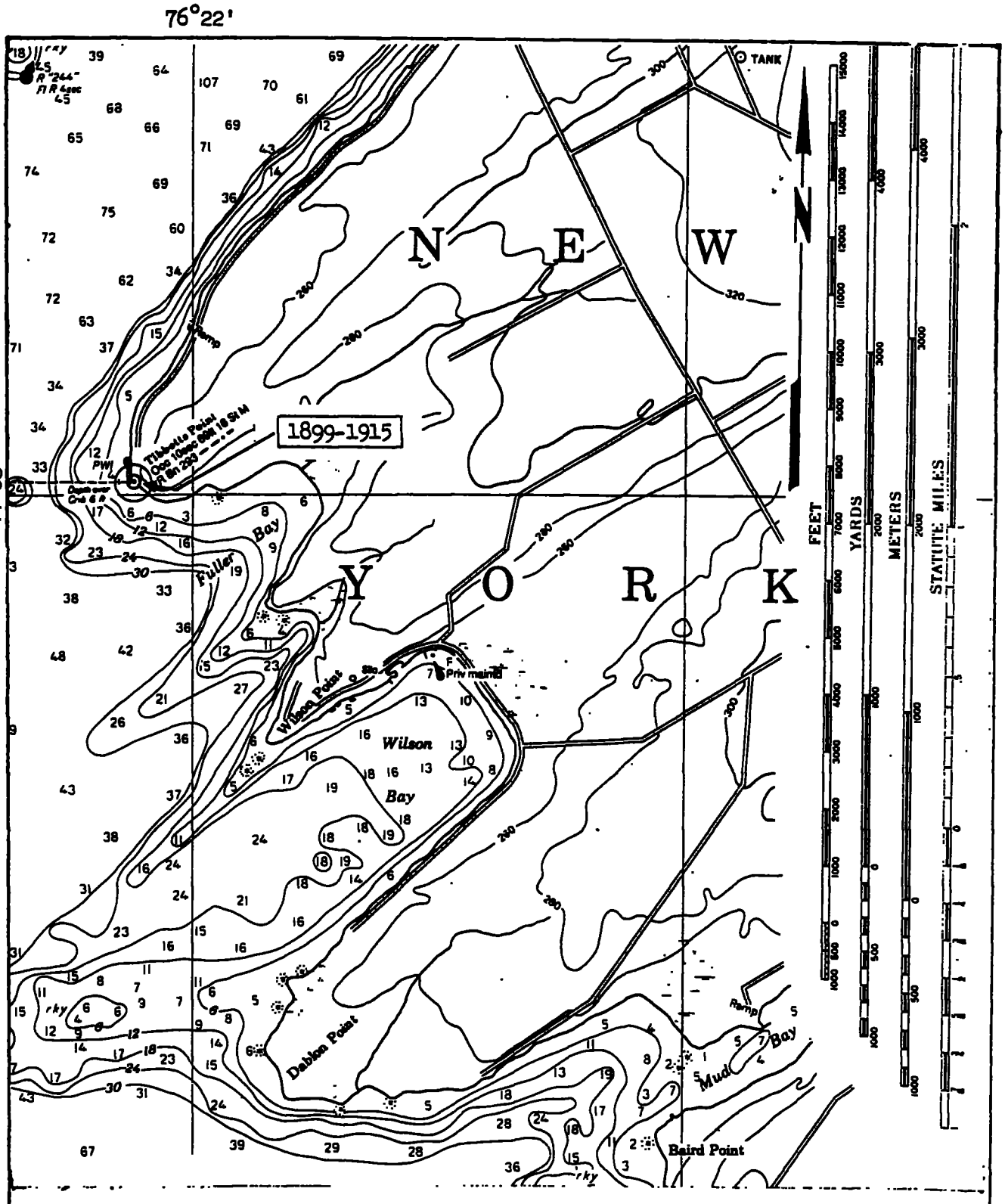
Elevations at Tibbetts Point on 1903 Datum depend on B.M. "35" at elevation 263.854 feet (80.423 meters) as published in Appendix FFF, Annual Report of the Chief of Engineers for 1903. Elevations at Tibbetts Point on 1935 Datum were established by precise levels from Cape Vincent, New York. The 1935 Datum elevation of B.M. "35" at Tibbetts Point is 264.041 feet (80.480 meters) and depends on the elevation of B.M. "A" at Cape Vincent as being 254.326 feet (77.519 meters) on 1935 Datum. IGLD (1955) elevations at Tibbetts Point depend on B.M. "35" at elevation 262.821 feet (80.108 meters) as published in Appendix A, Establishment of International Great Lakes Datum published in September 1961 by the Coordinating Committee.

CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Aug 1899-Dec 1915	35	262.821 feet (80.108 meters)	Recording Gauge, Hourly Scalings	U.S.L.S.

Gauging Station Site (see Plate 42, page 64):

(a) August 1899 - December 1915: A recording gauge located in the intake well of the Fog Signal Plant on the tip of Tibbetts Point.



WATER LEVEL GAUGE LOCATION

TIBBETTS POINT, NEW YORK
1899-1915

1982

GAUGE HISTORY

Sackets Harbor, New York

Elevations at Sackets Harbor on 1903 Datum depend on B.M. "2" at elevation 264.62 feet (80.66 meters) as published in Appendix FFF, Annual Report of the Chief of Engineers for 1903. Elevations at Sackets Harbor on 1935 Datum were established by water level transfer from Oswego and Cape Vincent, New York, using recording gauge records at Oswego and Cape Vincent for the period May - September 1935. The 1935 Datum elevation of B.M. "2" at Sackets Harbor is 264.570 feet (80.641 meters) and depends on the elevation of B.M. "A" at Oswego as being 251.898 feet (76.779 meters) on 1935 Datum. IGLD (1955) elevations at Sackets Harbor depend on B.M. "WL 138" at elevation 265.360 feet (80.882 meters) as published in Appendix A, Establishment of International Great Lakes Datum published in September 1961 by the Coordinating Committee.

CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Jul 1859-Dec 1859	2	263.360 feet	Float Gauge, Monthly Mean	U.S.L.S.
Apr 1860-Nov 1860	2	263.360 feet	Float Gauge, Monthly Mean	U.S.L.S.
Jan 1861-Jul 1861	2	263.360 feet	Float Gauge, Monthly Mean	U.S.L.S.
Sep 1871-Nov 1871	2	263.360 feet	Float Gauge, Monthly Mean	U.S.L.S.
Jun 1872-Nov 1872	2	263.360 feet	Float Gauge, Monthly Mean	U.S.L.S.
May 1873-Dec 1873	2	263.360 feet	Float Gauge, Monthly Mean	U.S.L.S.
May 1874-Sep 1874	2	263.360 feet	Float Gauge, Monthly Mean	U.S.L.S.
May 1875-Jun 1882	2	263.360 feet	Float Gauge, Monthly Mean	U.S.L.S.
Jun 1935-Sep 1935	2	263.360 feet	Float Gauge, Tri-Daily	U.S.L.S.
May 1941-Oct 1941	2	263.360 feet	Float Gauge, Tri-Daily	U.S.L.S.

May 1955-Oct 1955	WL 138	265.360 feet	Float Gauge, Tri-Daily	U.S.L.S.
Jun 1961-Sep 1961	WL 138	265.360 feet	Tape Gauge, Tri-Daily	U.S.L.S.
Jun 1964-Sep 1964	WL 138	265.360 feet	Tape Gauge, Tri-Daily	U.S.L.S.
May 1967-Sep 1967	MILITIA	246.528 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
May 1968-Sep 1968	MILITIA	246.528 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
Jun 1969-Oct 1969	MILITIA	246.528 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
Jun 1970-Sep 1970	MILITIA	246.528 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
Jun 1971-Oct 1971	MILITIA	246.528 feet	Recording Gauge, Hourly Scalings	N.O.S.
Apr 1972-Nov 1972	MILITIA	246.528 feet	Recording Gauge, Hourly Scalings	N.O.S.
Jun 1973-Sep 1973	MILITIA	246.528 feet	Recording Gauge, Hourly Scaling	N.O.S.
Jun 1976-Sep 1976	MILITIA	246.528 feet	Recording Gauge, Hourly Scalings	N.O.S.
Jun 1979-Sep 1979	WL 136	273.496 feet (83.362 meters)	Recording Gauge, Hourly Scalings	N.O.S.

Gauging Station Sites (see Plate 43, page 67):

(a) July 1859 - June 1882: A float gauge, the site of which was moved several times along the southwest shore of the harbor. The three locations were within a 500-foot stretch of the shore.

(b) June 1935 - October 1941: A float gauge located at the Naval Reserve Dock along the north shore of the harbor.

(c) May 1955 - October 1955: A float gauge located near the site of the 1860 gauge in the south corner of the harbor.

(d) June 1961 - September 1964: A tape gauge on the southerly side and near the inner end of Navy Point at the Navy Point Marina.

(e) May 1967 - September 1979: A recording gauge located on the southerly side and near the inner end of Navy Point at the Navy Point Marina.

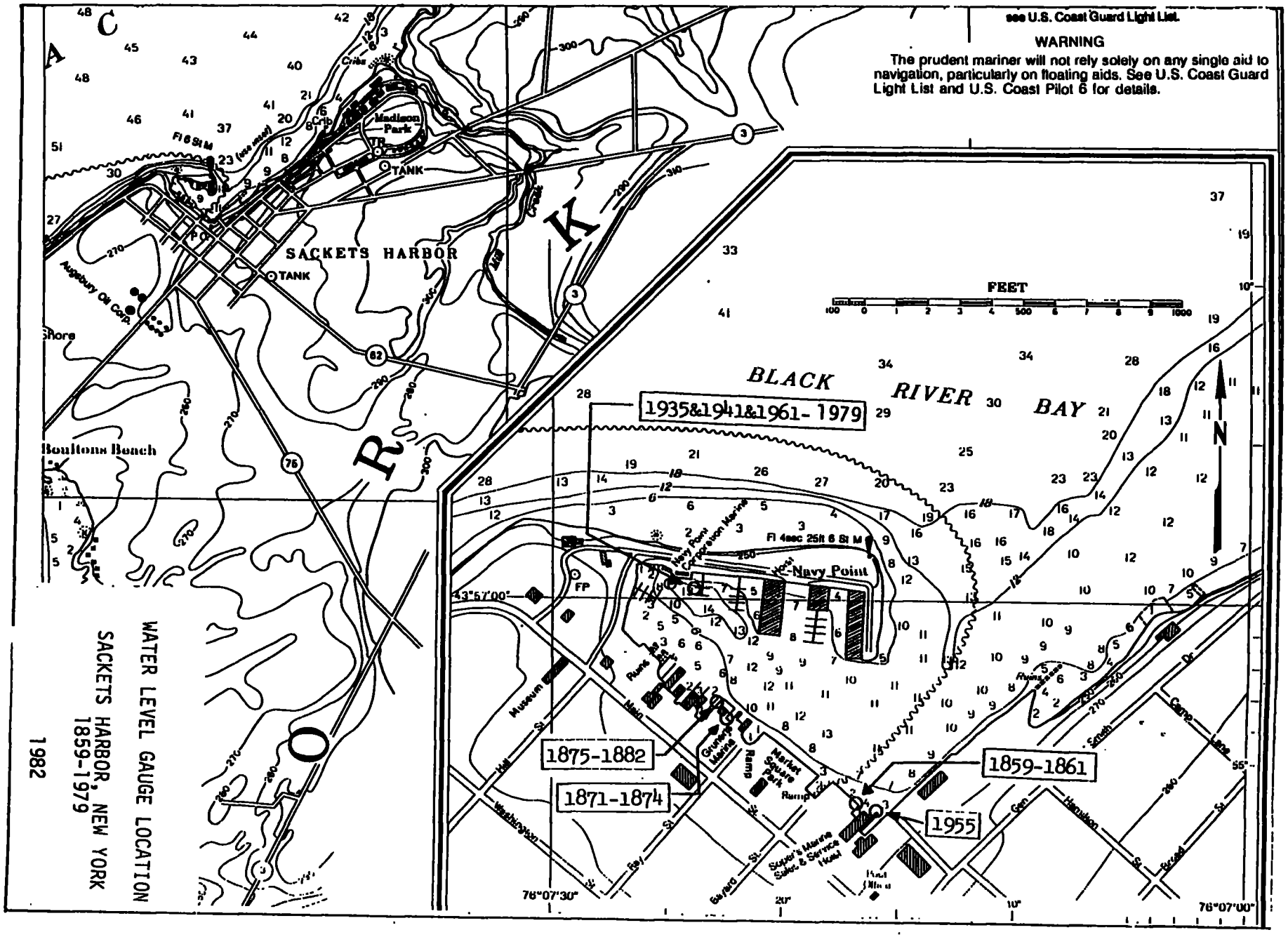

see U.S. Coast Guard Light List.
WARNING
The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot 6 for details.
SACKETS HARBOR
BLACK RIVER BAY
Madison Park
TANK
Boultons Beach
Navy Point
Fl 4sec 25ft 6 St M
FEET
1935&1941&1961-1979
1875-1882
1871-1874
1859-1861
1955
WATER LEVEL GAUGE LOCATION
SACKETS HARBOR, NEW YORK
1859-1979
1982

PLATE 43

GAUGE HISTORY

Port Ontario, New York

1903 Datum was never established at Port Ontario. Elevations at Port Ontario on 1935 Datum were established in 1948 by water level transfer from Oswego, New York and Kingston, Ontario using recording gauge records at Oswego and Kingston for the period July - October 1948. The 1935 Datum elevation of B.M. "LIGHT" at Port Ontario is 249.975 feet (76.192 meters) and depends on the elevation of B.M. "A" at Oswego as being 251.898 feet (76.779 meters) on 1935 Datum. IGLD (1955) elevations at Port Ontario depend on B.M. "LIGHT" at elevation 248.749 feet (75.819 meters) as published in Appendix A, Establishment of International Great Lakes Datum published in September 1961 by the Coordinating Committee.

CHRONOLOGICAL TABLE

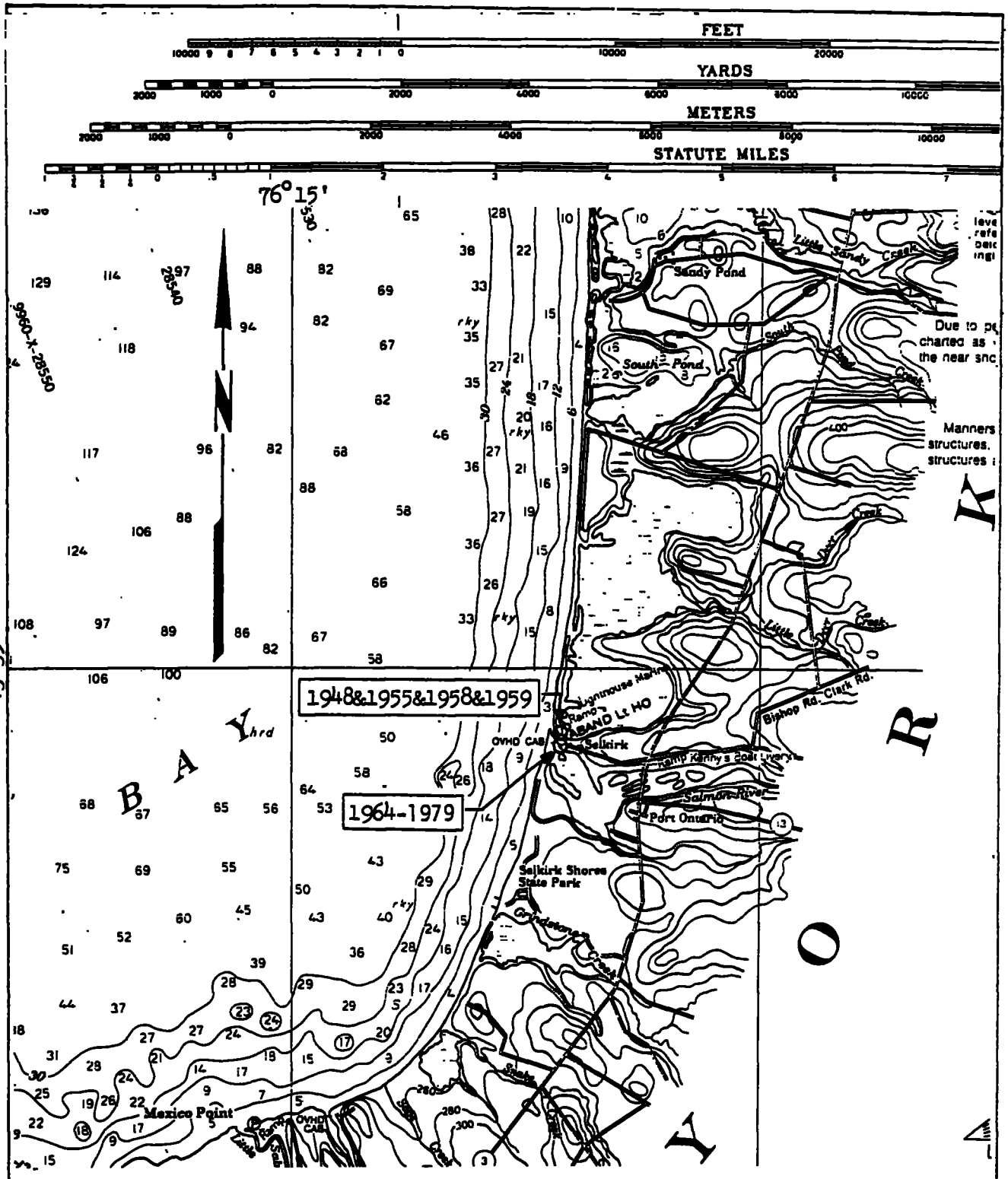
PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Jun 1948-Oct 1948	LIGHT	248.749 feet	Float Gauge, Tri-Daily	U.S.L.S.
May 1955-Oct 1955	LIGHT	248.749 feet	Float Gauge, Tri-Daily	U.S.L.S.
Jun 1958-Sep 1958	LIGHT	248.749 feet	Tape Gauge, Tri-Daily	U.S.L.S.
May 1959-Oct 1959	LIGHT	248.749 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
May 1964-Sep 1964	LIGHT	248.749 feet	Tape Gauge, Tri-Daily	U.S.L.S.
May 1967-Sep 1967	LIGHT	248.749 feet	Tape Gauge, Tri-Daily	U.S.L.S.
May 1968-Sep 1968	LIGHT	248.749 feet	Tape Gauge, Tri-Daily	U.S.L.S.
Jun 1970-Sep 1970	LIGHT	248.749 feet	Tape Gauge, Tri-Daily	U.S.L.S.
Apr 1972-Nov 1972	LIGHT	248.749 feet	Recording Gauge, Hourly Scalings	N.O.S.
Jun 1976-Sep 1976	LIGHT	248.749 feet	Tape Gauge, Tri-Daily	N.O.S.
Jun 1979-Sep 1979	LIGHT	248.749 feet (75.819 meeters)	Tape Gauge, Tri-Daily	N.O.S.

Gauging Station Sites (see Plate 44, page 70):

(a) June 1948 - September 1958: A float gauge was used until October 1955, a tape gauge was used in 1958. The gauges were located on the east bank of the Salmon River about 800 feet upstream from Lake Ontario.

