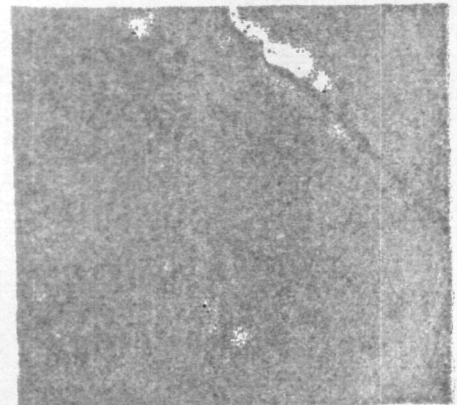
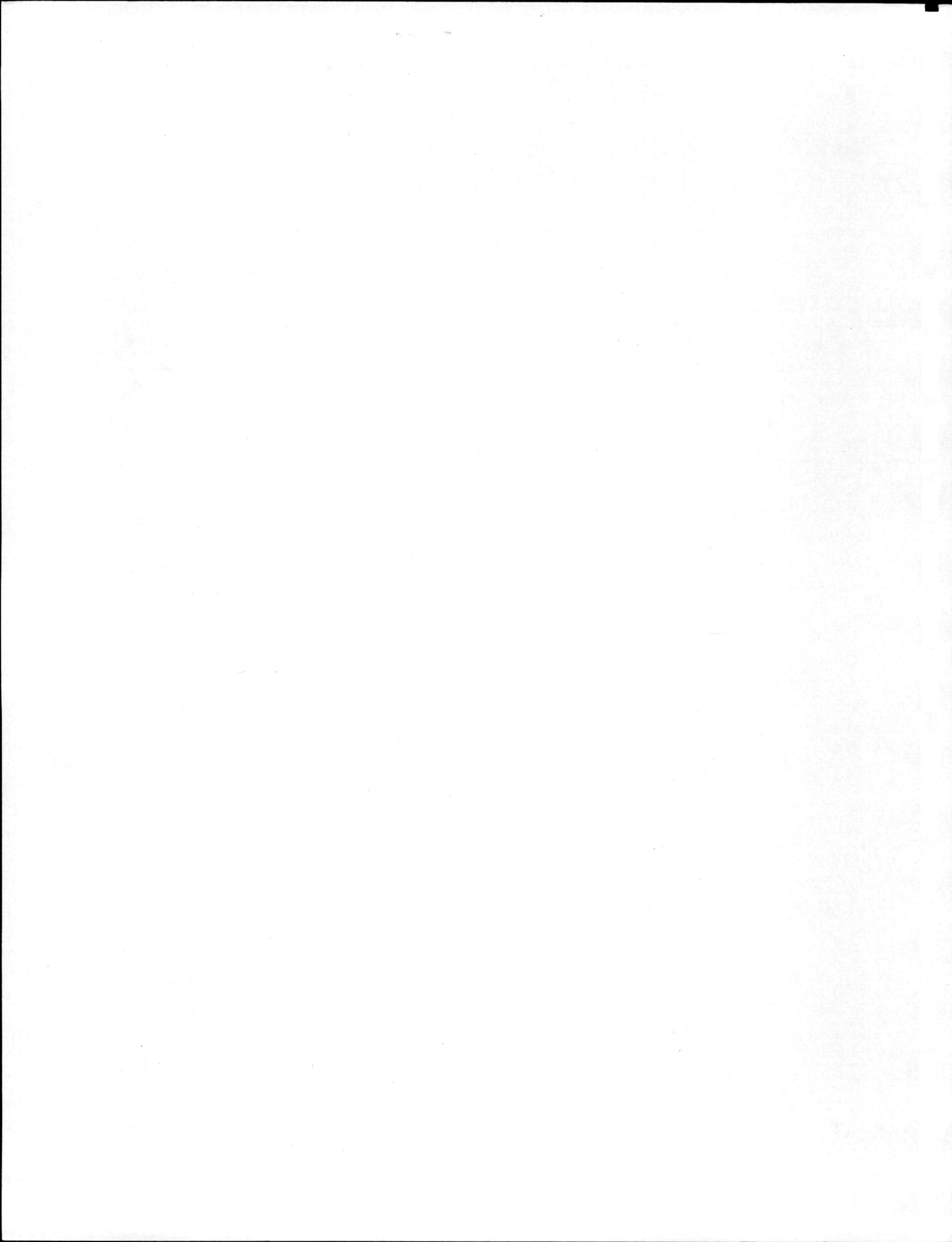




CANADA/ONTARIO  
COST SHARING AGREEMENT  
FOR  
WATER QUANTITY SURVEYS  
ANNUAL REPORT  
1986/87

SEPTEMBER 1987





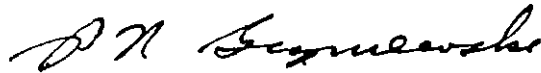
TO Mr J N Bishop  
Mr M G Lewis  
Administrators for Ontario

Mr E T Wagner  
Administrator for Canada

FROM Members of the Ontario Coordinating Committee

In accordance with Article XII of the Memorandum of Agreement signed June 10, 1975 covering the water quantity surveys in the Province of Ontario we submit herewith the annual report for the fiscal year 1986/87

Province of Ontario

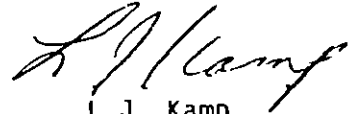


P N Gryniowski  
Ontario Ministry  
of Natural Resources

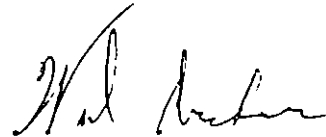


L A Logan  
Ontario Ministry  
of Environment

Government of Canada



L J Kamp  
Environment Canada



W M Archer  
Environment Canada

Ontario Hydro



R P Metcalfe  
Ontario Hydro

September 1987



CANADA/ONTARIO  
COST SHARING AGREEMENT  
FOR  
WATER QUANTITY SURVEYS  
ANNUAL REPORT  
1986/87

SEPTEMBER 1987



## EXECUTIVE SUMMARY

This is the twelfth annual report which describes the cost sharing of water quantity and sediment data collection under the terms of a Memorandum of Agreement between Canada and Ontario

The Coordinating Committee, established under the terms of the Agreement met twice during the year to plan and coordinate the construction, maintenance and operation of the hydrometric/sediment network. The Network Evaluation and Planning Sub-committee (NEPS) which was established in 1985/86 to coordinate network studies, held two meetings during the year.

Effective April 1, 1986, the Ontario network, excluding contributed data stations, consisted of 433 hydrometric stations. Of this number 378 were operated by the Water Resources Branch in Guelph, 49 were operated by the Manitoba District of the Water Resources Branch and 6 were operated by Ontario Hydro. The sediment network had 41 continuous, seasonal and miscellaneous stations operated by Water Resources Branch, Guelph.

A larger than usual number of stations were discontinued in 1986/87 due to cutbacks in person years to operate Federal stations. Of 29 Federal stations considered to be of a lesser priority, 14 were discontinued, 12 changed funding classification to Provincial or Federal/Provincial because of provincial interest and 3 remained unchanged.

The Region continued to adjust the sediment network to improve its data base and to achieve maximum coverage for resources allocated to the program. A total of 1 082 sediment samples were analyzed by the Water Resources Branch sediment laboratory for continuous, seasonal and miscellaneous stations and special surveys.

For the first quarter of 1986/87 streamflows in the Region were near or slightly below normal for the period. Heavy rain storms in southwestern Ontario caused high flows in streams during August and September. Peak discharges were recorded during storms on August 15 and 26 and September 16 and 17 at 11 stations and new measured maximums were obtained by field staff at 14 stations. Flows for the remainder of the year were near or below normal values based on long term records.

During the year 2 424 discharge measurements were taken and 1,813 additional visits were made to gauging stations. Six new stations were constructed, 5 were relocated and 8 were upgraded with new shelters or controls. All construction projects were screened for local environmental effects.

As part of the national five year DCP expansion program DCPs were installed at 12 sites leaving only 4 sites to complete the regional program.

The Region responded to 536 requests for data, involving 3 590 station years. Eleven users now have accounts on the Guelph minicomputer for the retrieval of data requests.

Network evaluation and planning activities were coordinated through NEPS. A network review was carried out to identify the stations with a lesser priority many of which were subsequently discontinued due to the reduction in manpower resources. A data user questionnaire survey was implemented during 1986/87. The survey obtained detailed feedback information from 205 users of Ontario hydrometric data regarding their present and future data requirements. A report on the results of the survey will be completed in 1987/88. A network review was undertaken to select stations for timely reporting of streamflow conditions in the Great Lakes Basin (Canadian portion). Seventeen stations were selected.



for monthly reporting to the Water Planning and Management Branch, Environment Canada and the Great Lakes Water Levels Communications Centre. Also improvements were made in the managing and summarizing station/network information.