(b) May 1959 - October 1959: A recording gauge located at the extreme northeast end of the hotel dockline about 800 feet upstream from Lake Ontario.

(c) May 1964 - September 1979: A tape gauge located at the southerly end of the concrete guardwall directly in front of the old Selkirk Lighthouse. A recording gauge was used in 1972.



WATER LEVEL GAUGE LOCATION

PORT ONTARIO, NEW YORK
1948-1979

1982

GAUGE HISTORY

Oswego, New York

Elevations at Oswego on 1903 Datum depend on B.M. "A" at elevation 251.898 feet (76.779 meters) as established by the U.S. Coast and Geodetic Survey level adjustment of 1903. In establishing 1935 Datum, the elevation of B.M. "A" was held at 251.898 feet (76.779 meters) above mean tide at New York. IGLD (1955) elevations at Oswego depend on B.M. "A" at elevation 250.671 feet (76.405 meters) as published in Appendix A, Establishment of International Great Lakes Datum published in September 1961 by the Coordinating Committee.

CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Jan 1837-Sep 1858	GAGE ZERO	242.86 feet	Staff Gauge, Once Monthly	NONE
Jun 1859-Mar 1872	EDGE PAVEMENT	250.653 feet	Staff Gauge, Once Daily	U.S.E.O.
Apr 1872-Nov 1872	EDGE PAVEMENT	250.653 feet	Unknown	U.S.E.O.
Dec 1872-Apr 1875	EDGE PAVEMENT	250.653 feet	Staff Gauge, Tri-Daily	U.S.E.O.
May 1875-Jan 1904	A	250.671 feet	Staff Gauge, Tri-Daily	U.S.E.O.
Feb 1904-Dec 1905	A	250.671 feet	Unknown	U.S.E.O.
Jan 1906-Dec 1932	A	250.671 feet	Staff Gauge, Tri-Daily	U.S.E.O.
Jan 1933-Apr 1934	A	250.671 feet	Recording Gauge, Hourly Scalings	U.S.E.O.
May 1934-Apr 1947	A	250.671 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
May 1947-Sep 1947	A	250.671 feet	Float Gauge, Tri-Daily	U.S.L.S.
Oct 1947-Oct 1970	A	250.671 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
Oct 1970-Date	A	250.671 feet (76.405 meters)	Recording Gauge, Hourly Scalings	N.O.S.

NOTE: Readings during the period 1837-1858 were taken once a month irregularly varying from one reading in a year to eleven readings in a year except for 1850 when no readings were taken.

Analogue recording gauges used before November 1973. Since that date, digital recording gauges have been used. Telemetering service was installed at Oswego in November 1973.

Gauging Station Sites (see Plate 45, page 73):

(a) January 1837 - May 1934: A staff gauge was located in the southwest corner of the slip at the north end of the United States Engineers Storehouse at the foot of West Third Street until January 1933. At that time the staff gauge was discontinued and a recording gauge was located in the southeast corner of the same slip.

(b) June 1934 - October 1934: A recording gauge located at the U.S. Coast Guard Station on the east side of the Oswego River.

(c) November 1934 - June 1942: A recording gauge located in the southeast corner of the slip of the discontinued U.S. Engineers Storehouse at the foot of West Third Street.

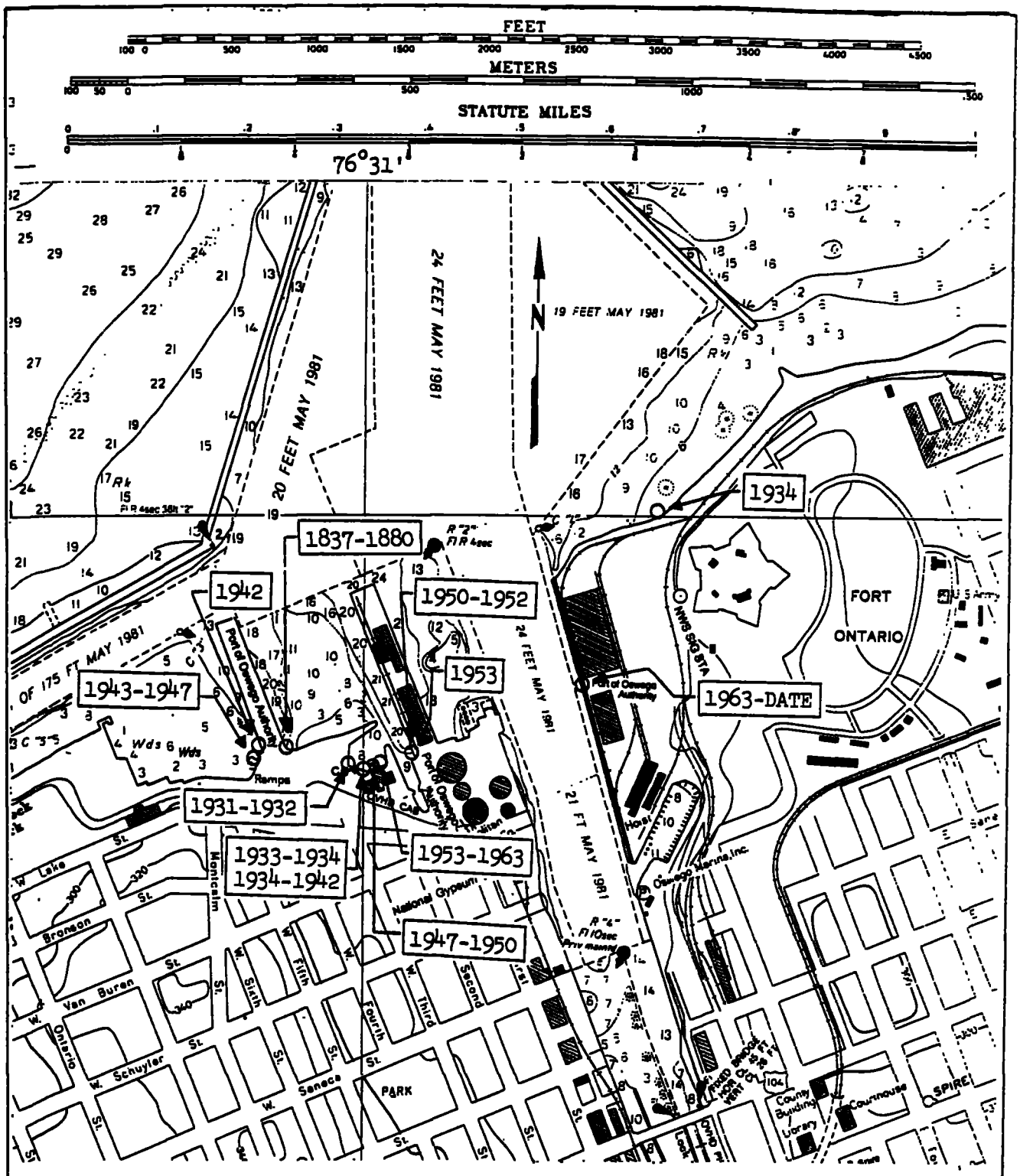
(d) July 1942 - April 1947: A recording gauge at the southwest corner of the Delaware, Lackawanna, and Western Railroad coal dock near the foot of West Fourth Street.

(e) May 1947 - October 1950: A recording gauge located at the boathouse on the east side of the U.S. Coast Guard slip at the foot of West Third Street.

(f) November 1950 - May 1953: A recording gauge located at the southeast corner of the New York State Barge Canal Terminal Dock at the foot of West First Street.

(g) June 1953 - May 1963: A recording gauge located in the U.S. Coast Guard Station at the foot of West Third Street.

(h) May 1963 - Date: A recording gauge located inside and at the southwest corner of the Oswego Port Authority building on the east side of the Oswego River.



WATER LEVEL GAUGE LOCATION

OSWEGO, NEW YORK
1837-DATE

1982

GAUGE HISTORY

Little Sodus Bay, New York

1903 Datum was never established at Little Sodus Bay. Elevations at Little Sodus Bay on 1935 Datum were established by water level transfer from Oswego and Cape Vincent, New York, using recording gauge records at Oswego and Cape Vincent for the period May - September 1935. The 1935 Datum elevation of B.M. "WL 132" at Little Sodus Bay is 263.179 feet (80.217 meters) and depends on the elevation of B.M. "A" at Oswego as being 251.898 feet (76.779 meters) on 1935 Datum IGLD (1955) elevations at Little Sodus Bay depend on B.M. "WL 132" at elevation 261.931 feet (79.837 meters) as published in Appendix A, Establishment of International Great Lakes Datum published in September 1961 by the Coordinating Committee.

CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
May 1935-Sep 1935	WL 132	261.931 feet	Float Gauge, Tri-Daily	U.S.L.S.
May 1955-Oct 1955	WL 132	261.931 feet	Float Gauge, Tri-Daily	U.S.L.S.
Jun 1958-Sep 1958	WL 132	261.931 feet	Tape Gauge, Tri-Daily	U.S.L.S.
May 1967-Sep 1967	WL 132	261.931 feet	Tape Gauge, Tri-Daily	U.S.L.S.
May 1968-Sep 1968	WL 132	261.931 feet	Tape Gauge, Tri-Daily	U.S.L.S.
May 1970-Oct 1970	WL 132	261.931 feet	Tape Gauge, Tri-Daily	U.S.L.S.
Apr 1972-Nov 1972	WL 132	261.931 feet	Recording Gauge, Hourly Scalings	N.O.S.
Jun 1976-Sep 1976	WL 132	261.931 feet	Tape Gauge, Tri-Daily	N.O.S.
Jun 1979-Sep 1979	WL 132	261.931 feet (79.837 meters)	Tape Gauge, Tri-Daily	N.O.S.

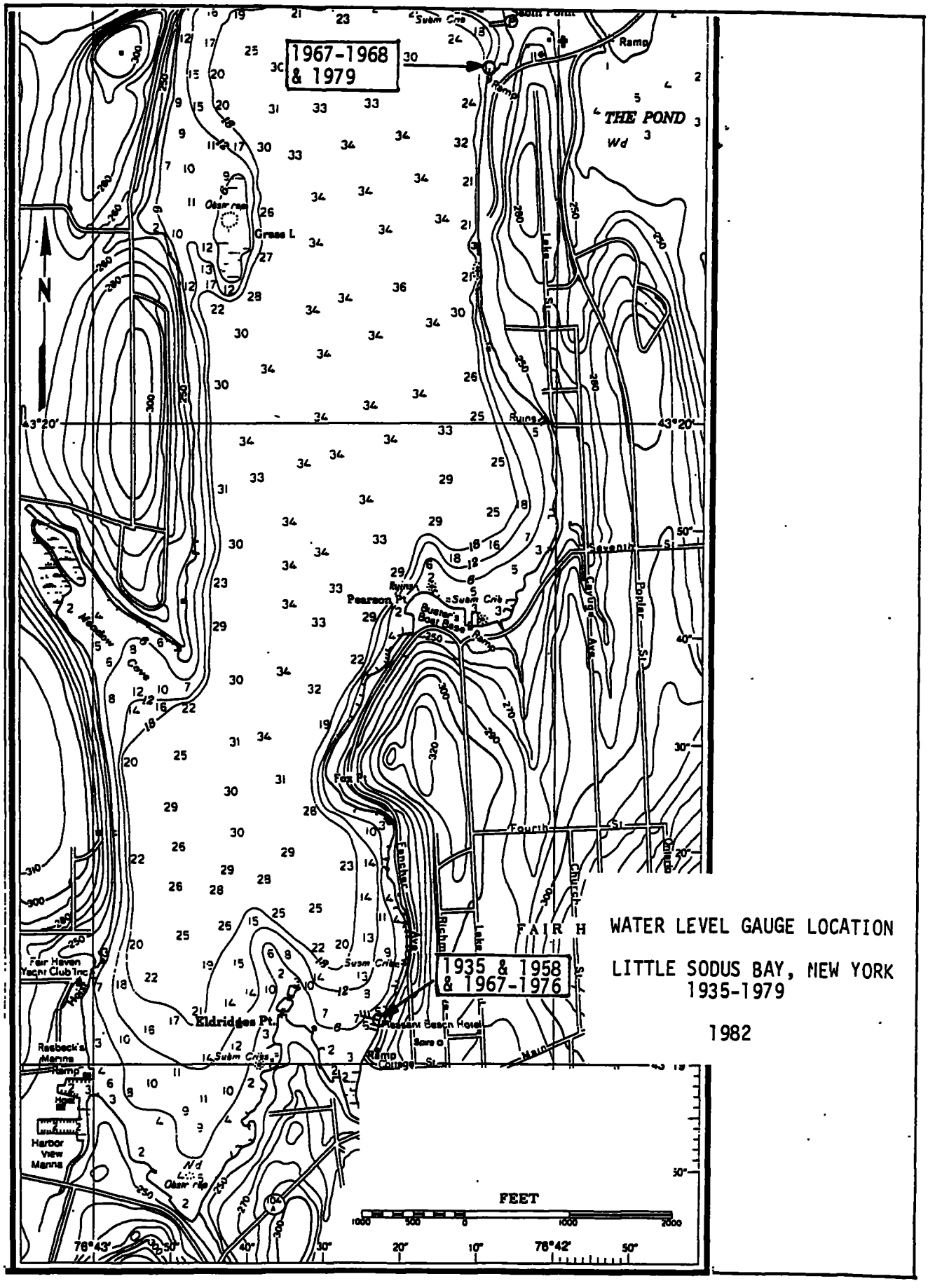
Gauging Station Sites (see Plate 46, page 76):

(a) May 1935 - September 1958: A float gauge was used until October 1955, a tape gauge was used in 1958. The gauges were located on the north side of the dock at the Pleasant Beach Hotel in Fair Haven, New York, in the southeast corner of the bay.

(b) May 1967 - September 1968: Tape gauges located at the dock of the Pleasant Beach Hotel in Fair Haven and the State Park Dock near the entrance of the bay.

(c) May 1970 - September 1976: A tape gauge located at the Pleasant Beach Hotel Dock in Fair Haven. A recording gauge was used in 1972.

(d) June 1979 - September 1979: A tape gauge located at the State Park Dock near the entrance of the bay.



WATER LEVEL GAUGE LOCATION

LITTLE SODUS BAY, NEW YORK
1935-1979

1982

GAUGE HISTORY

Sodus Bay, New York

1903 Datum was never established at Sodus Bay. Elevations at Sodus Bay on 1935 Datum were established by water level transfer from Oswego and Rochester, New York, using recording gauge records at Oswego and tri-daily gauge records at Rochester for the period May - September 1935. The 1935 Datum elevation of B.M. "WL 131" at Sodus Bay is 266.269 feet (81.159 meters) and depends on the elevation of B.M. "A" at Oswego as being 251.898 feet (76.779 meters) on 1935 Datum. IGLD (1955) elevations at Sodus Bay depend on B.M. "WL 131" at elevation 264.990 feet (80.769 meters) as published in Appendix A, Establishment of International Great Lakes Datum published in September 1961 by the Coordinating Committee.

CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
May 1935-Sep 1935	WL 131	264.990 feet	Float Gauge, Tri-Daily	U.S.L.S.
May 1955-Oct 1955	WL 131	264.990 feet	Float Gauge, Tri-Daily	U.S.L.S.
Jun 1958-Sep 1958	WL 131	264.990 feet	Tape Gauge, Tri-Daily	U.S.L.S.
May 1967-Sep 1967	WL 131	264.990 feet	Tape Gauge, Tri-Daily	U.S.L.S.
May 1968-Sep 1968	WL 131	264.990 feet	Tape Gauge, Tri-Daily	U.S.L.S.
May 1970-Sep 1970	WL 131	264.990 feet	Tape Gauge, Tri-Daily	U.S.L.S.
Apr 1972-Nov 1972	WL 131	264.990 feet	Recording Gauge, Hourly Scalings	N.O.S.
Jun 1976-Sep 1976	WL 131	264.990 feet	Tape Gauge, Tri-Daily	N.O.S.
Jun 1979-Sep 1979	WL 131	264.990 feet (80.769 meters)	Tape Gauge, Tri-Daily	N.O.S.

NOTE: In the 1962 report, this location was named Sodus Point.

Gauging Station Sites (see Plate 47, page 79):

(a) May 1935 - September 1935: A float gauge located near the southwest corner of the peninsula (Sand Point) projecting into Sodus Bay at Sodus Point.

(b) May 1955 - October 1955: A float gauge located at the northwest corner of Sand Point.

(c) June 1958 - November 1972: A tape gauge located near the southwest corner of the entrance channel to Sodus Bay. A recording gauge was used in 1972.

(d) June 1976 - September 1979: A tape gauge located at the northwest corner of Sand Point at the southwest corner of the Sand Point Bait Shop gas dock.

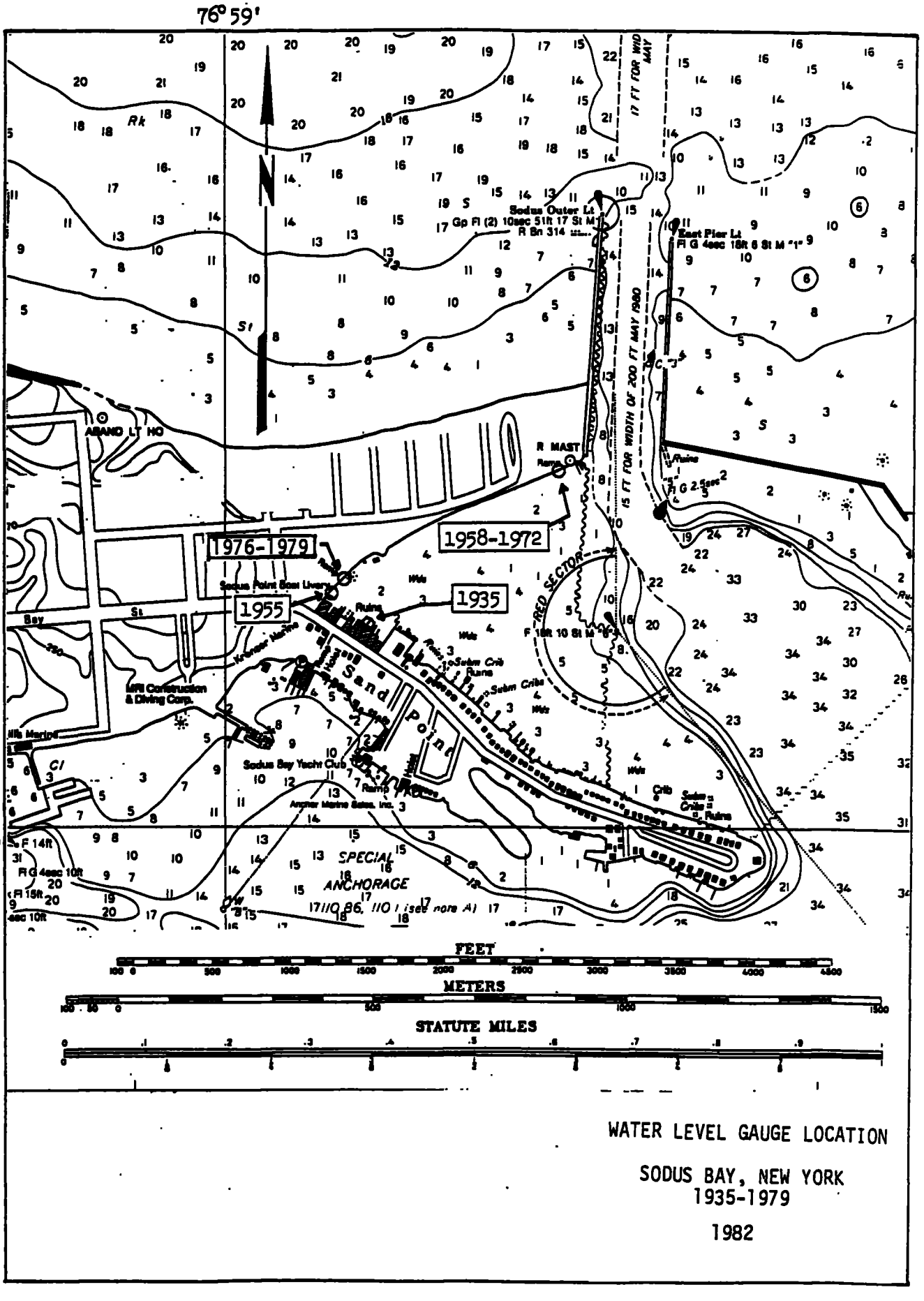
GAUGE HISTORY

Rochester, New York

Elevations at Rochester (Charlotte) on 1903 Datum depend on B.M. "NO 1" at elevation 283.169 feet (86.310 meters) as established by the U.S.C.& G.S. level adjustment of 1903. Elevations at Rochester on 1935 Datum were established by comparison of tri-daily float gauge readings with water surface elevations computed from hourly scalings at Oswego, New York, for the period May - September 1935. The 1935 Datum elevation of B.M. "NO 1" at Rochester is 282.975 feet (86.251 meters) and depends on the elevation of B.M. "A" at Oswego as being 251.898 feet (76.779 meters) on 1935 Datum. IGLD (1955) elevations at Rochester depend on B.M. "NO 1" at elevation 281.725 feet (85.870 meters) as published in Appendix A, Establishment of International Great Lakes Datum published in September 1961 by the Coordinating Committee.

CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Jan 1846-Jul 1850	FIXED POINT	247.35 feet	Staff Gauge, Once Monthly	NONE
Aug 1850-May 1859	FIXED POINT	Variable 248.35-247.59	Staff Gauge, Once Monthly	NONE
Jun 1859-Nov 1871	BASE STONE	279.45 feet	Staff Gauge, Two Readings/ Month-Maximum and Minimum	Weather Bureau
Dec 1871-Dec 1872	DECK ROD	248.91 feet	Unknown	U.S.E.O.
Jan 1873-Apr 1874	LIGHT HOUSE CIRCLE	281.725 feet	Unknown	U.S.E.O.
May 1874-Jun 1882	ENGINE HOUSE	251.955 feet	Unknown	U.S.E.O.
Jul 1882-May 1883	ENGINE HOUSE	251.955 feet	Staff Gauge, Tri-Daily	U.S.E.O.
Jun 1883-Nov 1903	BOLT NO 2	246.76 feet	Staff Gauge, Tri-Daily	U.S.E.O.
Dec 1903-Aug 1904	NO 1	281.725 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
Sep 1904-Oct 1904	W SPIKE	247.813 feet	Recording Gauge, Hourly Scalings	U.S.L.S.



WATER LEVEL GAUGE LOCATION

SODUS BAY, NEW YORK
1935-1979

1982

Nov 1904-Oct 1905	USEO BOARD	242.684 feet	Staff Gauge, Tri-Daily	U.S.E.O.
Nov 1905-Sep 1906	USEO BOARD	242.684 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
Oct 1906-Dec 1907	GAGE	249.577 feet	Recording Gauge, Hourly Scalings	U.S.E.O.
May 1935-Sep 1935	E SPIKE	246.290 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
Dec 1952-Jul 1953	MILITIA	248.073 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
Aug 1953-Oct 1953	BENGEL	249.277 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
Nov 1953-May 1954	MILITIA	248.073 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
Jun 1954-Jul 1955	CLUB	247.623 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
Aug 1955-Mar 1956	NO 1	281.725 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
Apr 1956-Mar 1961	BENGEL	249.277 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
Apr 1961-Sep 1967	NO 1	281.725 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
Sep 1967-Oct 1970	WATERFRONT	255.502 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
Oct 1970-Date	WATERFRONT	255.502 feet (77.877 meters)	Recording Gauge, Hourly Scalings	N.O.S.

NOTE: Analogue recording gauges used before October 1973. Since that date, digital recording gauges have been used. Telemetering service was installed at Rochester in October 1973.

Gauging Station Sites (see Plates 48-49, pages 83-84):

(a) January 1846 - May 1859: Gauge readings made from a fixed point on a wharf near the mouth of the Genesee River. Exact gauge site location is unknown.

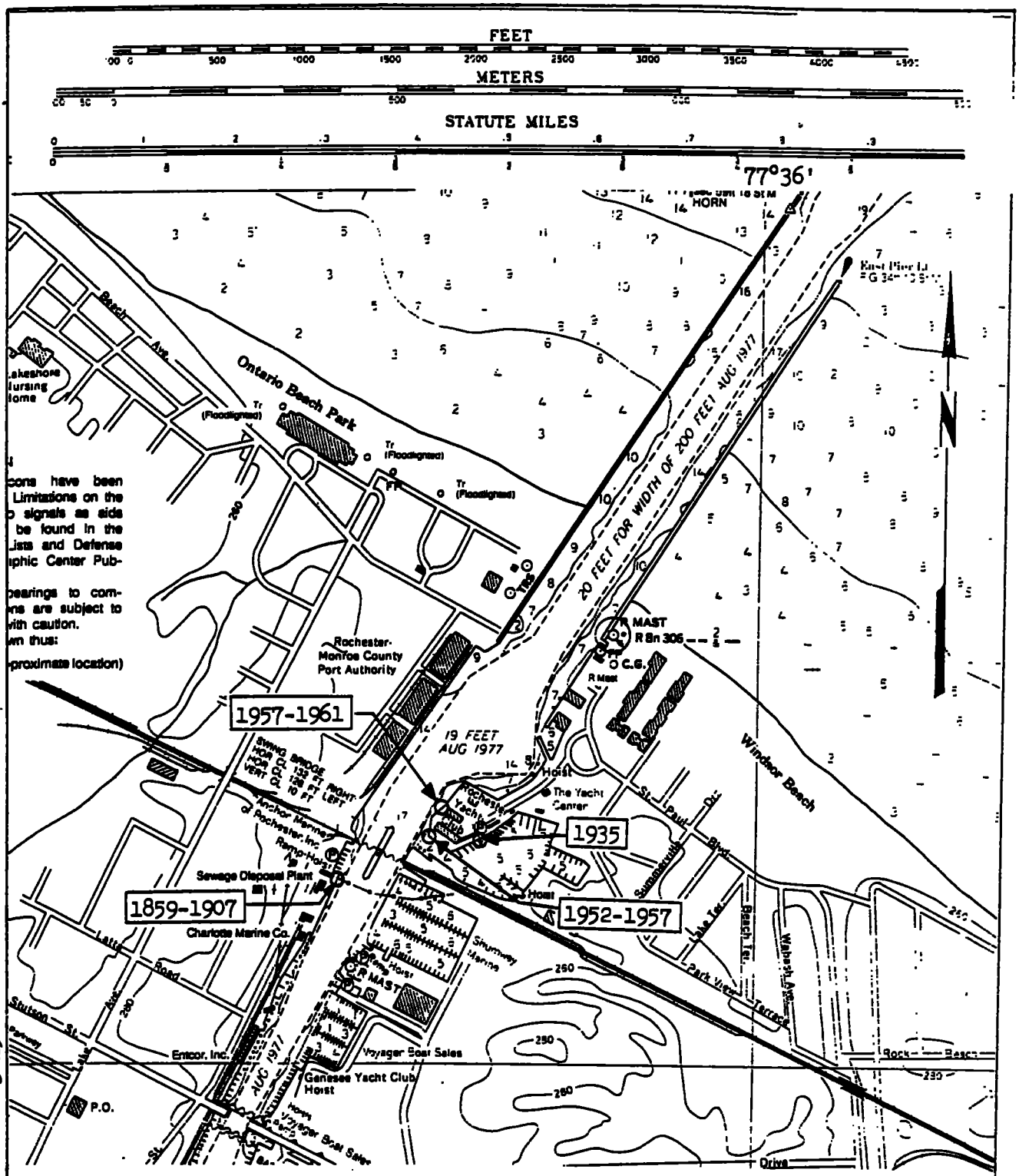
(b) June 1859 - December 1907: A float gauge located about 200 feet above the railroad bridge on the west bank of the Genesee River approximately one-half mile upstream from Lake Ontario.

(c) May 1935 - September 1935: A float gauge located in the Rochester Yacht Club basin on the east side of the Genesee River.

(d) December 1952 - December 1957: A recording gauge located at the entrance to the Rochester Yacht Club basin about one-half mile upstream from Lake Ontario.

(e) December 1957 - March 1961: A recording gauge located 100 feet downstream of the entrance to the Rochester Yacht Club basin on the east side of the Genesee River.

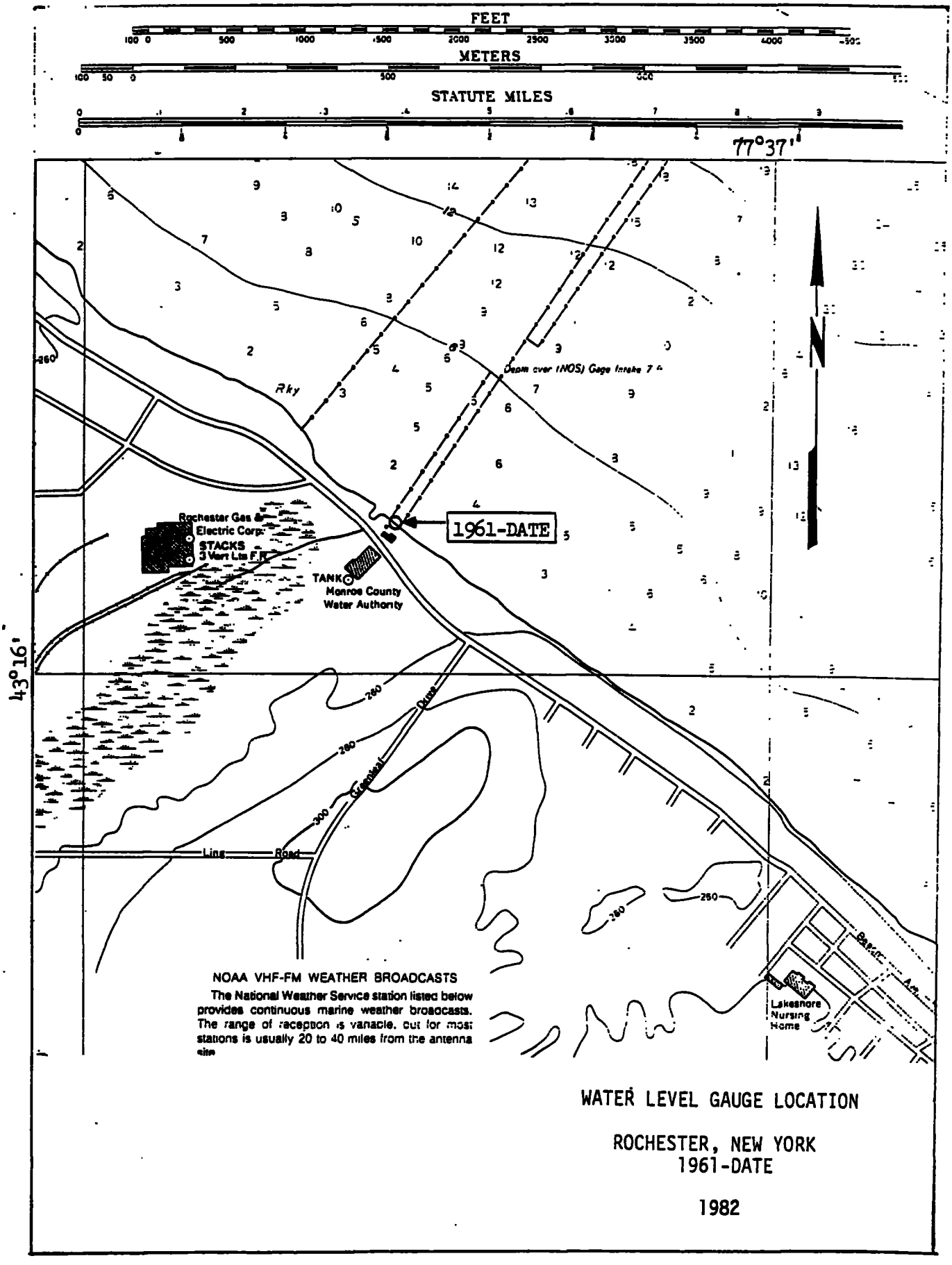
(f) April 1961 - Date: A recording gauge located on the shore of Lake Ontario approximately 1.4 miles west of the Genesee River at the Monroe County Water Authority.



WATER LEVEL GAUGE LOCATION

ROCHESTER, NEW YORK
1859-1961

1982



WATER LEVEL GAUGE LOCATION

ROCHESTER, NEW YORK
1961-DATE

1982

GAUGE HISTORY

Oak Orchard, New York

1903 Datum was never established at Oak Orchard. Elevations at Oak Orchard on 1935 Datum were established in 1948 by water level transfer from Oswego and Fort Niagara, New York, using recording gauge records at Oswego and tri-daily gauge records at Fort Niagara for the period June - October 1948. The 1935 Datum elevation of B.M. "HOTEL" at Oak Orchard is 255.774 feet (77.960 meters) and depends on the elevation of B.M. "A" at Oswego as being 251.898 feet (76.779 meters) on 1935 Datum. IGLD (1955) elevations at Oak Orchard depend on B.M. "HOTEL" at elevation 254.573 feet (77.594 meters) as published in Appendix A, Establishment of International Great Lakes Datum published in September 1961 by the Coordinating Committee.

CHRONOLOGICAL TABLE

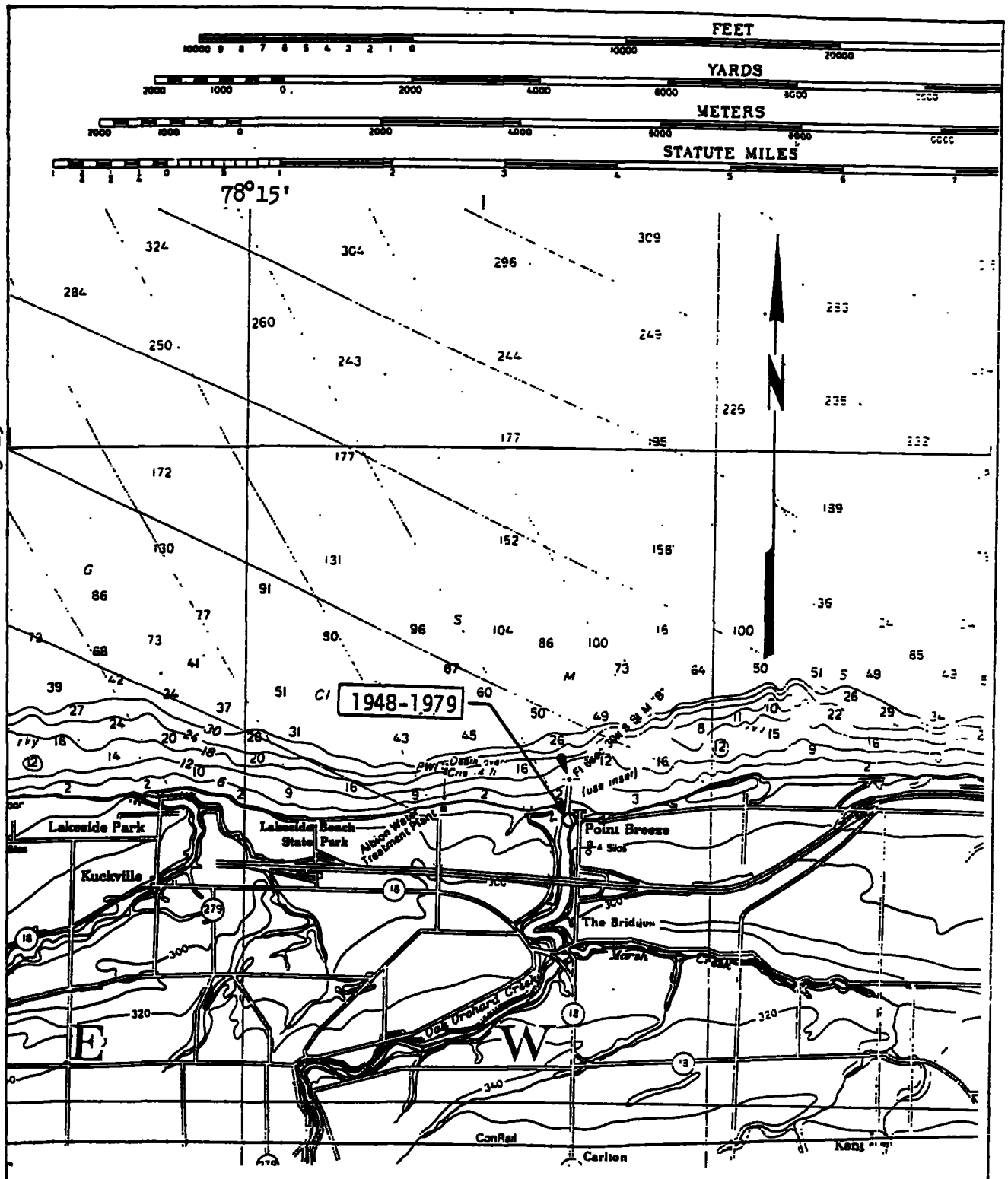
PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Jun 1948-Oct 1948	HOTEL	254.573 feet	Float Gauge, Tri-Daily	U.S.L.S.
May 1955-Oct 1955	HOTEL	254.573 feet	Float Gauge, Tri-Daily	U.S.L.S.
Jun 1958-Sep 1958	HOTEL	254.573 feet	Tape Gauge, Tri-Daily	U.S.L.S.
May 1964-Sep 1964	HOTEL	254.573 feet	Tape Gauge, Tri-Daily	U.S.L.S.
Jun 1967-Sep 1967	HOTEL	254.573 feet	Tape Gauge, Tri-Daily	U.S.L.S.
May 1968-Sep 1968	HOTEL	254.573 feet	Tape Gauge, Tri-Daily	U.S.L.S.
Jun 1969-Oct 1969	HOTEL	254.573 feet	Tape Gauge, Tri-Daily	U.S.L.S.
May 1970-Sep 1970	HOTEL	254.573 feet	Tape Gauge, Tri-Daily	U.S.L.S.
Apr 1972-Nov 1972	HOTEL	254.573 feet	Recording Gauge, Hourly Scalings	N.O.S.
Jun 1976-Sep 1976	HOTEL	254.573 feet	Recording Gauge, Hourly Scalings	N.O.S.
Jun 1979-Sep 1979	HOTEL	254.573 feet (77.594 meters)	Recording Gauge, Hourly Scalings	N.O.S.

Gauging Station Sites (see Plate 50, page 87):

(a) June 1948 - September 1964: A float gauge was located on the east bank of Oak Orchard Creek about 300 feet upstream from Lake Ontario and at the foot of the first east-west road south of the harbor entrance until October 1955. Tape gauges were used in 1958 and 1964.