The unit cost of operating a station during 1986/87 was \$3,582 per station-year for conventional stations and \$8,202 per station-year for remote stations. These costs represent an increase of 8.1% and 20.9% over 1985/86 for conventional and remote stations respectively. The total shareable portion of the program including costs for the network in Northwest Ontario, was \$1,843,000 of which the Provincial share was \$951,305. The three provincial agencies shared the actual cost as follows:

Ontario Ministry of Natural Resources	\$673,921
Ontario Ministry of Environment	218,117
Ontario Hydro	<u>54,255</u>
Provincial Share with WRB Guelph	\$946,293
Ontario Ministry of Environment Share with WRB Winnipeg	<u>5,012</u>
Total Ontario Provincial Share	\$951,305



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## 1 0 INTRODUCTION

This is the twelfth annual report which summarizes activities of the Canada/Ontario Coordinating Committee and provides statistical and financial information related to the Canada/Ontario hydrometric and sediment networks. Cooperative arrangements for the cost sharing of the network were established by a Memorandum of Agreement between Canada and Ontario in 1975. A sample copy of the agreement which is similar for all provinces and the territories is included in the National Annual Reports on Water Quantity Surveys, Federal/Provincial Cost Sharing Agreements which is prepared by Water Resources Branch (WRB), Headquarters.

The Agreement establishes the basis on which cooperative water quantity surveys will be undertaken and cost shared between Canada and Ontario. It requires that the Administrators establish a Coordinating Committee to plan and review network operations and prepare Schedules A and D annually for their approval. For this year 1986/87, Schedule A (Appendix A) lists the gauging stations in operation and covered by the Agreement and Schedule D (Appendix B) gives the annual cost sharing payment to be paid by Ontario to Canada.

The water quantity survey network in operation at March 31 1975 was reviewed to determine the division of responsibility between the Federal and Ontario governments. Each station was designated either Federal, Federal/Provincial or Provincial, the designation not only indicating the prime purpose but also the financial responsibility. The Federal government pays 100% of the costs of operation and construction of stations designated "Federal" and 50% of the specified costs of stations designated "Federal/Provincial". The province pays 100% of the specified costs of operation and construction of stations designated "Provincial" and 50% of the specified costs of operation and construction of stations designated "Federal/Provincial". The basic water leveling recording

equipment for all stations is paid for by the operating party while any specialized equipment is funded by the party or parties requiring the service

In Ontario, three provincial agencies, Ministry of Natural Resources (MNR), Ministry of Environment (MOE) and Ontario Hydro (OH) all participate in the cost sharing of the network along with Environment Canada and several other federal departments

In 1977 a set of national guidelines was developed for designating stations in the above categories. In 1982/83, these guidelines were revised and formally accepted by the Administrators for implementation beginning April 1 1984. These guidelines are included in the previously mentioned national report.

It should be noted that because of geographical location a portion of the Ontario network in the northwest part of the province is operated by the Manitoba District of the Western and Northern Region of the Inland Waters/Lands Directorate. The Manitoba District prepares a separate Annual Report for this portion of the network in Northwest Ontario which for 1986/87 included all Federal stations except three that were classified as Federal/Provincial.

As the "operating party" the Water Resources Branch, Ontario Region has prepared this annual report on behalf of the Canada/Ontario Coordinating Committee. Section 2 deals with Committee activities. Section 3 provides information on the water quantity/sediment network including its historical development changes in 1986/87, and gives highlights on construction and operation of the network over the past year. The section concludes with a summary of network planning and evaluation activities as conducted by the Hydrology Division of WRB. Section 4 highlights activities in data control processing and dissemination and Section 5 provides financial information on network costs and the shareable portion for each party. Section 6 briefly identifies some issues/concerns that will need addressing in the future.

## 2 0 COMMITTEE ACTIVITIES

The Coordinating Committee held meetings on June 10 1986 and January 29 1987 Provincial members also had frequent informal contact with WRB throughout the year regarding construction and operation of the network and the provision of data

The Committee was informed during the year of the appointment of M G Lewis replacing M R Garrett, as the Ontario Ministry of Natural Resources Administrator for the Cost Share Agreement There was also one change on the Committee Mr John Spratt the OH member and an original member of the Committee since 1975 retired and was replaced by R P Metcalfe

Highlights of each meeting are as follows

### June 10, 1986

- confirmed that MOE and OH would cost share the purchase and installation of DCPs at remote stations under the DCP expansion program
- reviewed the 1986/87 construction program and determined that for estimate purposes five new provincial stations would be constructed in 1987/88
- reported on the Soil and Water Environmental Enhancement Program (SWEET) and the requirement for six hydrometric stations to be constructed on watersheds to be selected in the future
- discussed the role and activities of the Network Evaluation and Planning Sub-committee

### January 29, 1987

- reviewed a draft Schedule 'A' including a proposal by WRB to discontinue approximately 24 Federal stations as a result of program cuts in person years
- informed by MOE that it has no further interest in three F/P stations operated by the Winnipeg office in the lower Rainy River watershed

- finalized the proposed 1986/87 construction program based on requests from the members and contacts with 38 Conservation Authorities
- reviewed and accepted estimates for station unit costs for the preparation of Schedule 'D'
- reported on the DCP Expansion Program and plans by WRB to have DCP receive sites in Canada under a joint arrangement with Atmospheric Environment Service (AES)
- discussed and gave input to the topics to be presented at the DOE/MOE Water Quality/Quantity Workshop scheduled for October 28-30, 1987

reported on the status of the Data Users Questionnaire sent to 367 data users in October 1986

- updated members on new initiatives being taken by DOE for Sediment Program including an expansion of the sediment data base by establishing miscellaneous sampling stations
- discussed agenda items for the next Administrators meeting on April 23, 1987 including background relating to proposed cost recovery of employee benefits

Official minutes of all Coordinating Committee meetings are kept on file in the Guelph office of WRB