(b) May 1967 - September 1970: A tape gauge located on the east bank of Oak Orchard Creek.

(c) April 1972 - September 1979: A recording gauge located off Water Street extended on the east bank of Oak Orchard Creek.



WATER LEVEL GAUGE LOCATION

OAK ORCHARD, NEW YORK
1948-1979

1982

GAUGE HISTORY

Olcott, New York

Elevations at Olcott, New York on 1903 Datum depend on B.M. "4" at elevation 259.245 feet (79.018 meters) as established by the U.S.C.& G.S. level adjustment of 1903. Elevations at Olcott on 1935 Datum were established in 1937 by water level transfer from Oswego, New York, using recording gauge records at Oswego for the period May - September 1937. The 1935 Datum elevation of B.M. "4" at Olcott is 259.172 feet (78.996 meters) and depends on the elevation of B.M. "A" at Oswego as being 251.898 feet (76.779 meters) on 1935 Datum. IGLD (1955) elevations at Olcott depend on B.M. "WL 127" at elevation 276.167 feet (84.176 meters) as published in Appendix A, Establishment of International Great Lakes Datum published in September 1961 by the Coordinating Committee.

CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Aug 1899-Aug 1903	4	257.923 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
May 1935-Sep 1935	4	257.923 feet	Float Gauge, Tri-Daily	U.S.L.S.
May 1936-Sep 1936	4	257.923 feet	Float Gauge, Tri-Daily	U.S.L.S.
Apr 1937-Oct 1937	4	257.923 feet	Float Gauge, Tri-Daily	U.S.L.S.
May 1955-Oct 1955	WL 126	260.949 feet	Float Gauge, Tri-Daily	U.S.L.S.
Jun 1958-Sep 1958	WL 126	260.949 feet	Tape Gauge, Tri-Daily	U.S.L.S.
Jun 1961-Sep 1961	WL 127	276.167 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
Jun 1964-Sep 1964	WL 127	276.167 feet	Tape Gauge, Tri-Daily	U.S.L.S.
Nov 1966-Oct 1970	GAGE	254.554 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
Oct 1970-Date	GAGE	254.554 feet (77.588 meters)	Recording Gauge, Hourly Scalings	N.O.S.

NOTE: Analogue recording gauges used before November 1966. Since that date, digital recording gauges have been used at Olcott.

Gauging Station Sites (see Plate 51, page 90):

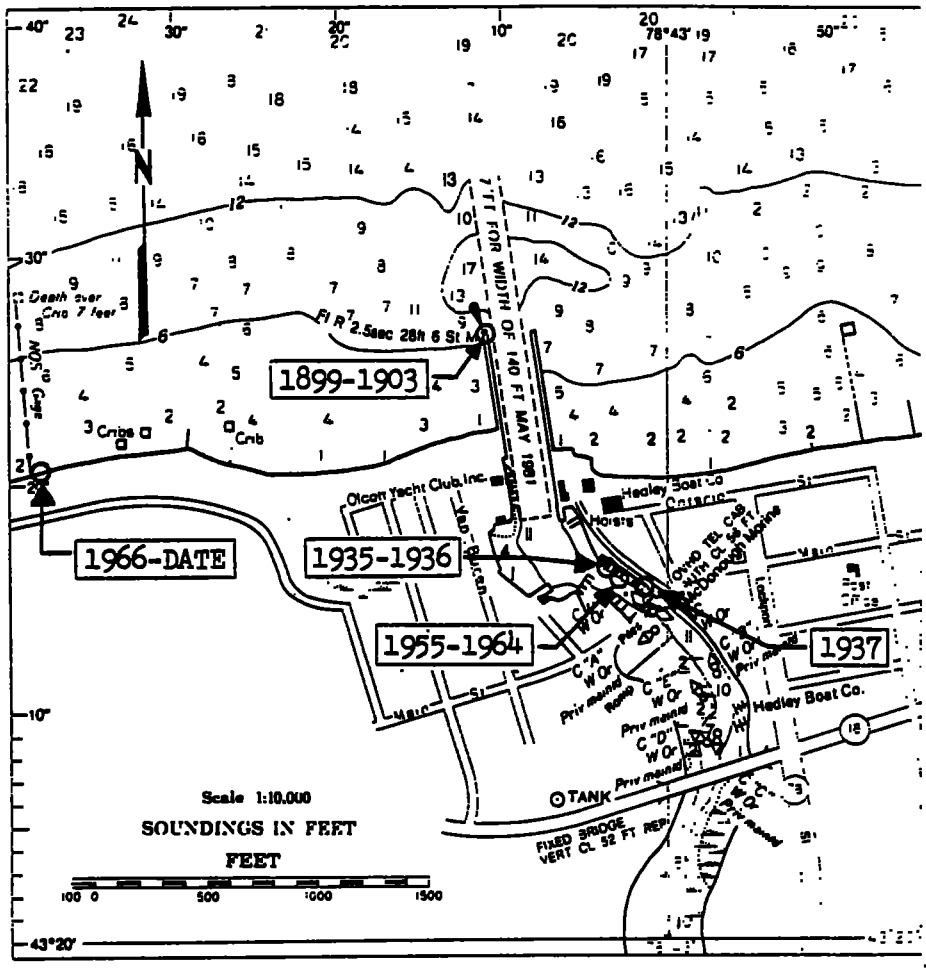
(a) August 1899 - August 1903: A recording gauge located on the south side of the lighthouse on the outer end of the west pier.

(b) May 1935 - September 1958: A float gauge (1935-1955) located on the east shore of Eighteenmile Creek in a group of boat wells at the downstream side of the highway bridge. A tape gauge was used in 1958.

(c) June 1961 - September 1961: A recording gauge located on the easterly side of Eighteenmile Creek, about 500 feet downstream from the Main Street bridge, and on the property of the Hedley Boat Company.

(d) June 1964 - September 1964: A tape gauge located on the easterly side of Eighteenmile Creek, about 500 feet downstream from the Main Street bridge, and on the property of the Hedley Boat Company.

(e) November 1966 - Date: A recording gauge located in an abandoned water intake building one-half mile west of Olcott on Cresent Street.



WATER LEVEL GAUGE LOCATION

OLCOTT, NEW YORK
1899-DATE

1982

GAUGE HISTORY

Wilson, New York

1903 Datum was never established at Wilson. Elevations at Wilson on 1935 Datum were established in 1948 by water level transfer from Oswego and Fort Niagara, New York, using recording gauge records at Oswego and tri-daily gauge records at Fort Niagara for the period June - October 1948. The 1935 Datum elevation of B.M. "GARAGE" at Wilson is 261.990 feet (79.855 meters) and depends on the elevation of B.M. "A" at Oswego as being 251.898 feet (76.779 meters) on 1935 Datum. IGLD (1955) elevations at Wilson depend on B.M. "GARAGE" at elevation 260.800 feet (79.492 meters) as published in Appendix A, Establishment of International Great Lakes Datum published in September 1961 by the Coordinating Committee.

CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Jun 1948-Oct 1948	GARAGE	260.800 feet	Float Gauge, Tri-Daily	U.S.L.S.
May 1955-Oct 1955	GARAGE	260.800 feet	Float Gauge, Tri-Daily	U.S.L.S.
Jun 1958-Sep 1958	GARAGE	260.800 feet	Float Gauge, Tri-Daily	U.S.L.S.
May 1964-Sep 1964	GARAGE	260.800 feet	Tape Gauge, Tri-Daily	U.S.L.S.
Jun 1967-Sep 1967	GARAGE	260.800 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
May 1968-Oct 1968	GARAGE	260.800 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
Jun 1969-Oct 1969	GARAGE	260.800 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
May 1970-Oct 1970	GARAGE	260.800 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
Jun 1971-Oct 1971	HARBOR	263.264 feet	Recording Gauge, Hourly Scalings	N.O.S.
Apr 1972-Nov 1972	HARBOR	263.264 feet	Recording Gauge, Hourly Scalings	N.O.S.
Apr 1973-Sep 1973	HARBOR	263.264 feet	Recording Gauge, Hourly Scalings	N.O.S.

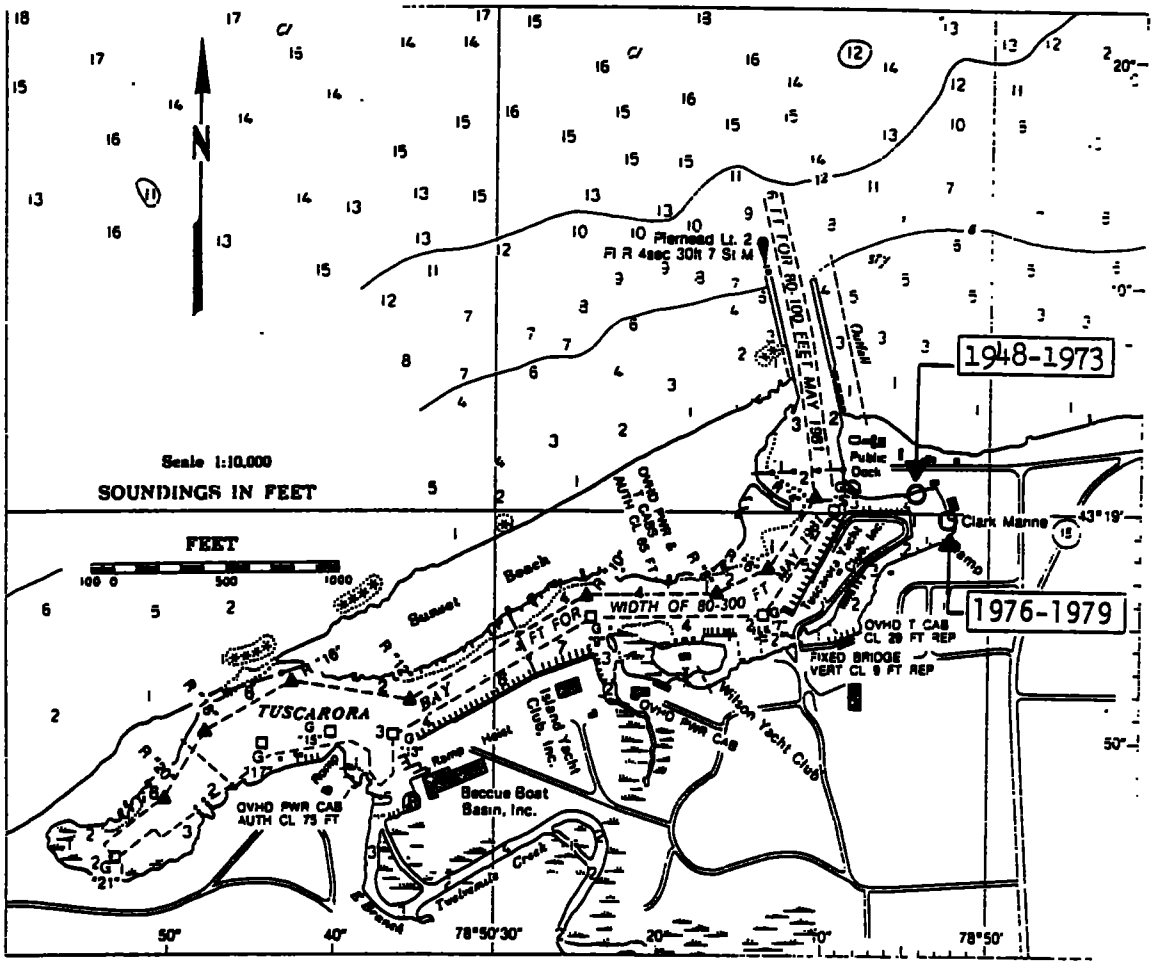
Jun 1976-Oct 1976	HARBOR	263.264 feet	Tape Gauge, Tri-Daily	N.O.S
May 1977-Sep 1977	HARBOR	263.264 feet	Tape Gauge, Tri-Daily	N.O.S.
Jun 1979-Sep 1979	HARBOR	263.264 feet (80.243 meters)	Tape Gauge, Tri-Daily	N.O.S.

Gauging Station Sites (see Plate 52, page 93):

(a) June 1948 - September 1964: A float gauge located in the northeast corner of the harbor. A tape gauge was used in 1964.

(b) June 1967 - September 1973: A recording gauge located in the northeast corner of the harbor.

(c) June 1976 - September 1979: A tape gauge located along the east end of the harbor at the rear of the Wilson Harbor Restaurant.



WATER LEVEL GAUGE LOCATION

WILSON, NEW YORK
1948-1979

1982

GAUGE HISTORY

Fort Niagara, New York

1903 Datum was never established at Fort Niagara. Elevations at Fort Niagara on 1935 Datum were established by water level transfer from Oswego, New York, using recording gauge records at Oswego for the period May - September 1935. The 1935 Datum elevation of B.M. "WL 121" at Fort Niagara is 255.099 feet (77.754 meters) and depends on the elevation of B.M. "A" at Oswego as being 251.898 feet (76.779 meters) on 1935 Datum. IGLD (1955) elevations at Fort Niagara depend on B.M. "WL 121" at elevation 253.841 feet (77.371 meters) as published in Appendix A, Establishment of International Great Lakes Datum published in September 1961 by the Coordinating Committee.

CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Mar 1815-Oct 1827	GAGE ZERO	240.22 feet	Staff Gauge, Once Monthly	NONE
Jul 1838-Oct 1838	GAGE ZERO	240.22 feet	Staff Gauge, Once Monthly	NONE
Jun 1859-Dec 1871	DAVIS STORE	296.439 feet	Float Gauge, Daily	U.S.L.S.
May 1935-Sep 1935	WL 121	253.841 feet	Float Gauge, Tri-Daily	U.S.L.S.
Jun 1942-Mar 1952	WL 121	253.841 feet	Float Gauge, Tri-Daily	U.S.L.S.
Apr 1952-Oct 1968	WL 121	253.841 feet	Tape Gauge, Tri-Daily	U.S.L.S.
Jun 1969-Sep 1969	PIT	248.478 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
May 1970-Sep 1970	PIT	248.478 feet	Recording Gauge, Hourly Scalings	U.S.L.S.
Apr 1972-Nov 1972	PIT	248.478 feet	Recording Gauge, Hourly Scalings	N.O.S.
May 1976-Oct 1976	PIT	248.478 feet	Recording Gauge, Hourly Scalings	N.O.S.
May 1977-Sep 1977	PIT	248.478 feet	Recording Gauge, Hourly Scalings	N.O.S.
Jun 1979-Sep 1979	PIT	248.478 feet (75.736 meters)	Recording Gauge, Hourly Scalings	N.O.S.

NOTE: From 1815 through 1826 a single reading was made in March or April and another in either June or July. In 1827 a single reading was made in June and one in October. In 1838 one reading was made in each of the months July, August, and October. From an article on the levels of Lake Ontario, published by Mr. Edward Giddings who made the readings, it appears that the major purpose of the lake level observations was to determine the yearly rise and fall of the lake waters.

Gauging Station Sites (see Plate 53, page 96):

(a) March 1815 - October 1838: Water level readings from a point 5 feet below upper surface of upper end of cap sill of wharf at mouth of river near Fort Niagara.

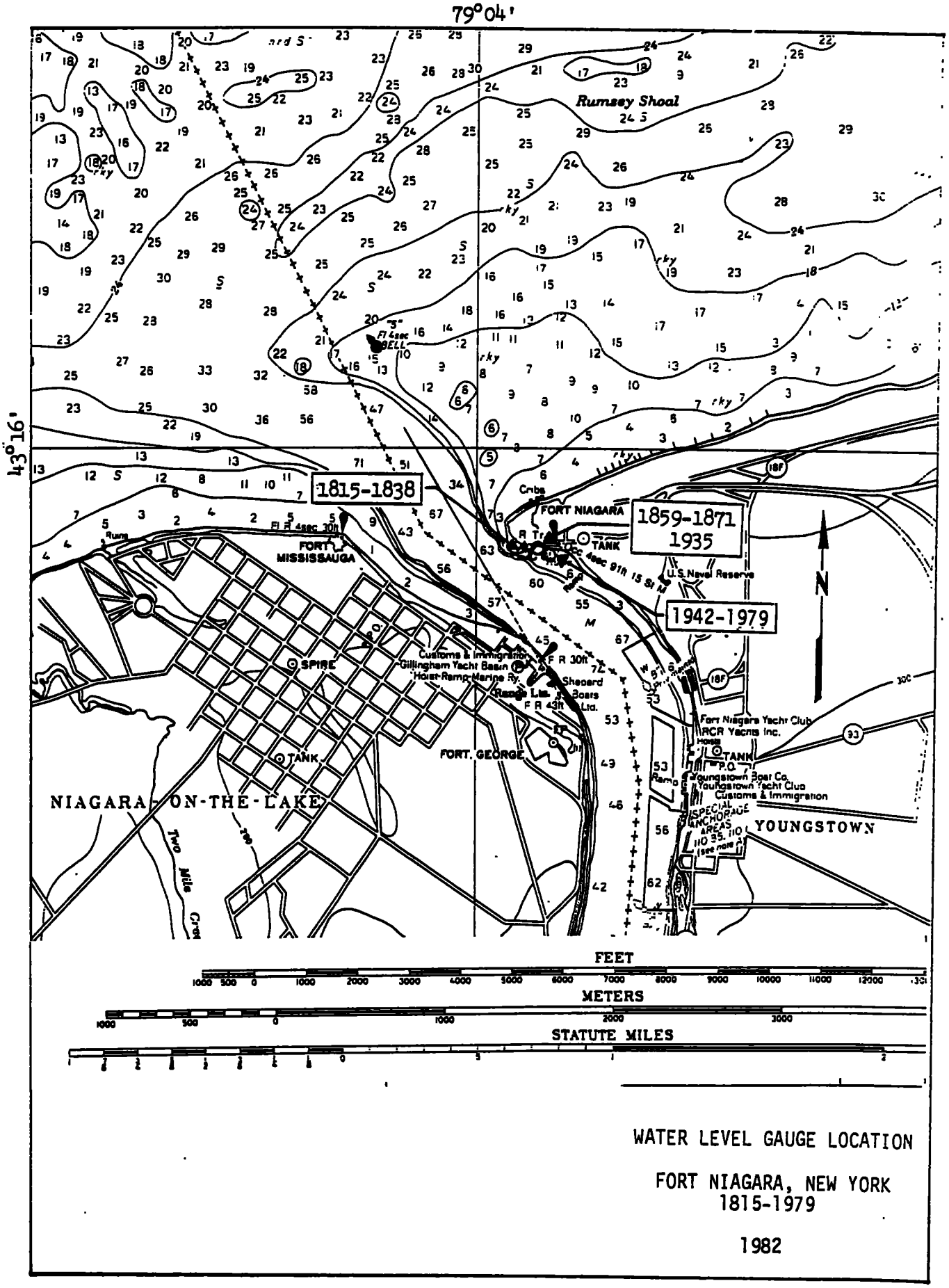
(b) June 1859 - December 1871: A float gauge located on a wharf near Fort Niagara.

(c) May 1935 - September 1935: A float gauge located on the United States Coast Guard wharf near Fort Niagara.

(d) June 1942 - March 1952: A float gauge located on the United States Coast Guard wharf near Fort Niagara.

(e) April 1952 - October 1968: A tape gauge located on the United States Coast Guard wharf near Fort Niagara.

(f) June 1969 - September 1979 : A recording gauge located on the United States Coast Guard wharf near Fort Niagara.



WATER LEVEL GAUGE LOCATION

FORT NIAGARA, NEW YORK
1815-1979

1982

GAUGE HISTORY

Brockville, Ontario

1903 Datum was never established at Brockville. Elevations at Brockville depend on B.M. "MMCLXXVII" at elevation 252.980 feet (77.108 meters) based on Public Works Datum 1908 and at elevation 253.360 feet (77.224 meters) based on Geodetic Survey of Canada Datum. IGLD (1955) elevations at Brockville depend on B.M. "MMCLXXVII" and B.M. "68 U 339" at elevations 252.961 feet (77.103 meters) and 283.881 feet (86.528 meters) respectively as established by level line run by Geodetic Survey of Canada.

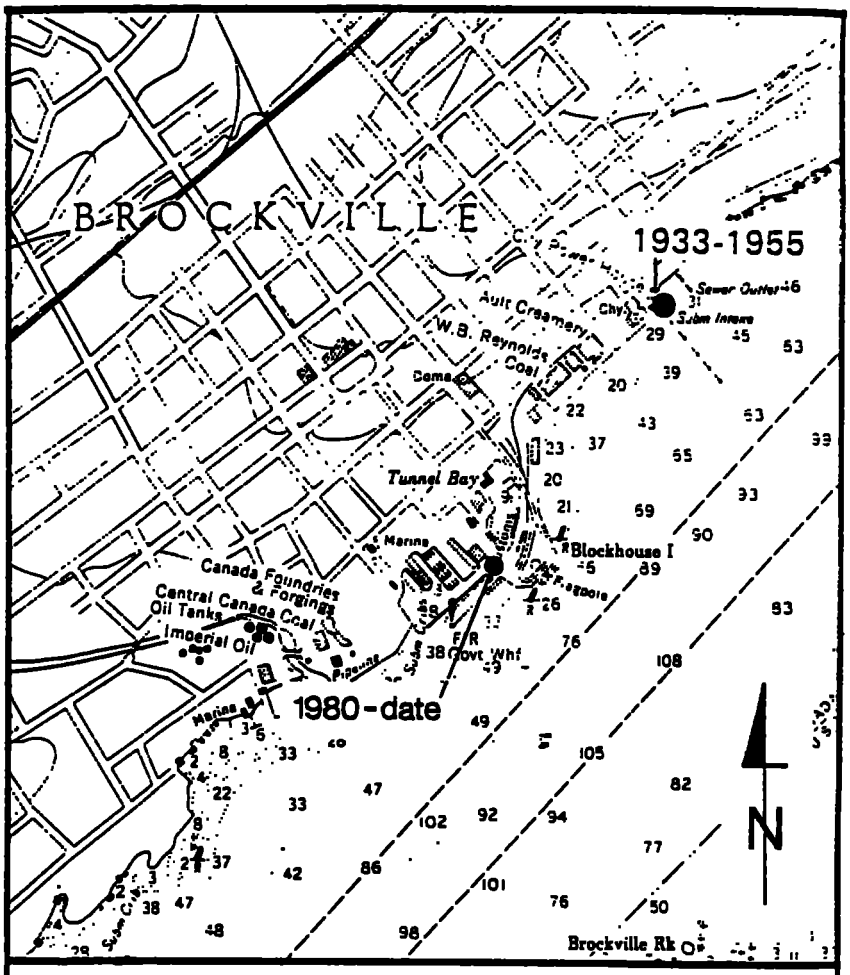
CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
May 1933-Sep 1954	MMCLXXVII	252.961 feet (77.103 meters)	Staff Gauge, Twice Daily	W.R.B.
Oct 1954-Dec 1955	MMCLXXVII	252.961 feet (77.103 meters)	Staff Gauge, Twice Daily	W.R.B.
May 1980-Date	68 U 339	86.528 meters (283.881 feet)	Recording Gauge, Hourly Scalings	C.H.S.

Gauging Station Sites (see Plate 54, page 98):

(a) May 1933-December 1955: Located on the retaining wall at the side entrance to the Brockville City Pumphouse on the east side of the building.

(b) May 1980-Date: Recording gauge in a steel armco shelter over a steel well located adjacent to the customs office on the south side of the entrance to Tunnel Bay at Brockville.



Metres 1000 0

Feet 1000 0 2000

WATER LEVEL GAUGE LOCATION

BROCKVILLE, ONTARIO
1933-DATE

1982

GAUGE HISTORY

Prescott, Ontario

Elevations at Prescott on 1903 Datum depend on B.M. "MMXXV" at elevation 263.489 feet (80.299 meters) based on leveling by the Department of Public Works in 1919 from B.M. "D" at Ogdensburg, New York. IGLD (1955) elevations a Prescott depend on B.M. "MMXXV" at elevation 262.768 feet (80.092 meters) as published in Appendix A, Establishment of International Great Lakes Datum published in September 1961 by the Coordinating Committee.

CHRONOLOGICAL TABLE

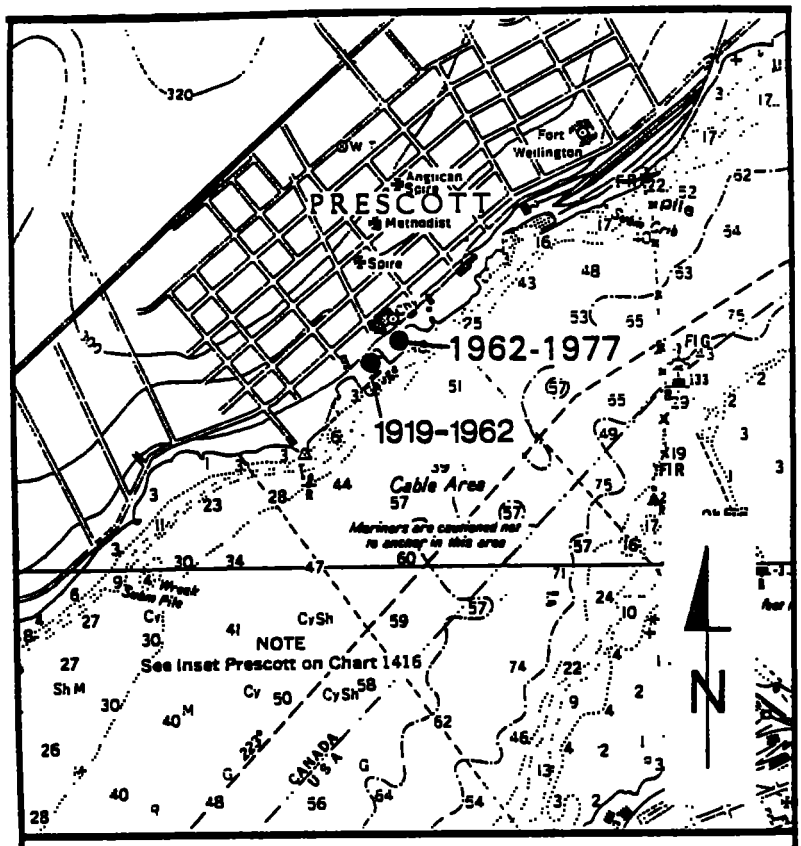
PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Oct 1919-Sep 1977	MMXXV	262.768 feet (80.092 meters)	Recording Gauge, Hourly Scalings	C.H.S.

NOTE: Analogue recording gauges used before 1970. Since that date, digital recording gauges have been used.

Gauging Station Sites (see Plate 55, page 100):

(a) October 1919-October 1962: A recording gauge located over concrete well at north end and west side of motorboat house in Department of Transport, Marine Depot Yard.

(b) October 1962-September 1977: A recording gauge located over steel well in northwest corner of Ferry Dock at Department of Transport, Marine Depot Yard.



WATER LEVEL GAUGE LOCATION

PRESCOTT, ONTARIO

1919-1977

1982

GAUGE HISTORY

North Channel-CA, Ontario

1903 Datum was never established at North Channel-CA. Elevations at North Channel-CA on 1935 Datum were established by precise leveling in 1955. The 1935 Datum elevation of B.M. "CA 1" at North Channel-CA is 253.896 feet (77.388 meters) and depends on the elevation of B.M. "WEIR" on the main line as being 249.453 feet (76.033 meters) on 1935 Datum. IGLD (1955) was never used at North Channel-CA gauge site.

NOTE: 1935 Datum records at this station for the period October 1954 - November 1962 have been converted to IGLD (1955) by subtracting 0.97 foot (0.30 meter).
This station site was submerged with the filling of Lake St. Lawrence.

Gauging Station Site (see Plate 56, page 102):

(a) October 1954-November 1962: A recording gauge located over a steel stilling well, connected to the river by an intake pipe 113 feet long, on the Canadian shore opposite the lower entrance piers to North Channel about three miles west of Cardinal.

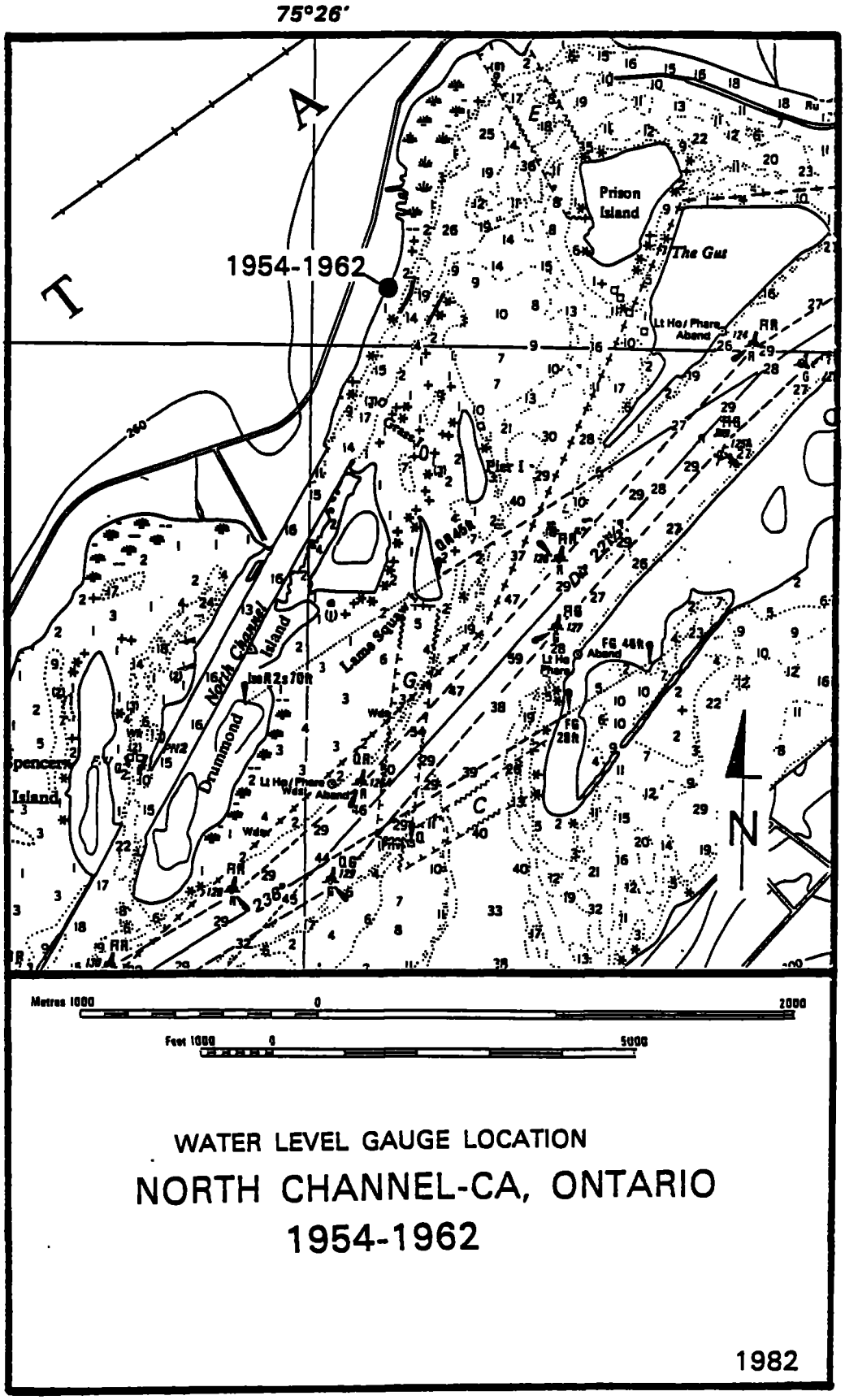

75°26'
44°46'
1954-1962
Prison Island
The Gut
Lt Ho/ Phare
Abeml
Plat I
Lame Square
North Channel
Drummond Island
Spencer
Island
Metres 1000 0 2000
Feet 1000 0 5000
WATER LEVEL GAUGE LOCATION
NORTH CHANNEL-CA, ONTARIO
1954-1962
1982

PLATE 56

GAUGE HISTORY

H-10-CA, Ontario

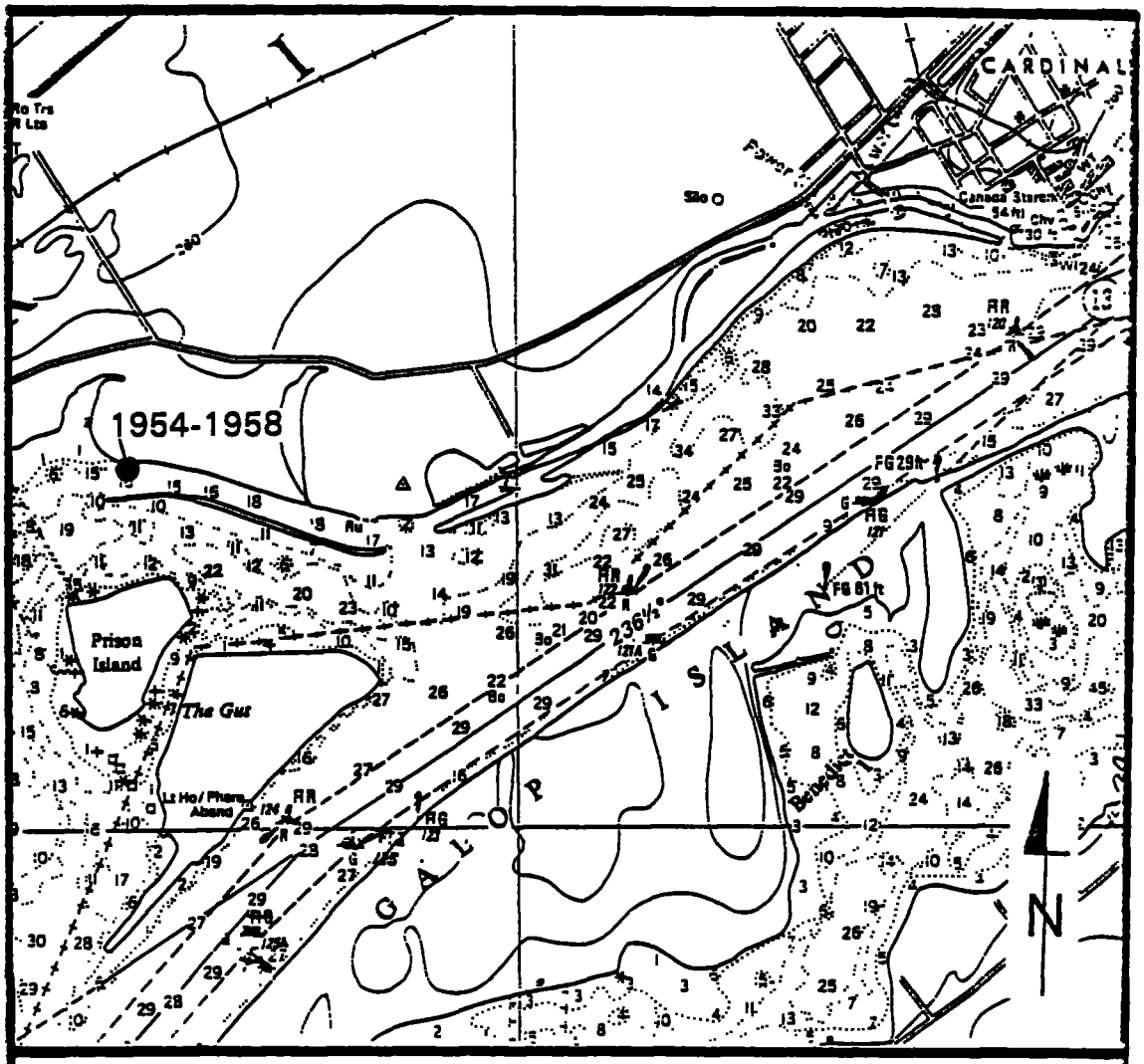
1903 Datum was never established at H-10-CA. Elevations at H-10-CA on 1935 Datum were established by precise leveling in 1954. The 1935 Datum elevation of B.M. "CA 2" at H-10-CA is 250.091 feet (76.228 meters) and depends on the elevation of B.M. "WEIR" on the main level line as being 249.453 feet (76.033 meters) on 1935 Datum. IGLD (1955) was never used at H-10-CA gauge site.

NOTE: 1935 Datum records at this station for the period October 1954 - May 1958 have been converted to IGLD (1955) by subtracting 0.97 foot (0.30 meters).

Gauging Station Site (see Plate 57, page 104):

(a) October 1954-May 1958: A recording gauge located over a steel stilling well, connected to the river by an intake pipe 36 feet long, on the Canadian shore at the entrance to the Cardinal Canal.

75°24'



44°46'

WATER LEVEL GAUGE LOCATION

H-10-CA, ONTARIO

1954-1958

1982

GAUGE HISTORY

Lock 27, Ontario

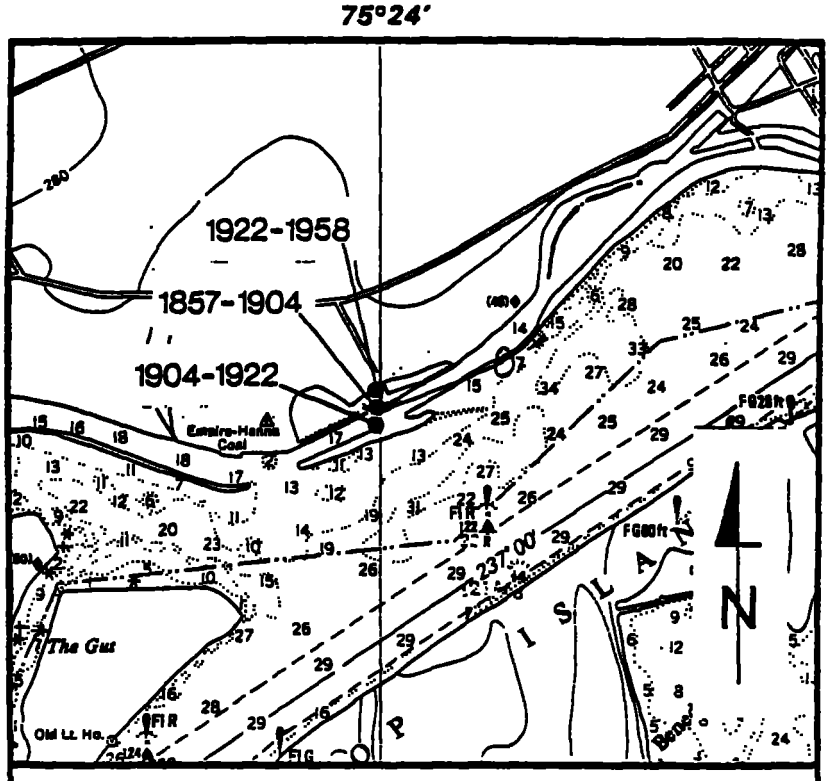
Elevations at Lock 27 on 1903 Datum from 1857 to 1904 depend on the upper sill of Lock 27 at elevation 234.210 feet (71.387 meters). Elevations at Lock 27 on 1903 Datum as used from 1922 to 1937 depend on B.M. "MMXLI" at elevation 248.682 feet (75.798 meters). Elevations at Lock 27 on 1903 Datum used from 1937 depend on B.M. "WEIR" at elevation 249.152 feet (75.942 meters). IGLD (1955) was never used at Lock 27 gauge site.