### 3 0 HYDROMETRIC AND SEDIMENT NETWORKS

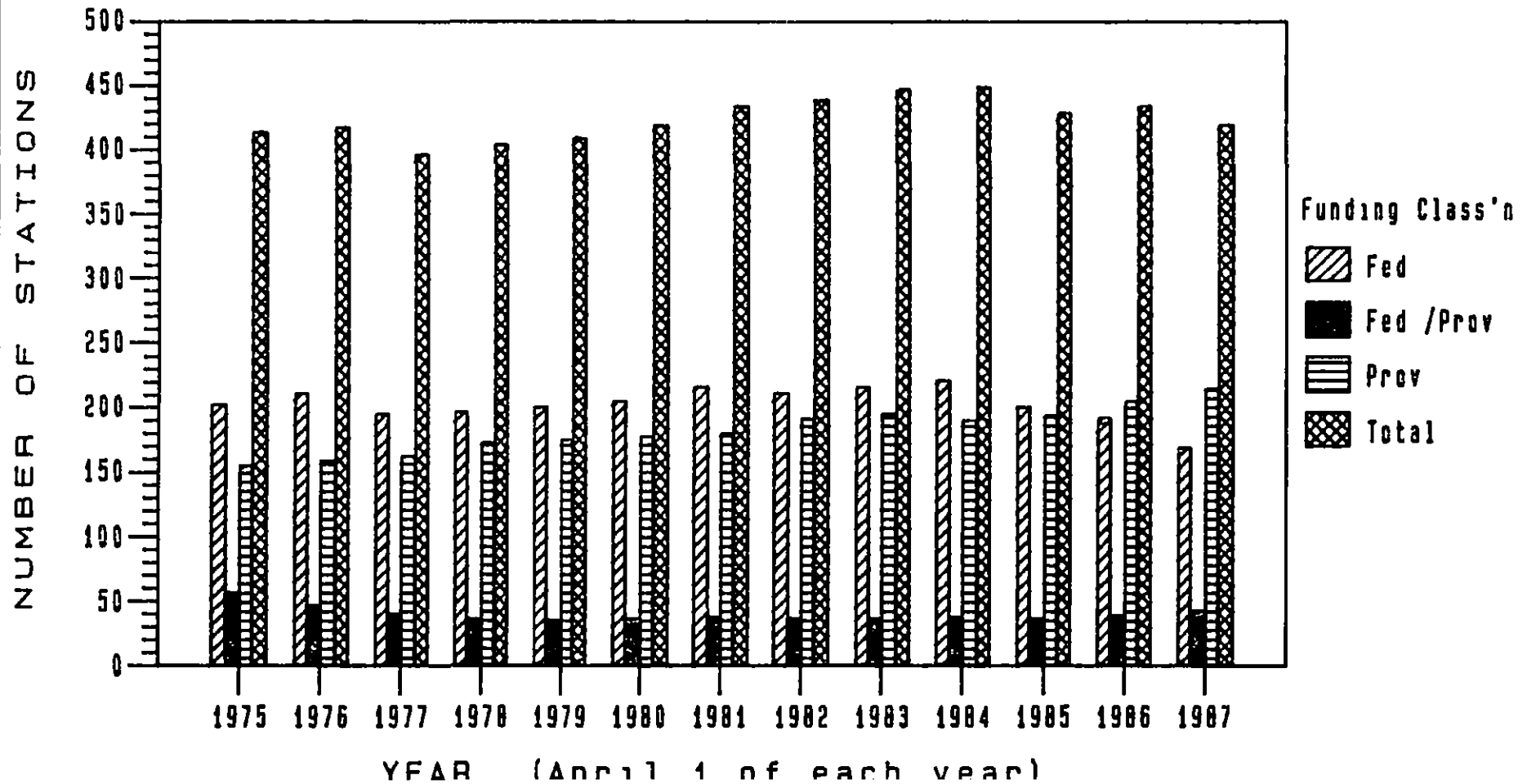
#### 3 1 History

The numbers of hydrometric stations in the Ontario network by category as of April 1 each year are displayed graphically in Figure 1. These numbers include all stations operated under Schedule A by WRB (Guelph and Winnipeg) and Ontario Hydro in the Province of Ontario since implementation of the Agreement on April 1, 1975. Of interest is that the total number of stations on April 1, 1975 was 414 which has increased to 433 as of April 1, 1986. During the eleven year period the network reached a maximum of 449 stations in 1984 and a minimum of 396 stations in 1977. The significant drop in stations from 1984 to 1985 was largely due to the Manitoba District transferring the operation of 22 stations to the Freshwater Institute of the Department of Fisheries and Oceans on April 1, 1985. These stations are now considered contributed data stations. Overall it can be concluded that there has only been a modest increase in the network over the period of the Agreement and that discontinued stations have been replaced with new stations to meet data needs at other sites.

A number of agencies like the Freshwater Institute contribute their hydrometric data to HYDAT and these data are published by WRB. In 1975 there were 71 contributed data stations which has increased to 128 as of April 1, 1986. Including contributed data stations, which complement the network operated under the Canada/Ontario Agreement, the number of stations in Ontario has increased from 485 in 1975 to 561 as of April 1, 1986.

In 1984/85 WRB began to add seasonal and miscellaneous stations to the sediment network. This was done to provide additional coverage in Southern Ontario at minimal extra cost and to assist in determining the need for regular sediment stations and the sampling strategy to be used. As of April 1, 1986 there were 41 regular seasonal and miscellaneous

Figure 1 - HISTORY OF ACTIVE HYDROMETRIC STATIONS  
 OPERATED UNDER THE CANADA-ONTARIO COST SHARE  
 AGREEMENT (all Ontario) SINCE 1975



sediment stations. All were operated by WRB Ontario Region. The lowest number of stations operated in the network in the twelve year period was 12.

Tables 1, 2 and 3 in Appendices E and F provide additional information on that portion of the network operated by WRB Ontario Region and the total network for the province. Attention is drawn to the footnotes in these tables because some stations in Ontario are operated by WRB Winnipeg and Ontario Hydro and some stations (8) operated by WRB Guelph are located in Quebec.

### 3.2 Network Changes During 1986/87

During 1986/87, 21 hydrometric stations were added and 27 discontinued in the province. This includes 8 stations in Quebec which were also added to the network operated by WRB Ontario Region. These stations are located in Northwestern Quebec and are operated from the North Bay Sub-office because of its geographical location.

The larger than normal number of stations discontinued (23 operated by Ontario Region) resulted mostly from cutbacks in person year resources to operate the federal portion of the network. A review of Federal stations undertaken during the year identified 29 stations that were considered to be of a lesser priority. Through discussions at NEPS and Coordinating Committee meetings of these 29 stations, 14 were discontinued, 12 changed funding classification from Federal to Provincial or Federal/Provincial because of provincial interest and 3 were unchanged. Documentation on rationale for these decisions are available on WRB files.

A number of changes were also made to the sediment network, all involving Federal stations, effective January 1, 1987. Eight new miscellaneous stations were added, 2 stations were discontinued and 4 were changed from continuous to seasonal or miscellaneous stations. Annual sediment network reviews are carried out to enhance the sediment data base as well.

as to meet user needs. Figures 2 and 3 show the location of hydrometric and sediment stations that were added or discontinued. Appendix C gives more detailed information on network changes and changes in Schedule 'A' over the reporting period.

### 3.3 Network Construction and Maintenance

The WRB, Ontario Region Construction Section completed projects including six new stations, five relocations, three artificial controls and five shelter upgrades. Also, 33 minor maintenance projects were included in the program. Categories of construction projects include:

#### a) Field Investigations

Included in this category were:

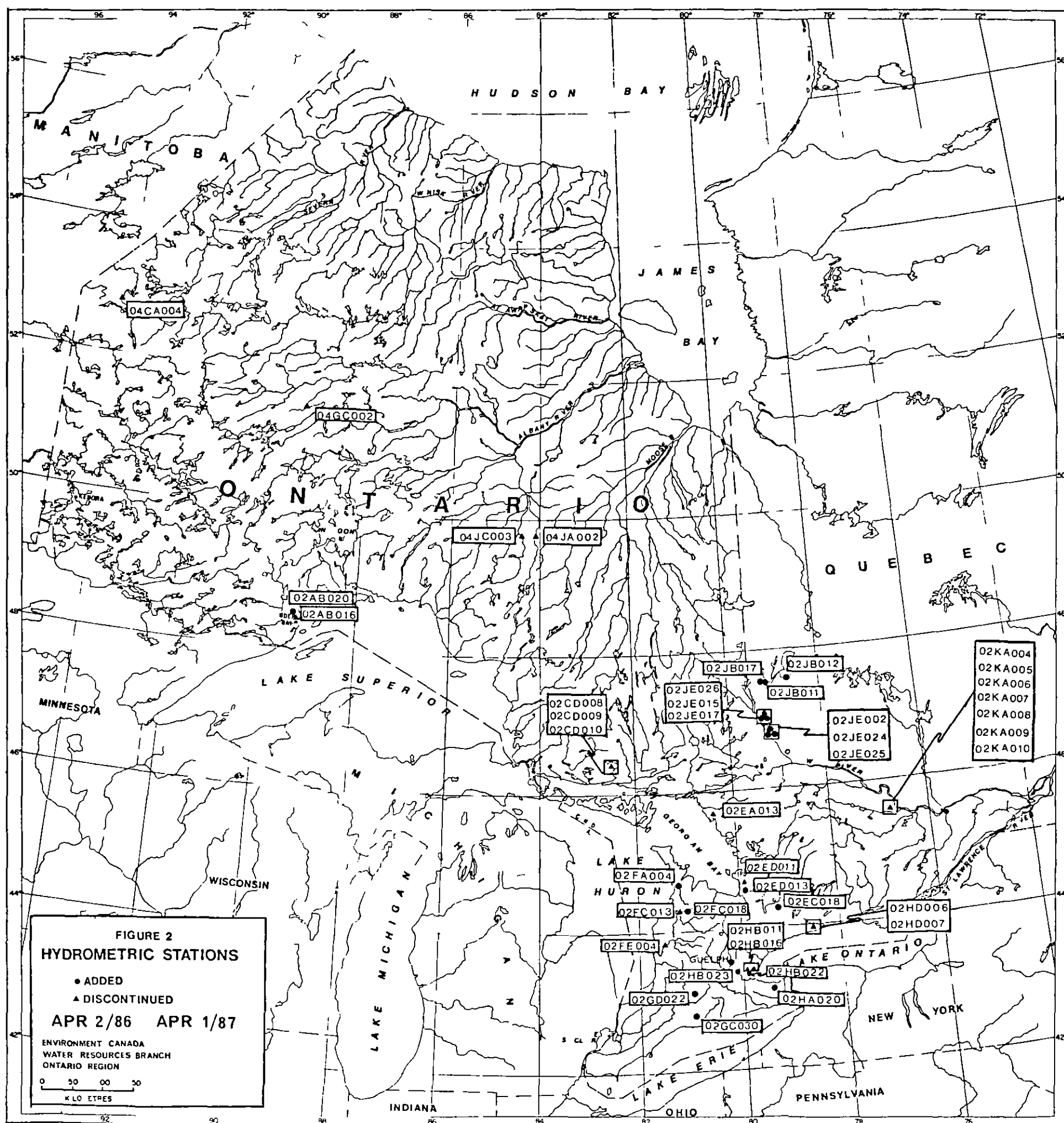
- i) on-site field reconnaissance of new and existing site locations
- ii) preparation of project site plans,
- iii) obtaining necessary approvals for hydrometric/sediment installations
- iv) investigations of specific problems requiring immediate remedial action

During the year, 26 such investigations were conducted.

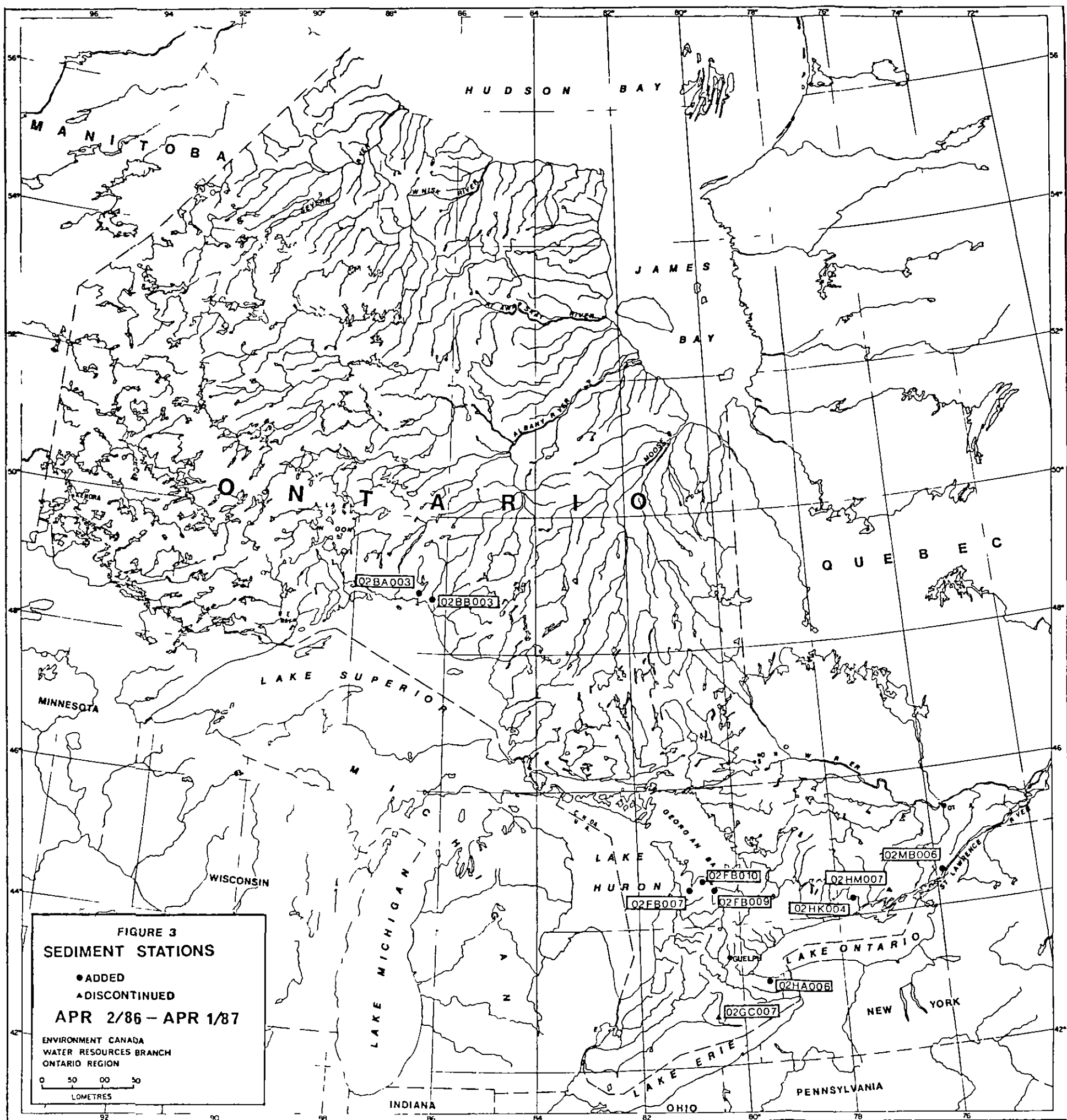
#### b) New Construction

This category includes installation of stilling wells, intakes, instrument shelters, artificial controls, cableways, access roads, and some instrumentation. Such construction is associated with new stations in areas never before gauged or the relocation of existing stations because of poor quality of records or bridge reconstruction. The following projects were undertaken in this category:











<u>New or Relocated Stations</u>	<u>Classification</u>
02HB021 Ancaster Creek at Ancaster (new)	P-1 MNR
02HK006 Beaver Creek near Marmora (relocated)	P-1 MNR
02HB022 Bronte Creek at Carlisle (relocated)	P-1 MNR
02GC030 Catfish Creek at Aylmer (new)	P-1 MNR
04LA002 Mattagami River near Timmins (relocated)	P-1 MNR
02AB020 McIntyre River above Thunder Bay (relocated) Nogies Creek near Nogies Creek (new)	P-1 MOE  To be operated by C A
02FA004 Sauble River at Allenford (new)	P-2 MNR
02HB023 Spencer Creek at Highway #5 (new)	P-2 MNR
02HA020 Twenty Mile Creek above Smithville (new)	P-1 MNR
02ED013 Wye River near Wyevale (relocated)	P-1 MOE

c) Upgrading of Station

It is necessary in some situations to improve the capability of existing stations to collect more accurate or timely data. In order to do so, it is required that the Construction Section install artificial controls, erect larger shelters to house added instrumentation for real-time data access, and install essential services such as hydro and telephone and construct sediment sampler housing. Five projects were carried out in this category.

d) Maintenance

General maintenance projects were carried out at a number of stations and included such work as replacement of shelter doors, repairs to cableways, intake repairs, straightening of wells and bank stabilization.

All major construction projects were screened for local environmental effects under the Federal Environmental Assessment and Review Process. A report documenting screening decisions is on file at the WRB office in Guelph.

Details of the 1986/87 Construction program are provided in the Annual Construction Report 1986/87 which is available from the WRB office in Guelph.

### 3 4 Network Operations and Field Surveys by WRB, Ontario Region

WRB Ontario Region was virtually fully staffed during the reporting period a change from previous years when several supervisory and field positions were vacant. Taking into account the type of stations (water level or discharge) seasonal stations start-up of new stations record loss, and discontinued stations during the year 359 26 equivalent station years of hydrometric data were collected by WRB Ontario Region. To collect this information 2 424 discharge measurements and 1 813 additional station visits were made to hydrometric stations over the reporting period. Total field staff person years devoted to hydrometric data collection (Hydrometric supervisors, technicians terms and students) were approximately 23 8 or approximately 15 stations units per person year.

The 1985 hydrometric data computations and approval for publication was completed on June 17 and the data forwarded to WRB Headquarters for publication on the same date. The target date of May 1 was not met due to staff shortages in 1985/86.

In addition to the spring freshet period high flows were experienced in August and September in Southwestern Ontario. New peak discharges were recorded during storms on August 15 and 26 and September 16 and 17 at 11 stations and new measured maximums were obtained by field staff at 14 stations. These high water events resulted in numerous data requests and data revisions which severely taxed the staff for a period of time.

As part of the Federal DCP Expansion Program 12 DCPs were installed at remote sites in northern Ontario. The program in Ontario is now virtually completed with only four sites left for installation in 1987/88. Sites having DCPs installed during 1986/87 were

Missinaibi River below Waboose River	(Fed/OH)
Asheweig River at Straight Lake	(Fed/MOE)
Sachigo River below Outlet of Sachigo Lake	(Fed/MOE)
Windigo River above Muskrat Dam Lake	(Fed/MOE)
Severn River at Outlet of Muskrat Dam Lake	(Fed/MOE)
Roseberry River above Roseberry Lakes	(Fed/MOE)
Pipestone River at Carl Lake	(Fed/MOE)
Pineimuta River at Eyes Lake	(Fed/MOE)
Albany River near Hat Island	(Fed)
Kwataboahegan River near the Mouth	(Fed)
Moose River above Moose River	(Fed)
Muswabik River at Outlet of Muswabik Lake	(Fed)

Special arrangements for servicing specialized equipment such as data loggers were made with several agencies. Memorandums of Understanding for this cost recoverable service are now in place with a total of eight agencies.

Several field sediment surveys were also conducted. Sediment monitoring related to assessing the impact of the Goderich Harbour Expansion continued for the third consecutive year. In cooperation with WRB Headquarters the HYDAC 2000 system was used to sound the harbour area and to take bottom sediment samples. Suspended sediment data were also collected on the St. Mary's River as part of a field program to establish baseline data and to determine any changes and effects on the flow distribution around Sugar Island.