Gauging Station Sites (see Plate 58, page 106):

(a) May 1857-July 1904: A staff gauge located on the upper sill of Lock 27.

(b) August 1904-May 1922: Staff readings were taken at noon each day over the upper sill of Lock 27.

(c) June 1922-August 1958: A recording gauge located at the coping at the west side of the masonary wall, on the shore side of the weir at the upper end of Lock 27.



WATER LEVEL GAUGE LOCATION

LOCK 27, ONTARIO

1857-1958

1982

GAUGE HISTORY

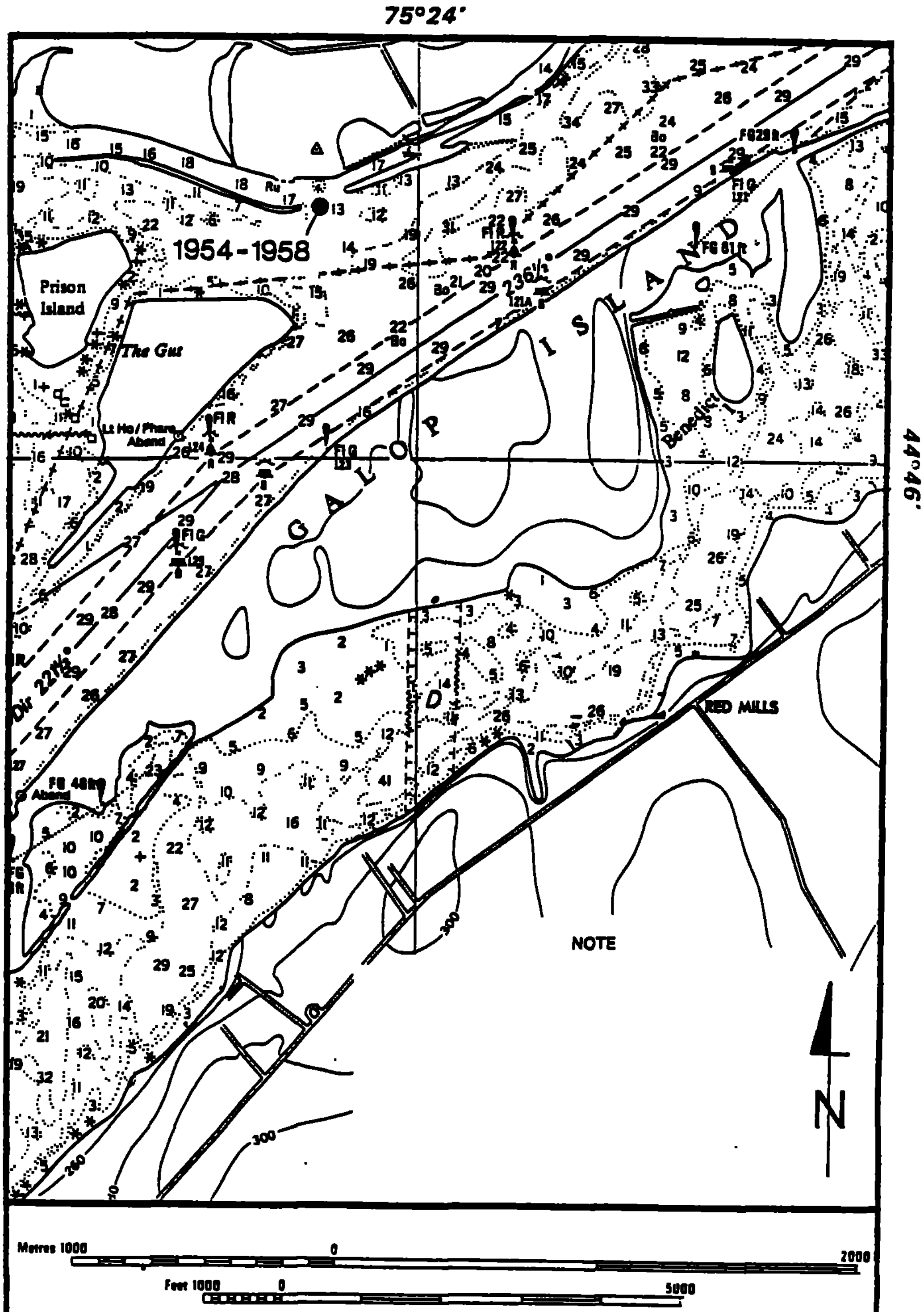
H-25-CA, Ontario

1903 Datum was never established at H-25-CA. Elevations at H-25-CA on 1935 Datum were established by precise leveling in 1954. The 1935 Datum elevation of B.M. "CA 1" at H-25-CA is 250.305 feet (76.293 meters) and depends on the elevation of B.M. "WEIR" on the main level line as being 249.453 feet (76.033 meters) on 1935 Datum. IGLD (1955) was never used at H-25-CA gauge site.

NOTE: 1935 Datum records at this station for the period October 1954 to May 1958 have been converted to IGLD (1955) by subtracting 0.97 foot (0.30 meters).
This station site was submerged with the filling of Lake St. Lawrence.

Gauging Station Site (see Plate 59, page 108):

(a) October 1954-May 1958: A recording gauge located over a steel stilling well, connected to the river by an intake pipe 22 feet long, on the Canadian side on the causeway above Lock 28.



WATER LEVEL GAUGE LOCATION

H-25-CA, ONTARIO

1954-1958

1982

GAUGE HISTORY

Galop, Ontario

1903 Datum was never established at Galop. Elevations at Galop on 1935 Datum were established by precise leveling in 1954. The 1935 Datum elevation of B.M. "CA 2" at Galop is 248.000 feet (75.590 meters) and depends on the elevation of B.M. "GALOP" on the main level line as being 249.546 feet (76.062 meters) on 1935 Datum. IGLD (1955) elevations at Galop depend on B.M. "CA 2" at elevation 246.941 feet (75.268 meters). IGLD (1955) elevations at Galop also were established by leveling from B.M. "MMXLIV" at elevation 278.179 feet (84.789 meters).

NOTE: In the 1962 report this location was named H-24-CA. It was renamed Galop in July 1966.

CHRONOLOGICAL TABLE

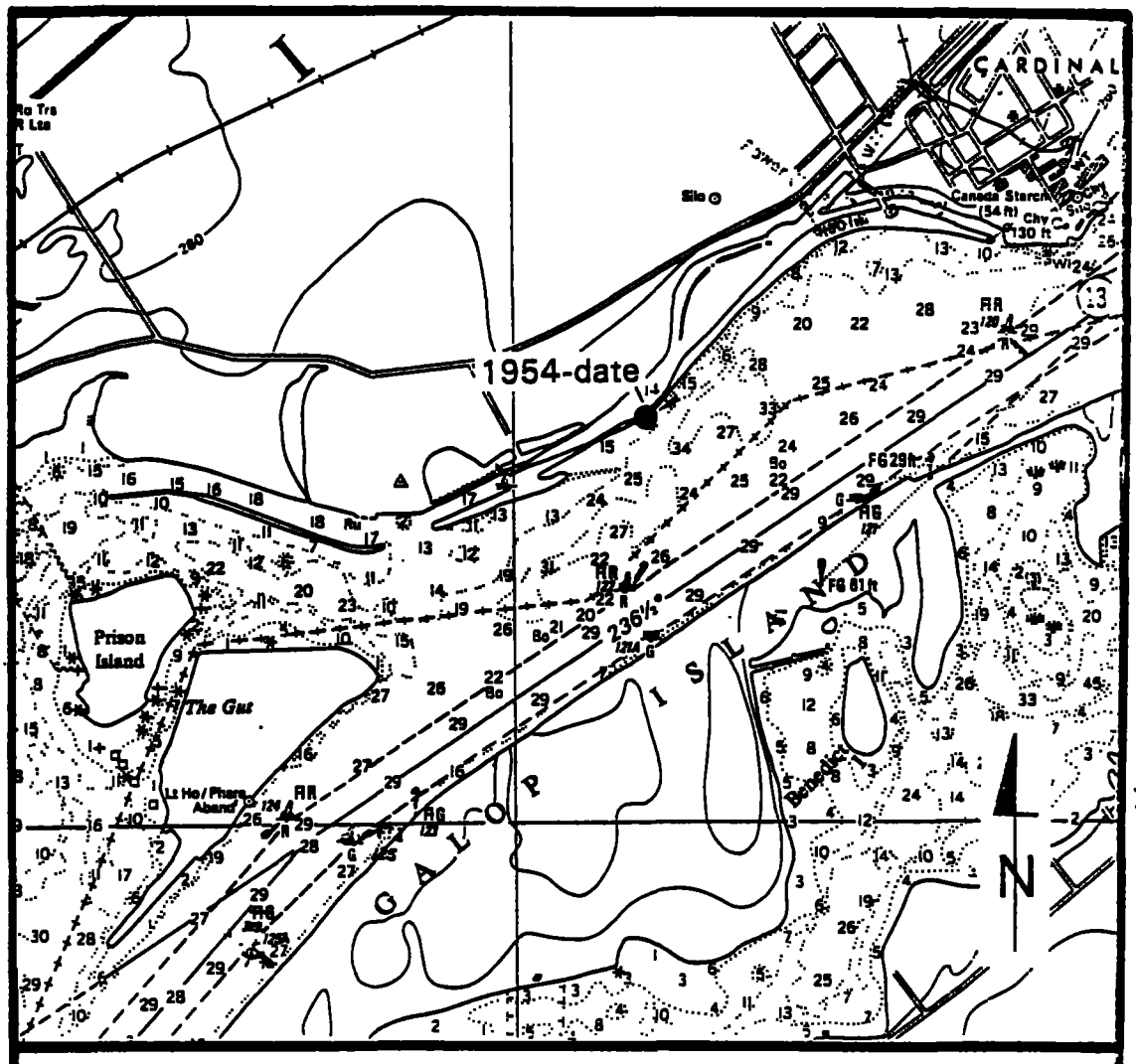
PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Oct 1954-May 1958	CA 2	246.941 feet (75.268 meters)	Recording Gauge, Hourly Scalings	H.E.P.C.O. & P.A.S.N.Y.
May 1962-Date	CA 2	246.941 feet (75.268 meters)	Recording Gauge, Hourly Scalings	H.E.P.C.O. & P.A.S.N.Y.

NOTE: Beginning in 1962, the gauge operated only during the navigation season.

Gauging Station Site (see Plate 60, page 110):

(a) October 1954-Date: A recording gauge located over a steel stilling well, connected to the river by an intake pipe 30 feet long, on the Canadian side on the causeway below Lock 28.

75°24'



44°46'

WATER LEVEL GAUGE LOCATION

GALOP, ONTARIO

1954-DATE

1982

GAUGE HISTORY

Cardinal, Ontario

1903 Datum was never established at Cardinal. Elevations at Cardinal on 1935 Datum were established by first-order leveling in 1955. The 1935 Datum elevation of B.M. "CA 1" at Cardinal is 245.896 feet (74.949 meters) and depends on the elevation of B.M. "MMXLIV" on the main level line as being 279.153 feet (85.085 meters) on 1935 Datum. IGLD (1955) elevations at Cardinal depend on B.M. "CA 1" at elevation 244.891 feet (74.643 meters).

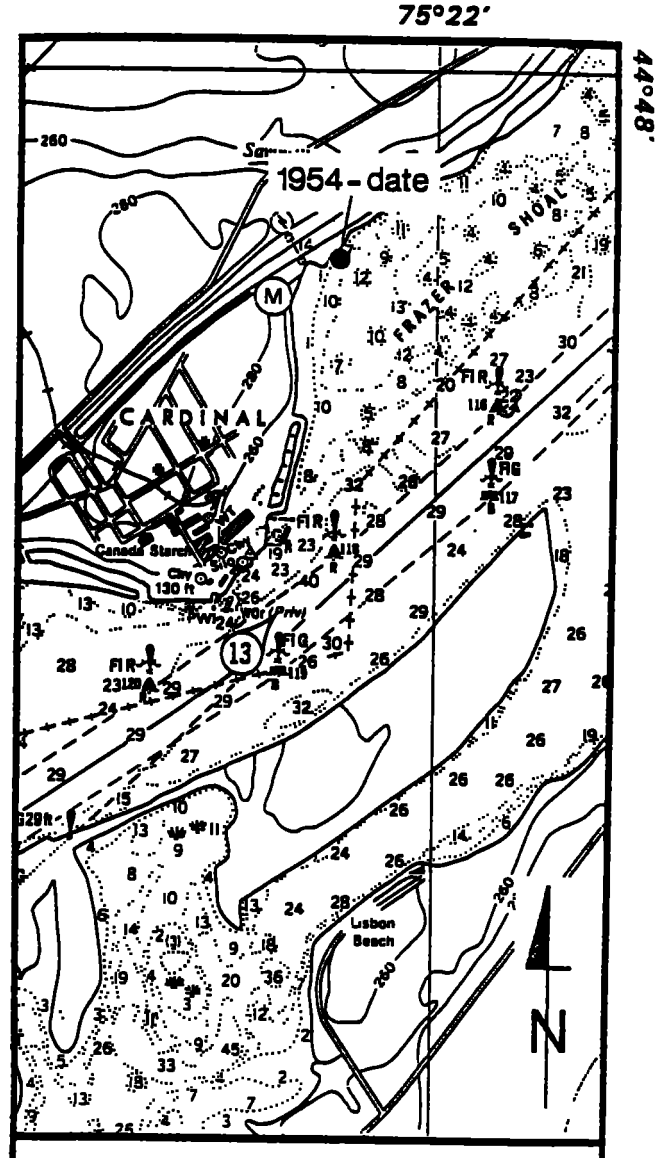
NOTE: In the 1962 report, this location was named D-CA. It was renamed Cardinal in July 1966.

CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Oct 1954-Date	CA 1	244.891 feet (74.643 meters)	Recording Gauge, Hourly Scalings	H.E.P.C.O. & P.A.S.N.Y.

Gauging Station Site (see Plate 61, page 112):

(a) October 1954-Date: A recording gauge located over a steel stilling well, connected to the river by an intake pipe 61 feet long, on the Canadian shore on the canal causeway just east of Cardinal.



WATER LEVEL GAUGE LOCATION

CARDINAL, ONTARIO
1954-DATE

1982

GAUGE HISTORY

Iroquois Dam HW, Ontario

1903 Datum was never established at Iroquois Dam HW. Elevations at Iroquois Dam HW on 1935 Datum were established by first-order leveling in 1958. The 1935 Datum elevation of B.M. "CA 1" at Iroquois Dam HW is 275.904 feet (84.096 meters) and depends on the elevation of B.M. "2910" on the main level line as being 249.949 feet (76.185 meters) on 1935 Datum. The IGLD (1955) elevations at Iroquois Dam HW depend on B.M. "2910" at elevation 248.990 feet (75.892 meters) as published in Appendix A, Establishment of International Great Lakes Datum published in September 1961 by the Coordinating Committee.

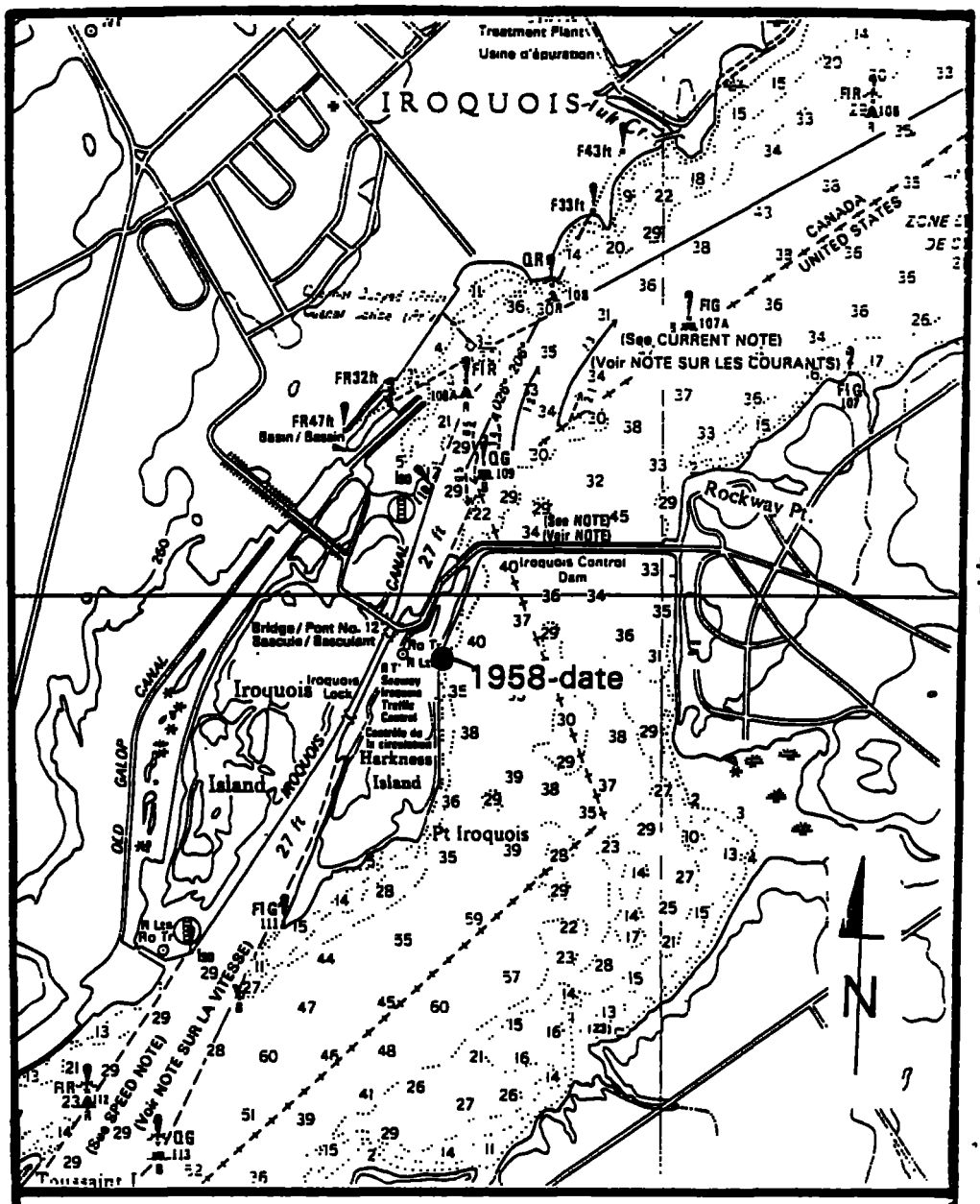
CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Apr 1958-Date	CA 1	274.944 feet (83.083 meters)	Recording Gauge, Hourly Scalings	H.E.P.C.O. & P.A.S.N.Y.