Assistance was also provided to the National Water Research Institute on a field survey to collect data on sediment bedloads in the St. Clair and Detroit Rivers.

WRB continued to operate a small sediment laboratory in support of the network and special surveys. A total of 1 082 samples were submitted and 1 497 analyses performed. An estimated 1 0 person year was utilized for the sediment program in field, office and laboratory work.

### 3.5 Network Evaluation and Planning

Network evaluation and planning continued to be a high priority during 1986/87. The most significant activities are summarized in Table 1.

Network evaluation and planning activities except for Northwestern Ontario were coordinated by the Network Evaluation and Planning Sub-committee (NEPS) of the Coordinating Committee. Network evaluation and planning for Northwestern Ontario is the responsibility of WRB/Manitoba-Northwestern Ontario (Winnipeg office). The NEPS held two formal meetings in 1986/87: May 26 and December 3, with most of the discussion related to the major activities listed in Table 1 and future activities which may be initiated. Major activities planned for 1987/88 include completion of the data user survey report, development of a network plan for 1988/89 and participation at a national network evaluation/planning workshop.

Network evaluation and review in 1986/87 resulted in the development of a list of stations with lesser priority which WRB could stop operating if necessary due to staff reductions. The station cuts which were actually implemented are described in section 3.2. The reduction represents the largest cut in Federal component of the network during the history of the cost sharing agreement.

An important component of network review is the management of information on the stations of the network. This activity continued with improvements in summary reports, computerized data base management and improved documentation on data usage of the stations. For example, an investigation was carried out to identify the Federal clients or data users of all Federal and Federal/Provincial stations operated by WRB Ontario Region.

A network review of stations on tributaries to the Great Lakes (Canadian portion) resulted in the selection of 17 hydrometric stations for timely reporting of streamflow conditions for selected rivers was initiated in



response to the need for timely information on inflow to the Great Lakes  
by the Water Planning and Management Branch Environment Canada and the  
Great Lakes Water Level Communications Centre

TABLE 1  
SUMMARY OF NETWORK EVALUATION AND PLANNING  
ACTIVITIES DURING 1986/87

Area	Activity	Participating Agencies	Status On March 31/87	Results/Progress
Ontario excluding N W Ontario	Data user survey			
	- develop a questionnaire and distribute to data users	WRB/Ontario MOE MNR OH	Complete	Questionnaire was distributed to 367 data users on October 3 1986 A French version of the questionnaire was prepared and sent to one user on November 7 1986
	- analyze questionnaire results and prepare a summary report	WRB/Ontario	Continuing	205 questionnaire responses were received and information was input to computer data base Some analyses were completed
Ontario excluding N W Ontario	Plan for downsizing Federal component of the network	WRB/Ontario MNR OH MOE	Continuing	Prepared a list of Federal stations which WRB/Ontario may no longer wish to operate if present manpower shortage does not improve List to be finalized in 1987/88
Ontario	Review of previous network related studies	WRB/Ontario	Complete	Contract study by S I Solomon and Associates for a review of selected references Final report submitted to WRB/Ontario March 1987 uses the results of seven previous studies and some new information to comment on adequacy of the present network for estimating hydrologic characteristics throughout Ontario

TABLE 1 (continued)

Area	Activity	Participating Agencies	Status On March 31/87	Results/Progress
Ontario excluding N W Ontario	Station profiles	WRB/Ontario	Continuing	Profiles for Federal and Federal/Provincial stations were updated to reflect any changes in operation data uses, funding priority etc
N W Ontario	Network Evaluation and Plan Study	WRB/Man-NW Ont	Complete	Final report indicates where the network will have to be strengthened in order to meet present/future data requirements

#### 4 0 DATA PROCESSING AND DISSEMINATION

##### 4 1 Requests for Data

The Ontario Region answered 536 requests for data during 1986/87 involving 3 590 station years of data. Thirty-five percent of these requests were from the Provincial agencies and 33 percent were from various consultants. Other user groups include private individuals 13%, federal government agencies 8.5%, educational institutions 6.5% and other/foreign users 3.5%.

In December two larger requests were answered for consultants on contract to the Conservation Authorities and Water Management Branch (CAWMB) that involved hourly discharge data for 21 stations for all open water periods for ten years. A tremendous effort was put forth to complete these requests within a very short time frame so that the consultants could meet CAWMB's fiscal year deadlines. As a result of this request processing costs at the University of Guelph exceeded allotted budget and prompted the first cost recovery exercise for data requests ever undertaken by this Region. The CAWMB paid the full cost of processing for these requests (\$6 749).

##### 4 2 Computer System Expansion

A small expansion of the computer system was experienced during 1986/87 with only three new terminals and one printer put into service during the year. This additional equipment was used to increase the accessibility of the computer for the WSC field staff for the processing and computations of the hydrometric data.

Late in the fiscal year two major purchases were made, one being a DEC MICROVAX II multi-user microcomputer and the second being the hardware, software and cabling for DEC's ETHERNET internal communications network.

The MICROVAX is currently resident in the Hydrology Division pending a decision on relocation to the North Bay Sub-office. The ETHERNET system is for the Guelph office and will enable better distribution of computer activities and permit further expansion of the system.

#### 4.3 DCP Data Retrieval

At the present time DCP data is still being retrieved from NESDIS by the WRB Headquarters office on a daily basis. However, due to the continued increase in the amount of DCP data retrieved, the Headquarters system is becoming overloaded. Plans are to download the automatic retrieval routines to the Regions during 1987/88 to permit each Region to retrieve and store data for their Region.

During 1986/87 a routine was brought on-line which converts the data from a Bristol DCP unit into pseudo-digitized analogue data for use in our hydrometric data processing routines. This will be used to replace missing analogue data at the remote stations.

#### 4.4 User Access to WRB Minicomputer

During 1986/87 the number of non-WRB users having accounts on the Guelph minicomputer increased to eleven. These users include three conservation authorities, CAWMB and MOE Headquarters office in Toronto, four consultants and two Federal agencies.

These users access the minicomputer for the retrieval of data requests completed by the Data Control Section where the data is required quickly or in a computer readable format. In addition, the CAWMB office accessed the DCP data on occasion to supplement their data banks and to provide a daily forecast to the Moosonee office of MNR of streamflow conditions during the 1987 freshet.

5 0 NETWORK OPERATING COSTS

Costs to operate the network identified as operational costs in Schedule B of the Agreement were computed based on actual costs provided in WRB financial statements or recorded for the purpose of computing shareable costs. The per station cost based on actual equivalent station years of data was \$3,582 for conventional stations and \$8,202 for remote stations. Table 2 gives a comparison of the actual unit costs for 1986/87 to estimated unit costs for 1986/87 and actual costs for 1985/86.

TABLE 2  
COMPARISON OF UNIT COSTS FOR  
OPERATING WATER QUANTITY STATIONS

	1985/86 Actual Costs	1986/87 Estimated Costs	1986/87 Actual Costs	% Increase (Decrease) from 1985/86
Conventional	\$3,313	\$3,480	\$3,582	+ 8.12%
Remote	\$6,785	\$7,380	\$8,202	+20.88%

For both conventional and remote stations normal programs in terms of number of trips were carried out. Increased costs for conventional stations were due chiefly to salaries as the number of vacant positions was low in comparison to previous years. Increased air charter costs from \$102,274 in 1985/86 to \$137,668 or a 34.6% increase was the single factor that affected remote stations the most. In previous years only four trips were made to remote sites but this was increased to five in 1986/87 to improve station maintenance, reduce data loss and improve data quality. In addition, the lower cost MNR aircraft could not be used in 1986/87.

Figures 4 and 5 give a comparison of unit costs per station for remote and conventional stations since 1975. Unit cost increases for remote stations can vary from year to year and are largely dependent upon the number of trips taken. The cancellation of one trip for example would result in a savings of about \$30,000 in air charter costs.

Figure 4 AVERAGE ANNUAL COSTS FOR  
OPERATING A CONVENTIONAL HYDROMETRIC  
STATION (WRB - ONTARIO REGION)

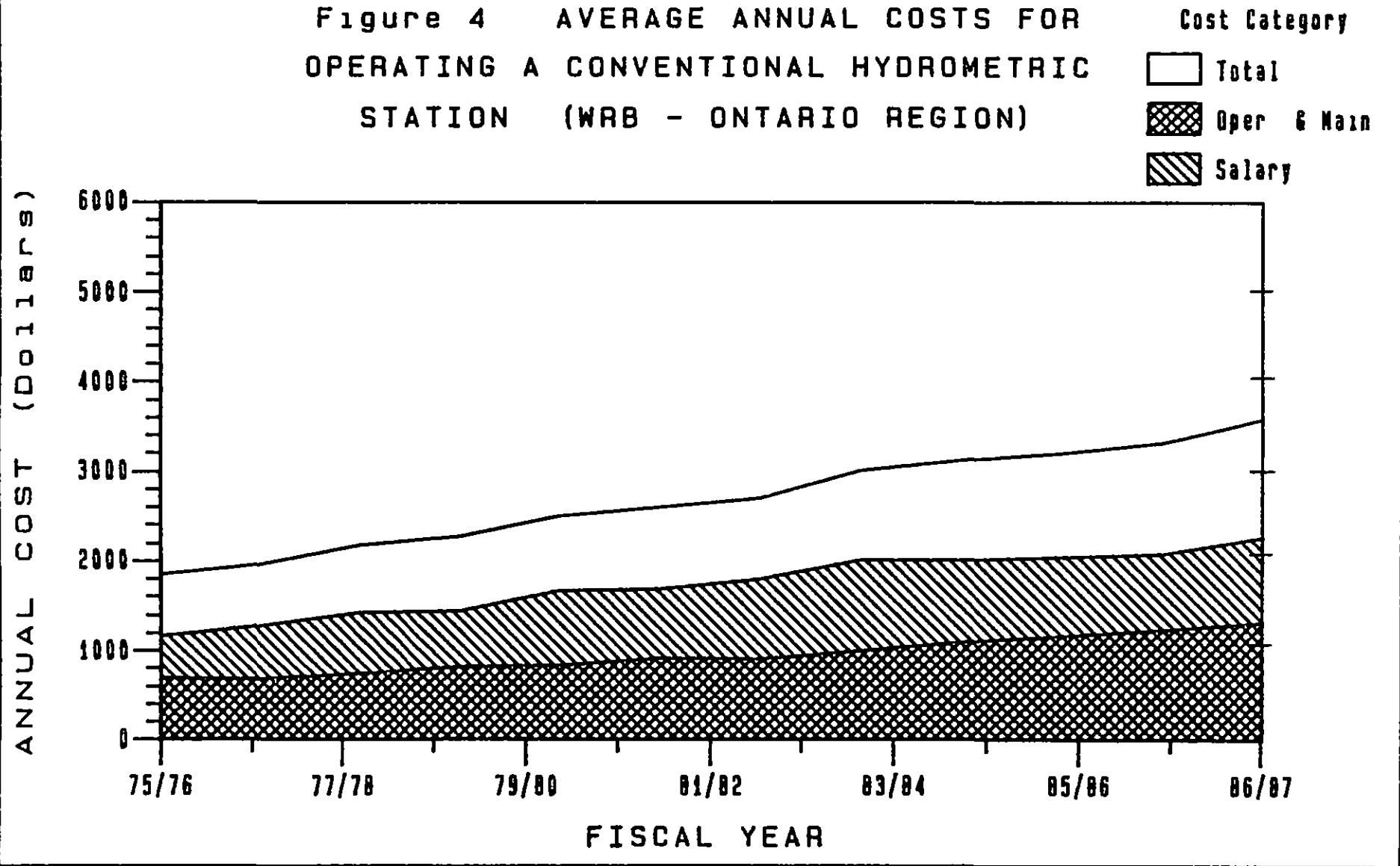
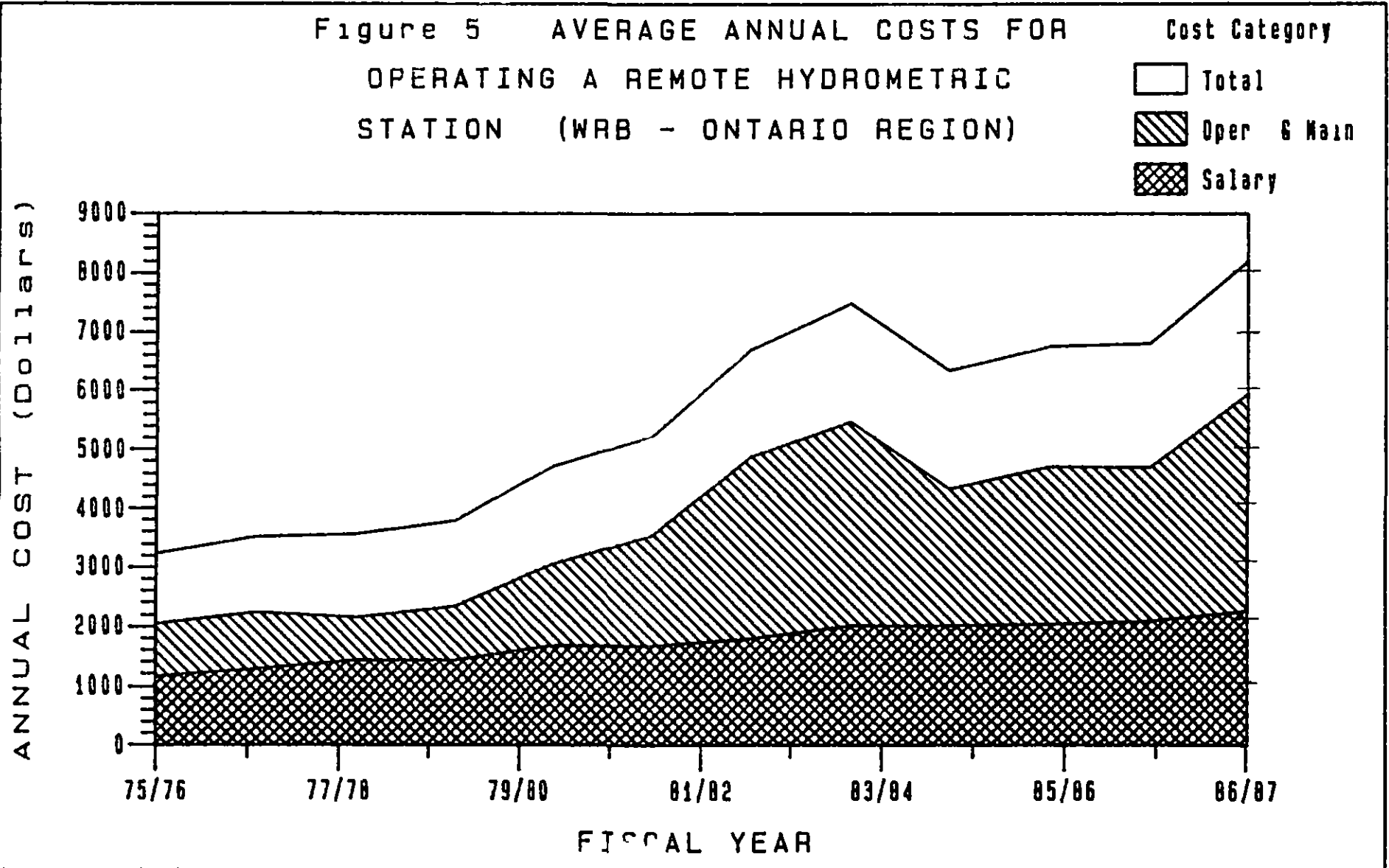


Figure 5 AVERAGE ANNUAL COSTS FOR  
OPERATING A REMOTE HYDROMETRIC  
STATION (WRB - ONTARIO REGION)





The total shareable cost for construction of new stations and operation and maintenance of the network in the province was \$1 843 000 of which the provincial share was \$951,300 or 51.6%. Table 3 gives a summary of cost comparisons by agency. Appendix D provides tables which derive the cost data for each agency. It must be noted that \$5 012 was paid by MOE to WRB Manitoba District and is included where shareable costs are given for the whole province.

Over and under payments by the province were last reconciled up to and including the year 1985/86. Table 4 summarizes the over and under payments since 1975 and indicates when payments were balanced. For 1986/87 MNR, MOE and Ontario Hydro under paid by \$8 682, \$6 993 and \$1 998 respectively.

Additional cost information is also provided in Appendix F which gives tables that are used for reporting information for the national report on Water Quantity Surveys.