Gauging Station Site (see Plate 62, page 114):

(a) April 1958-Date: A recording gauge located over a concrete stilling well, connected to the river by an intake pipe 74 feet long, on the Canadian shore 1,400 feet above Iroquois Dam.

75°18'



WATER LEVEL GAUGE LOCATION

IROQUOIS DAM HW, ONTARIO
1958-DATE

1982

GAUGE HISTORY

Iroquois Dam TW, Ontario

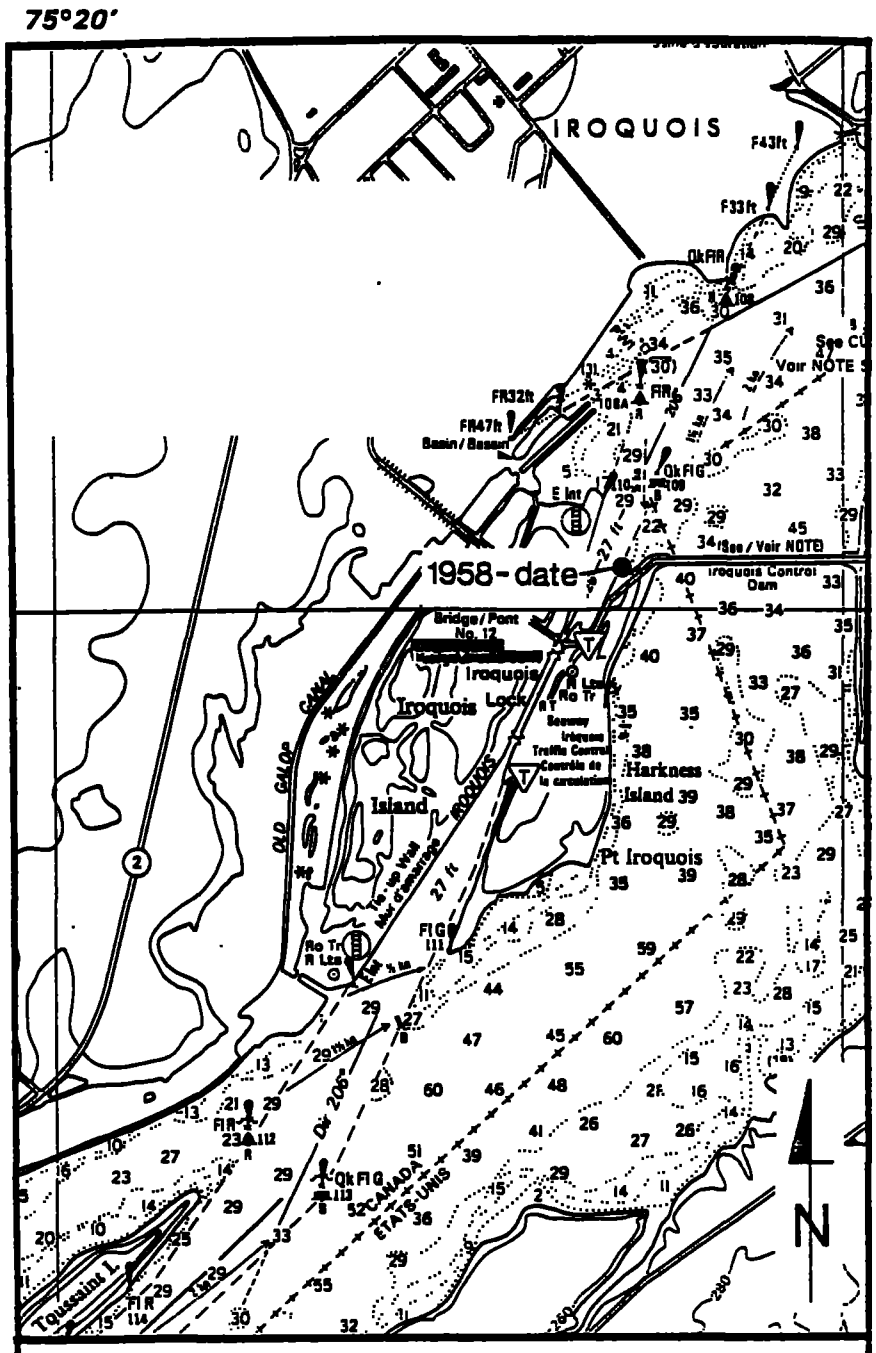
1903 Datum was never established at Iroquois Dam TW. Elevations at Iroquois Dam TW on 1935 Datum were established by first-order leveling in 1958. The 1935 Datum elevation of B.M. "WALL" at Iroquois Dam TW is 249.902 feet (76.170 meters) and depends on the elevation of B.M. "2910" on the main level line as being 249.949 feet (76.185 meters) on 1935 Datum. IGLD (1955) elevations at Iroquois Dam HW depend on B.M. "2910" at elevation 248.990 feet (75.892 meters) as published in Appendix A, Establishment of International Great Lakes Datum published in September 1961 by the Coordinating Committee.

CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Jul 1958-Date	WALL	248.942 feet (75.878 meters)	Recording Gauge, Hourly Scalings	H.E.P.C.O. & P.A.S.N.Y.

Gauging Station Site (see Plate 63, page 116):

(a) July 1958-Date: A recording gauge located over a concrete stilling well on the lower end of the South Seaway Lock wall of Iroquois Lock.



WATER LEVEL GAUGE LOCATION

IROQUOIS DAM TW, ONTARIO

1958-DATE

1982

GAUGE HISTORY

Iroquois Lock Above, Ontario

1903 datum was never established at Iroquois Lock Above. IGLD (1955) elevations at Iroquois Lock Above depend on B.M. "H.S. '0'" and "H.S. 2" at elevations 252.926 feet (77.092 meters) and 250.974 feet (76.497 meters) respectively as published in Appendix A, Establishment of International Great Lakes Datum published in September 1961 by the Coordinating Committee.

CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Dec 1959-Sep 1976	H.S. '0'	252.926 feet (77.092 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Sep 1976-Date	H.S. 2	76.494 meters (250.962 feet)	Recording Gauge, Hourly Scalings	C.H.S.

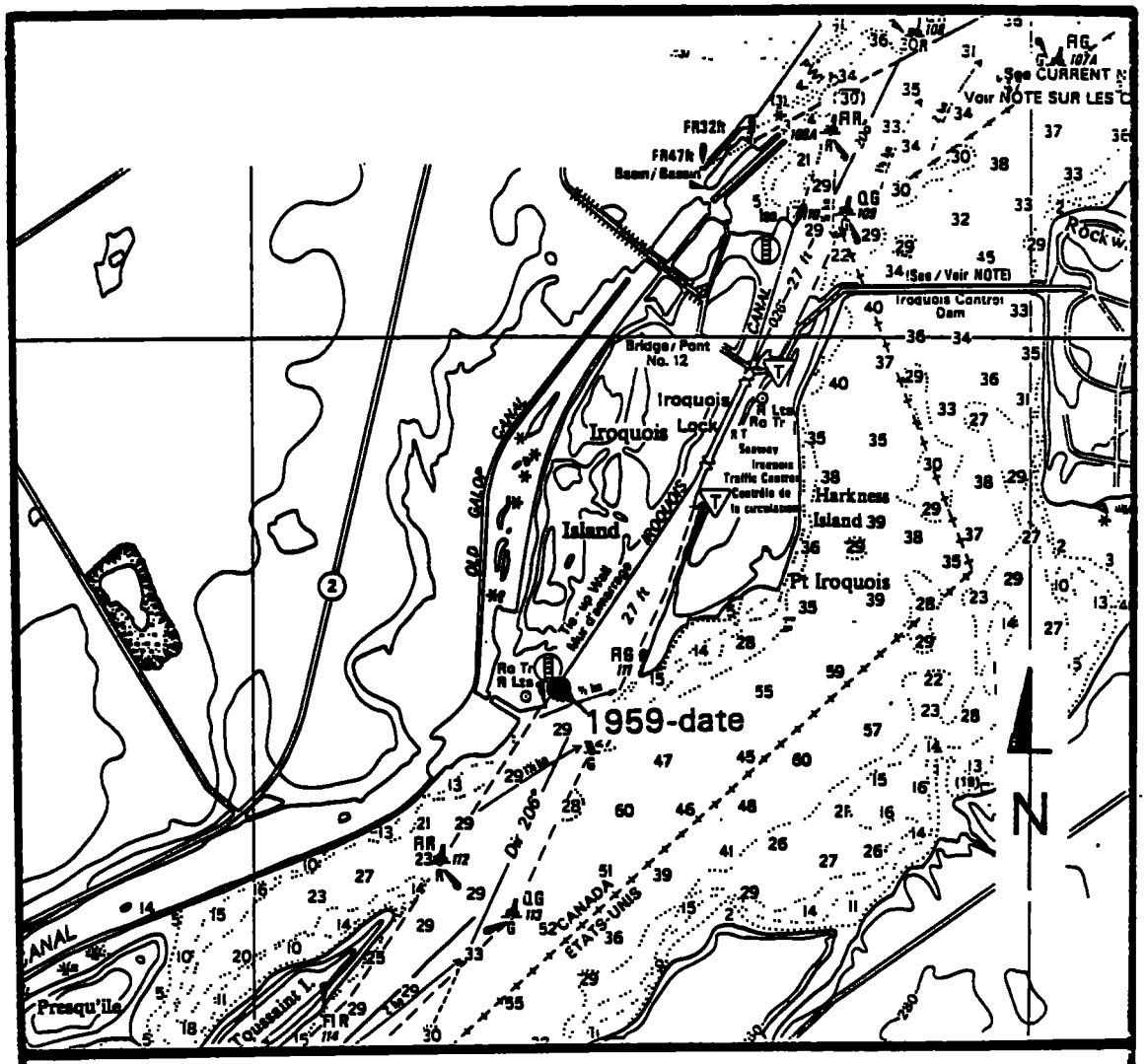
NOTE: Analogue recording gauges used before 1970. Since that date, digital recording gauges have been used.

Gauging Station Site (see Plate 64, page 118):

(a) December 1959-Date: A recording gauge located over concrete well built into the south end of the upper canal entrance.

75°20'

75°18'



44°50'

Metres 1000 0 2000

Feet 1000 0 5000

WATER LEVEL GAUGE LOCATION

IROQUOIS LOCK ABOVE, ONTARIO

1959-DATE

1982

GAUGE HISTORY

Iroquois Lock Below, Ontario

1903 datum was never established at Iroquois Lock Below. IGLD (1955) elevations at Iroquois Lock Below depend on B.M. "H.S. '0'" and "H.S. L 2" at elevations 252.926 feet (77.092 meters) and 248.986 feet (75.891 meters) respectively as published in Appendix A, Establishment of International Great Lakes Datum published in September 1961 by the Coordinating Committee.

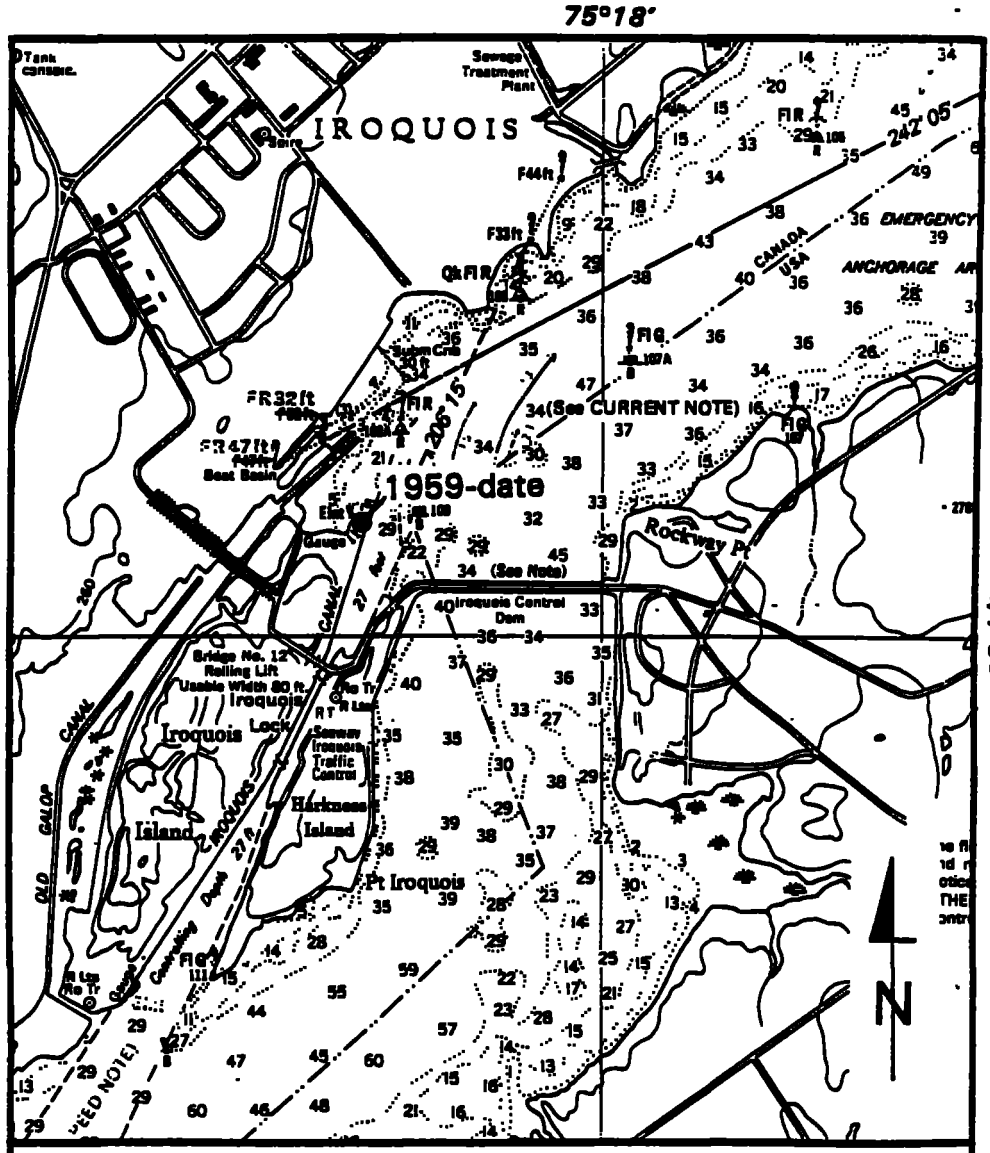
CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Dec 1959-Sep 1976	H.S. '0'	252.926 feet (77.092 meters)	Recording Gauge, Hourly Scalings	C.H.S.
Sep 1976-Date	H.S. L 2	75.886 meters (248.967 feet)	Recording Gauge, Hourly Scalings	C.H.S.

NOTE: Analogue recording gauges used before 1970. Since that date digital recording gauges have been used.

Gauging Station Site (see Plate 65, page 120):

(a) December 1959-Date: A recording gauge located over concrete well built into the north end of the west side of the lower canal entrance.



WATER LEVEL GAUGE LOCATION

IROQUOIS LOCK BELOW, ONTARIO
1959-DATE

1982

GAUGE HISTORY

Lock 25, Ontario

Elevations at Lock 25 on 1903 Datum used from 1860 to 1904 depend on the lower sill of Lock 25 at elevation 217.340 feet (66.245 meters). Elevations on 1903 Datum at Lock 25 from 1904 depend on B.M. "LOCK 25" at elevation 236.811 feet (72.180 meters) based on 1935 Datum. IGLD (1955) elevations at Lock 25 depend on B.M. "LOCK 25" at elevation 236.211 feet (71.997 meters) as Published in Appendix A, Establishment of International Great Lakes Datum published in September 1961 by the Coordinating Committee.

CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Jun 1860-Jul 1904	LOWER SILL OF OLD LOCK 25	217.340 feet (66.245 meters)	Staff Gauge, Once Daily	D. of R. and C.
Aug 1904-Sep 1917	LOWER SILL OF OLD LOCK 25	208.400 feet (63.521 meters)	Staff Gauge, Once Daily	D. of R. and C.
Oct 1917-Jun 1958	LOCK 25	236.211 feet (71.997 meters)	Recording Gauge, Hourly Scalings	C.H.S.

Gauging Station Sites (see Plate 66, page 122):

(a) June 1860-July 1904: A staff gauge located over the lower sill of Lock 25.

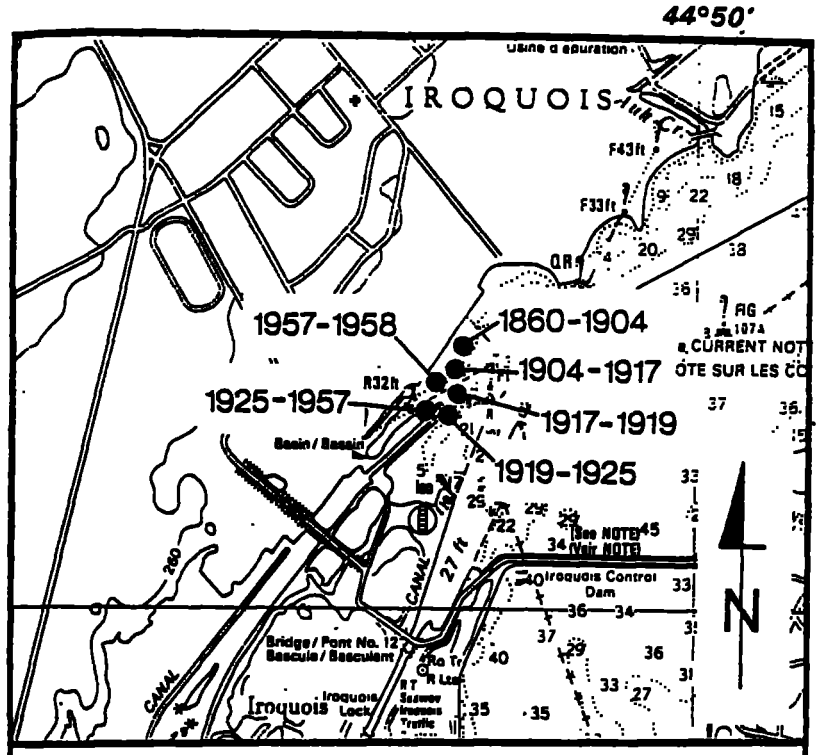
(b) August 1904-September 1917: A staff gauge located over the lower sill of Lock 25.

(c) October 1917-July 1919: A recording gauge located over the coping on the inner side of the old northwest timber approach pier to the new canal entrance.

(d) August 1919-August 1925: A recording gauge located on the coping over the chain well at the corner end and on the southeast side of the entrance to Lock 25.

(e) September 1925-May 1957: A recording gauge located over the coping on the inner side of the northwest concrete approach pier to the new canal entrance.

(f) June 1957-June 1958: A recording gauge located on the coping over the chain well at the lower end and on the southeast side of the entrance to Lock 25.