TABLE 3  
SUMMARY OF COST COMPARISONS BY AGENCY  
1986/87

	Schedule 'D'	Recovered And Paid During 1986/87	Actual Cost	Difference (cost re- covered less actual cost)
a) Hydrometric Operations				
1 MNR	\$569 820	\$570 255	\$577 775	- \$ 7 520
2 MOE	179,580	179 580	186,573	- 6,993
3 OH	37 170	37 170	39,168	- 1,998
4 WRB (to OH)	<u>6,510</u>	<u>6,510</u>	<u>6,510</u>	<u>0</u>
Subtotal	\$793 080	\$793 515	\$810 026	- \$16 511
b) Sediment				
1 MNR	<u>\$ 4,200</u>	<u>\$ 4,200</u>	<u>\$ 5,362</u>	<u>- \$ 1,162</u>
Subtotal	\$ 4 200	\$ 4 200	\$ 5 362	- \$ 1 162
c) Construction				
1 OH	\$ 5 850	\$ 8 886	\$ 8 886	\$ 0
2 MNR	98 800	71,984	71 984	0
3 MOE	<u>15,400</u>	<u>15,316</u>	<u>15,316</u>	<u>0</u>
Subtotal	\$120 050	\$ 96 186	\$ 96 186	\$ 0
d) Specialized Equipment				
1 MOE	\$ 16 675	\$ 16 228	\$ 16,228	\$ 0
2 MNR	10,800	18 800	18 800	0
3 OH	<u>7,125</u>	<u>6,201</u>	<u>6,201</u>	<u>0</u>
Subtotal	<u>\$ 34,600</u>	<u>\$ 41,229</u>	<u>\$ 41,229</u>	<u>\$ 0</u>
TOTAL	\$951 930	\$935,130	\$952 803	- \$17 673
Total Actual Cost MNR - \$673,921				
Total Actual Cost MOE - 218,117				
Total Actual Cost OH - 54,255				
Total Actual Cost WRB Paid to OH - <u>6,510</u>				
TOTAL			\$952 803	

NOTE The above does not include \$5,012 paid by MOE to WRB Manitoba District for the operation of three Fed/Prov stations in the lower Rainy River watershed

TABLE 4  
SUMMARY OF OVER/UNDER PAYMENTS  
1975/76 TO DATE

	1975/76 <sup>1</sup>	1976/77 <sup>1</sup>	1977/78 <sup>1</sup>	1978/79 <sup>2</sup>	1979/80 <sup>3</sup>	1980/81 <sup>3</sup>	1981/82 <sup>4</sup>	1982/83 <sup>4</sup>	1983/84 <sup>4</sup>	1984/85 <sup>5</sup>	1985/86 <sup>5</sup>	1986/87
<u>Hydrometric Operations</u>												
MNR	+6 071	-5 008	+ 542	-2 058	+4 667	-28 692	-19 537	-28 334	- 1 072	-25 623	-14 113	+ 7 520
MOE	+2 293	+1 275	-3 190	-3 493	+4 028	8 505	- 3 286	- 2 393	-11 617	-11 323	+ 4 526	+ 6 993
OH	- 354	-1 427	0	- 300	+ 354	1 506	- 574	- 745	- 2 745	- 3 571	- 1 229	+ 1 998
<u>Sediment</u>												
MNR	+ 4	+ 431	- 523	- 24	-1 329	- 2 603	- 4 454	- 1 749	+ 1 142	+ 2 360	+ 259	<u>+ 1,162</u>
											TOTAL	<u>+17,673</u>

NOTE + Indicates that actual costs are more than the funds recovered  
 - Indicates that actual costs are less than the funds recovered  
<sup>1</sup> Over/under payments for 1975/76 1976/77 and 1977/78 were reconciled on the second quarter billing for 1978/79  
<sup>2</sup> Over/under payments for 1978/79 were reconciled on the second quarter billing for 1979/80  
<sup>3</sup> Over/under payments for 1979/80 and 1980/81 were reconciled on the second quarter billing for 1982/83  
<sup>4</sup> Over/under payments for 1981/82 1982/83 and 1983/84 were reconciled on the second quarter billing for 1984/85  
<sup>5</sup> Over/under payments for 1984/85 and 1985/86 were reconciled on the second quarter billing for 1986/87

## 6 0 FUTURE PROGRAMS AND ISSUES

It is expected that for 1987/88 and 1988/89 another 6 or 7 stations will be constructed each year at the request of the province. In addition the Canada Ontario Soil and Water Environmental Enhancement Program (SWEEP) will require the construction of 6 stations on small watersheds in 1988/89. It is expected then that over the next two years there will be an increase of up to 20 stations. There are no plans for discontinuing any stations at present.

During 1987/88 two reports related to sediment data are expected to be released to users. The reports entitled "Sediment Data Reference Index for Ontario" and "Ontario Sediment Related Literature Annotated Bibliography" are being prepared as a result of information needs determined at a previous users workshop.

As the operating party WRB will continue to be involved in presenting opportunities for the testing and demonstration of new technology to increase productivity and improve service to clients. Initial plans have been developed for the installation of an acoustic velocity meter (AVM) on the Upper Niagara River. Units of this nature if successful will have many applications in Ontario where backwater conditions are prevalent and reliable data is required.

Review and evaluation of the network will continue. The studies planned for 1987/88 will provide required information for the development of network recommendations and the network plan for 1988/89. The studies include report on the results of the data user questionnaire, further development of station profiles, report on characteristics of the network and an investigation of the water quantity inventory component of the network.

A national review of workload and resources undertaken by WRB will be finalized in 1987/88. This review is intended to give guidance to managers in shifting and allocating resources. The report will be studied

over 1987/88 and will be important in forming the basis for any recommendations and changes in network operations and resource allocations in the Ontario Region



APPENDIX A

SCHEDULE 'A'

MEMORANDUM OF AGREEMENT BETWEEN

GOVERNMENTS OF CANADA  
AND  
ONTARIO

FOR WATER QUANTITY SURVEYS

1986/87





SCHEDULE A

Water Quantity Survey Stations

A complete listing of active water quantity survey stations in the province of Ontario is included in the Schedule. The list designates each water quantity survey station as a Federal, Federal/Provincial or Provincial interest and identifies the operating party and the agency or agencies funding the operation of the station.

The categories for the listing according to guidelines implemented April 1, 1984 are as follows:

Federal 1	- Federal Departmental Programs
Federal 2	- Interprovincial Waters
Federal 3	- International Waters
Federal 4	- National Water Quantity Inventory
Federal/Provincial 1	- Federal/Provincial Agreement
Federal/Provincial 2	- River Basin Management
Federal/Provincial 3	- Regional Water Quantity Inventory
Provincial 1	- Provincial Departmental Programs
Provincial 2	- Specific Purpose Monitoring Requirement

All of the above stations are operated by WRB Environment Canada with the exception of 6 gauging stations that are operated by Ontario Hydro. The Schedule also includes contributed data stations i.e. stations operated by either WRB (DFO Tides and Water Level stations) or by another agency.

MAY 05 1986

INDEX OF HYDROMETRIC CODES

GAUGE INFORMATION  
 \*\*\*\*\*  
 H-WATER LEVEL STATION  
 M-MANUAL STATION  
 P-POLLUTANT RATING  
 Q-DISCHARGE STATION  
 R-PELOPING STATION  
 S-STATION OF FLOW

DATA ASSUMED  
 \*\*\*\*\*  
 N-NORTHERN REMOTE STATIONS  
 S-SEDIMENT SAMPLING  
 Q-WATER QUALITY SAMPLING  
 T-CONT. WATER TEMPERATURE  
 M-ELEMENTARY  
 L-SATELLITE STATION  
 U-TELEPHONE DATA LOGGING

ONTARIAN CODE INDEX

S E I (A) J O A R E H	S CENT ONT AREA	W ONTARIO AREA	NORTH BAY AREA	OTTAWA AREA	THUNDER BAY AREA
10-10 FEEB	20-REG LFBANL	30-WAYNE BOUNT	40-VACANT	50-DOWS ROWE	60-ROSS PISHOP
11-IRMAN	21-B RUSSELL	31-B LAWLOR	41-D R PFLAND	51-G JIGGINS	61-B PE SAK
13-VANT	1 Y MNN	3 G MELEMLY	42-J DONLET	52-VACANT	62-I MILLER
14-M RYANHAMPT	24-S TEMPL	33 C WABLLW	44-D JACSON	53-J WYFE	
		34-B SNLW	45-P LAVOIE		

INTERNAL SOURCE INDEX

- 00-11th DISTRICT OF OTTAWA
- 1-1st DISTRICT OF OTTAWA (NORTH BAY)
- 73-1st DISTRICT OF OTTAWA (NORTH BAY)
- 75-SPUR AREA POWER CO. (NORTH BAY)
- 1-5000 LAKE POWELL COMPANY LTD
- 15-INTERNATIONAL NICKEL OF CANADA LTD (NORTH BAY)
- 20-1st DISTRICT OF OTTAWA (NORTH BAY)
- 31-ONTARIO HIGHWAY (NORTH BAY)
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- 99-ONTARIO HIGHWAY (NORTH BAY)