WATER LEVEL GAUGE LOCATION

LOCK 25, ONTARIO

1860-1958

1982

GAUGE HISTORY

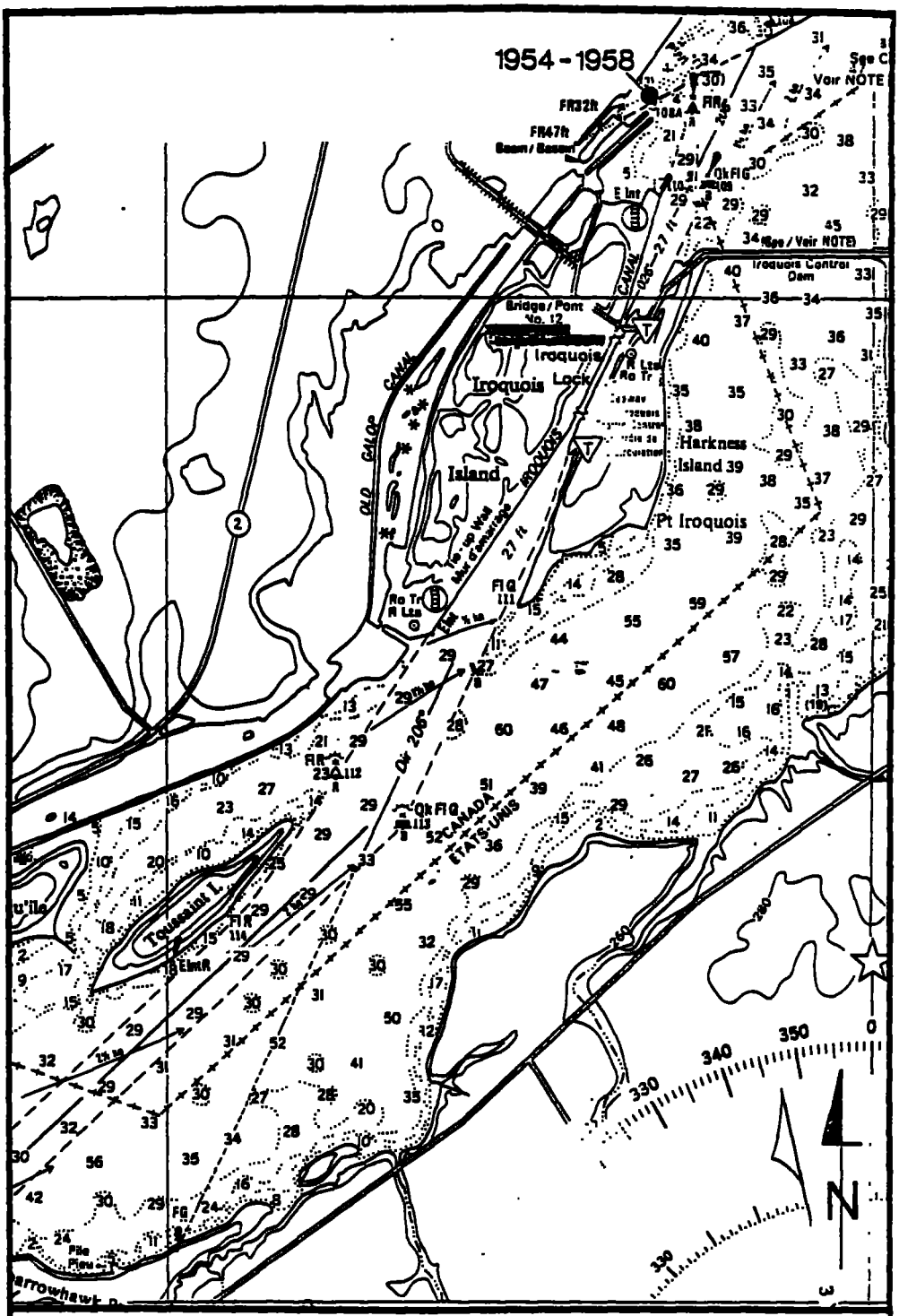
Iroquois-CA, Ontario

1903 Datum was never established at Iroquois-CA. Elevations at Iroquois-CA on 1935 Datum were established by precise leveling in 1954. The 1935 Datum elevation of B.M. "MMXLIX" at Iroquois-CA is 235.338 feet (71.731 meters). IGLD (1955) was never used at Iroquois-CA gauge site.

NOTE: 1935 Datum records at this station for the period October 1954-July 1958 have been converted to IGLD (1955) by subtracting 0.97 foot (0.30 meters).
This station site was submerged with the filling of Lake St. Lawrence.

Gauging Station Site (see Plate 67, page 124):

(a) October 1954-July 1958: A recording gauge located over a stilling well situated on the Canadian side on the south wall near the easterly gate of the old locks on the abondoned canal at Iroquois.



WATER LEVEL GAUGE LOCATION

IROQUOIS-CA, ONTARIO

1954-1958

1982

GAUGE HISTORY

H-1-CA, Ontario

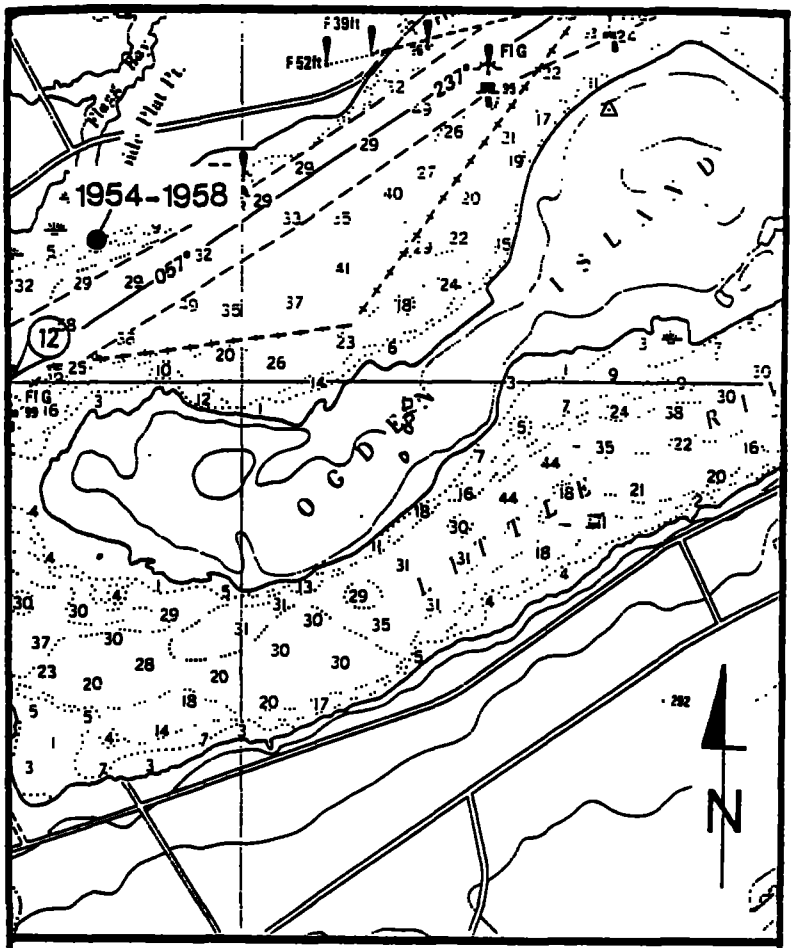
1903 Datum was never established at H-1-CA. Elevations at H-1-CA on 1935 Datum were established by precise leveling in 1955. The 1935 Datum elevation of B.M. "CA 1" at H-1-CA is 235.506 feet (71.782 meters) and depends on the elevation of B.M. "906" on the main level line as being 250.224 feet (76.268 meters) on 1935 Datum. IGLD (1955) was never used at H-1-CA gauge site.

NOTE: 1935 Datum records at this station for the period October 1954-July 1958 have been converted to IGLD (1955) by subtracting 0.98 foot (0.30 meters).
This station site was submerged with the filling of Lake St. Lawrence.

Gauging Station Site (see Plate 68, page 126):

(a) October 1954-July 1958: A recording gauge located over a steel stilling well, connected to the river by an intake pipe 40 feet long, on the Canadian shore at the entrance to the Morrisburg Canal.

75°14'



44°52'

WATER LEVEL GAUGE LOCATION

H-1-CA, ONTARIO

1954-1958

1982

GAUGE HISTORY

Lock 24, Ontario

Elevations at Lock 24 on 1903 Datum used from 1860 to July 1904 depend on the upper sill of old Lock 24 at elevation 216.120 feet (65.120 meters). Elevations at Lock 24 on 1903 Datum from 1917 depend on B.M. "LOCK 24" at elevation 230.198 feet (70.164 meters) based on 1935 Datum. IGLD (1955) was never used at Lock 24 gauge site.

Gauging Station Sites (see Plate 69, page 128):

(a) June 1860-July 1904: A staff gauge located over the upper sill of Lock 24.

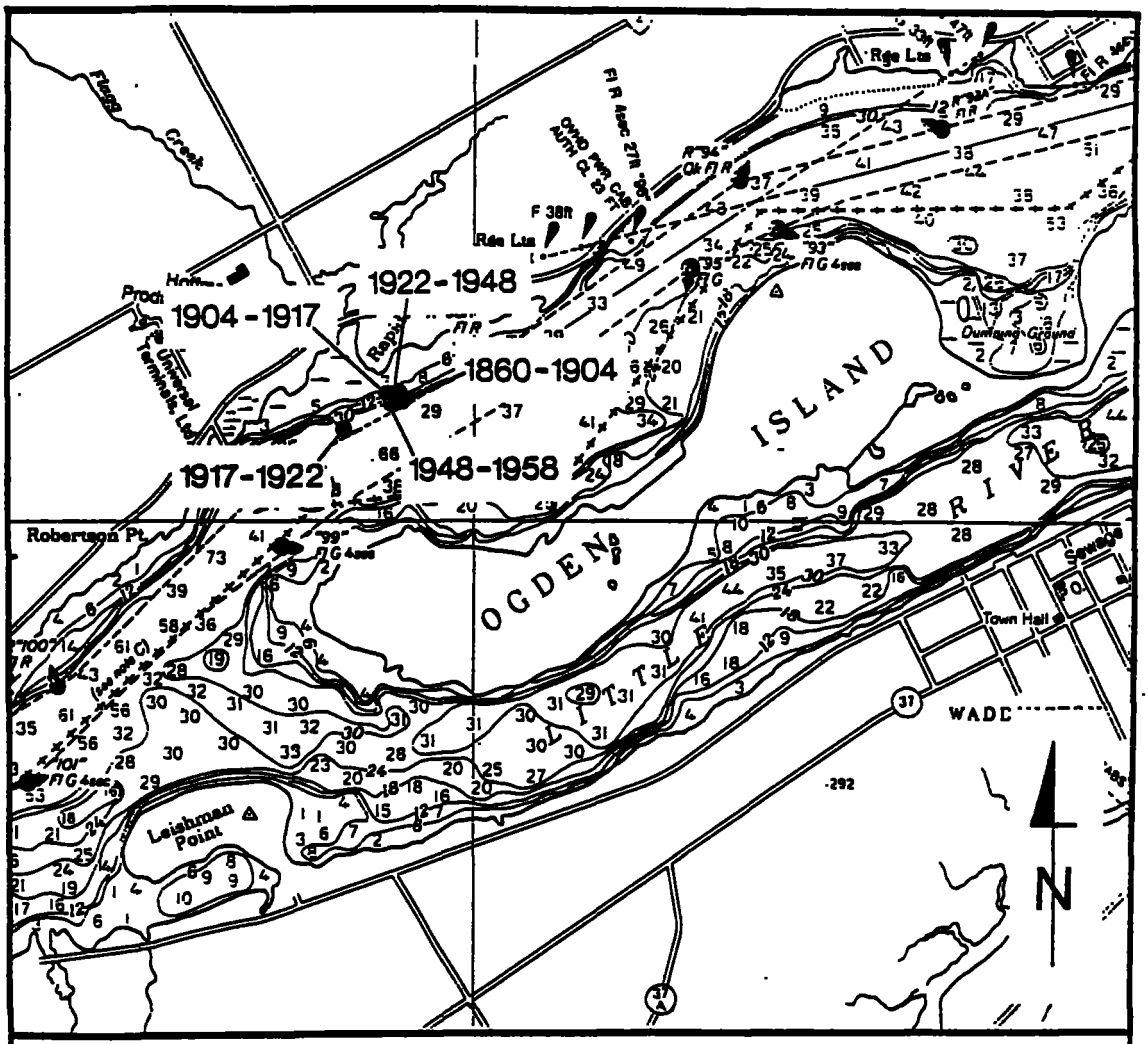
(b) August 1904-September 1917: A staff gauge located over the upper sill of Lock 24.

(c) October 1917-November 1922: A recording gauge located over the coping approximately 300 feet from the canal end of the masonry approach wall on the southeast side of the canal entrance.

(d) December 1922-October 1948: A recording gauge located over the coping approximately 6 feet west of the Bridge over the weir at the head of Lock 24, and on the masonry wing wall on the southeast side.

(e) October 1948-June 1958: A recording gauge located over the coping on the inner side on the masonry wing wall on the southwest side of the entrance to Lock 24 and just upstream from the concrete bridge over the weir.

75°14'



44°52'

Metres 1000 0 2000

Feet 1000 0 5000

WATER LEVEL GAUGE LOCATION

LOCK 24, ONTARIO

1860-1958

1982

GAUGE HISTORY

Morrisburg, Ontario

1903 Datum was never established at Morrisburg. Elevations at Morrisburg on 1935 Datum were established by precise leveling in 1958. The 1935 Datum elevation of B.M. "CA 3" at Morrisburg is 248.991 feet (75.893 meters) and depends on the elevation of B.M. "905" on the main level line as being 265.649 feet (80.807 meters) on 1935 Datum. IGLD (1955) elevations at Morrisburg depends on B.M. "CA 3" at elevation 248.044 feet (75.604 meters). IGLD (1955) elevations at Morrisburg were established by level line from B.M. "905A" at elevation 252.587 feet (76.989 meters).

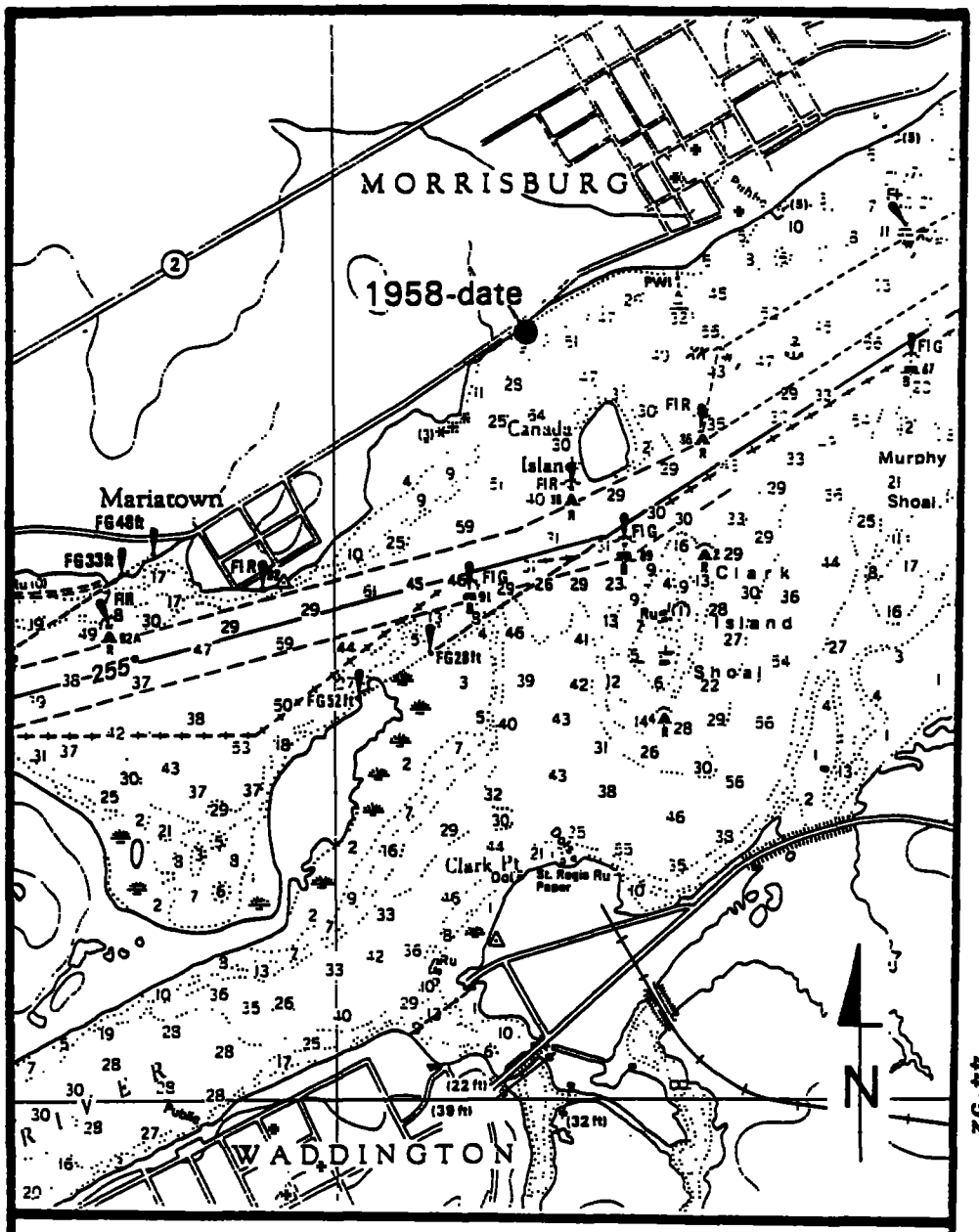
CHRONOLOGICAL TABLE

PERIOD	CONTROLLING BENCH MARK	IGLD (1955) ELEVATION	TYPE OF RECORD	AGENCY
Jul 1958-Date	CA 3	248.044 feet (75.604 meters)	Recording Gauge, Hourly Scalings	H.E.P.C.O. & P.A.S.N.Y.

Gauging Station Site (see Plate 70, page 130):

(a) July 1958-Date: A recording gauge located over a concrete stilling well, connected to the river by an intake pipe about 50 feet long, on the Canadian shore at the westerly limits at Morrisburg.

75°12'



44°52'

WATER LEVEL GAUGE LOCATION

MORRISBURG, ONTARIO

1958-date

1982

GAUGE HISTORY

Morrisburg-CA, Ontario

1903 Datum was never established at Morrisburg-CA. Elevations at Morrisburg-CA on 1935 Datum were established by precise leveling in 1954. The 1935 Datum elevation of B.M. "CA 1" at Morrisburg-CA is 226.981 feet (69.184 meters) and depends on the elevation of B.M. "MMLX" on the main level line as being 219.670 feet (66.955 meters) on 1935 Datum. IGLD (1935) was never used at Morrisburg-CA gauge site.

NOTE: 1935 Datum records at this station for the period October 1954-July 1958 have been converted to IGLD (1955) by subtracting 0.95 foot (0.29 meters).
This station site was submerged with the filling of Lake St. Lawrence.

Gauging Station Site (see Plate 71, page 132):

(a) October 1954-July 1958: A recording gauge located on the Canadian side over the chain well, on the north side near the easterly gate of the old locks at Morrisburg.