FUNDING CODES FOR STATIONS

- AA - FEDERAL 1 FED HYD PROGRAM OPERATED BY FED(WC)
- BA - FEDERAL 2 INTER GOV WATER OPERATED BY FED(WC)
- CA - FEDERAL 3 INTER GOV WATER OPERATED BY FED(WC)
- DA - FEDERAL 4 NAT WATER QUAN INV OPERATED BY FED(WSC)
- EAD - FED-PROV 1 OPERATED BY FED(WSC) OMNR
- EAE - FED-PROV 1 OPERATED BY FED(WSC) OMNR
- GAL - FED-PROV 2 OPERATED BY FED(WC) OMNR
- GA - FED-PROV 2 OPERATED BY FED(WSC) OMNR
- GL - FED-PROV 2 OPERATED BY PROVINCE (ONT HYDRO)
- HAD - FED-PROV 3 OPERATED BY FED(WSC) OMNR
- IAH - PROVINCIAL 1 OPERATED BY FED(WC) OMNR
- IAD - PROVINCIAL 1 OPERATED BY FED(WSC) OMNR
- IAE - PROVINCIAL 1 OPERATED BY FED(WC) OMNR
- IAF - PROVINCIAL 1 OPERATED BY FED(WSC) OMNR
- IAG - PROVINCIAL 1 OPERATED BY FED(WSC) OMNR
- JAD - PROVINCIAL 2 OPERATED BY FED(WSC) OMNR
- JA - PROVINCIAL 2 OPERATED BY FED(WSC) OMNR
- KAD - CONTRIBUTED DATA OPERATED BY FED(WSC) MEI
- KAL - CONTRIBUTED DATA OPERATED BY PROV(OM) HYD
- KED - CONTRIBUTED DATA OPERATED BY PROV(OM) HYD
- KFD - CONTRIBUTED DATA OPERATED BY PRIVATE GENRY
- KGD - CONTRIBUTED DATA OPERATED BY FED(OTHER)
- SAD - FED 1 50% PROG OPERATED BY FED(WSC)
- SAL - PROV 2 ED PROG OPERATED BY FED(WC) OMNR

NOTE 1) DRAINAGE AREA ALL FIGURES SHOWN ARE IN METRIC UNITS (KM<sup>2</sup>)  
 2) UNITS COLUMN ALL GAUGES REPORTED IN METRIC UNITS EXCEPT AS NOTED

AMAL/ONTARIO COST SHARING AGREEMENT ACTIVE STATION LIST TOP SCHEDULE A FOR THE FISCAL YEAR 86/87(FINAL)

MAY 03 1987

FEDERAL 1 FEDERAL DEPT PROGRAMS OPERATED BY FEDERAL(WSC)

STA NO	DF	APRM	DIST	TEC	GAUGE DATA	FUND CD	STATION NAME	UNIT	NO
021E010	11	0	00	G	43	QR	AA	AMABLE DU FOND P AT SAMUET DE CHAMPLAIN P P	1
02E007	1	20	00	G	13	QR	AA	WALY RIVER NEAR WASHAGO	2
021E008	1	30	00	F	43	QR	AA	BLANCHE RIVER ABOVE FOLLEHART	3
02HE003	12	0	00	F	23	QR	AA	BURNT RIVER NEAR BURNT RIVER	4
02HA002	5	4	00	G	52	QR	AA	CATARAQUI R AT CHAFFEYS LOCKS (0015-MAY15)	5
02A003	5	04	00	F	52	QR	AA	CATARAQUI RIVER AT KINGSTON MILLS	6
02HE008	16	30	00	W	00	QR	AA	EDAR RIVER BELOW WABASKANG LAKE	7
021E001	4	0	00	W	00	QR	AA	CHUMPT RIVER NEAR EAK FALLS	8
02A001	19	10	00	G	23	QR	AA	CROW RIVER AT MARMORA	9
02HA010	0	25	00	G	53	QR	AA	EAST TRIP TO PPV H L INLET NO 2 NE CHALK RIVER	10
05PE000	0	00	00	W	00	QR	AA	EASTERN TRIP TO DASHWA LAKE NR ATIKOKAN	11
02HA001	24	00	00	G	23	QR	AA	FELS CREEK BELOW AFSLEY	12
02PE002	0	00	00	W	00	QR	AA	EYE RIVER NEAR COULSON LAKE	13
05PE001	0	00	00	W	00	QR	AA	EYE RIVER NEAR HARDY LAKE	14
02HE017	0	00	00	F	45	QR	AA	FRENCH RIVER AT CHAUDIERE DAM	15
02HE016	0	00	00	G	45	QR	AA	FRENCH RIVER AT PORTAGE DAM	16
02PE002	11	60	00	C	44	QR	AA	GULAI RIVER NEAR SEARCYMONT MISC TED	17
05PE015	0	00	00	W	00	HR	AA	GRASSY NARROW L AT GRASSY NARROW (S)	18
02HE002	1	00	00	F	23	QR	AA	GULL RIVER AT NORLAND	19
02PE003	0	00	00	W	00	HR	AA	LAC SEUL AT GO PRINCE	20
02GB001	0	00	00	W	00	HR	AA	LAC SEUL AT HUDSON	21
02PE001	0	00	00	W	00	HR	AA	LAC SEUL AT LAC SEUL	22
02EL015	0	00	00	G	23	QR	AA	LAKE SIMCOE NEAR GAMBRIIDGE	23
02PE001	0	00	00	G	40	QR	AA	LITTLE FRENCH RIVER AT OPELANDAU ISLAND	24
02PE012	5	48	00	W	00	QR	AA	LONG ISLAND RIVER BELOW LONG LEGGED LAKE	25
02PE000	0	00	00	F	45	QR	AA	MATTAWA RIVER BELOW BOUILLON LAKE	26
02EL010	0	00	00	F	13	QR	AA	MIDDLE EVERN RIVER AT WA HAGO	27
041J001	5	40	00	G	41	QR	AA	MISSINAIBI RIVER AT MATICE	28
02HA001	0	00	00	G	23	QR	AA	MISISSAUGA RIVER BELOW MT SIS-AGUA LAKE	29
02PE001	2	00	00	F	52	QR	AA	MISISSAUGA RIVER AT APPLETON	30
02BE001	1	10	00	G	44	QR	AA	NORBERG CREEK (SITE A) ABOVE BATCHAWANA RIVER	31
02BE012	1	15	00	F	44	QR	AA	NORBERG CREEK (SITE B) AT OUTLET OF BATCHAWANA L	32
02B009	2	02	00	G	44	QR	AA	NORBERG CREEK (SITE E) BELOW BATCHAWANA LAKE	33
02BE000	5	40	00	G	44	QR	AA	NORBERG CREEK (SITE C) AT OUTLET OF LIT SUPPLY L	34
02BE006	2	04	00	G	44	QR	AA	NORBERG CREEK (SITE D) AT OUTLET OF TURKEY LAKE	35
02A008	4	08	00	G	44	QR	AA	NORBERG CREEK (SITE D) BELOW WISHART LAKE	36
02A008	2	09	00	G	42	QR	AA	NORBIT MINF TAIL DIT (1) NR EL LK (APRI-NOVI)	37
02A009	2	76	00	G	42	QR	AA	NORBIT MIN TAIL DIT (2) NR EL LK (APRI-NOVI)	38
02A010	2	01	00	G	42	QR	AA	NORBIT MIN TAIL DIT (3) NR EL LK (APRI-NOVI)	39
05PE019	0	00	00	W	00	QR	AA	NORTHEAST TRIP TO DASHWA LAKE NR ATIKOKAN	40
EH010	14	00	00	G	43	QR	AA	NORTH MAGNETAWAN RIVER ABOVE PICKEREL LAKE	41
02HA001	7	50	00	F	23	QR	AA	OTONABEE RIVER AT LAKEFIELD	42
02A005	0	00	00	F	50	QR	AA	OTTAWA RIVER AT WYNTANPIA	43
02A010	0	00	00	F	51	QR	AA	OTTAWA RIVER AT CUMBERLAND	44
021E011	0	00	00	G	43	HR	AA	OTTAWA RIVER AT LAKE TIMOTHY	45
02JE013	0	00	00	G	43	HR	AA	OTTAWA RIVER AT MATIWA	46
02A003	7	20	00	G	51	QR	AA	PERCH LAKE OUTLET NEAR CHALK RIVER	47
02A004	0	93	00	G	52	QR	AA	PERCH LAKE INLET NO 1 NEAR CHALK RIVER	48
02A005	2	60	00	G	53	QR	AA	PERCH LAKE INLET NO 2 NEAR CHALK RIVER	49
02A006	0	41	00	G	53	QR	AA	PERCH LAKE INLET NO 3 NEAR CHALK RIVER	50

MAY 03 1986

FEDERAL 1 FEDERAL DEPT PROGRAMS OPERATED BY FEDERAL (WSC)

STATION	IP AREA	DI T	TECH	Gauge	DATA	FUND CD	STATION NAME	UNITS	NO
0214007	0 24	G	53	QR		AA	PEPCH LAKE INLET NO 4 NEAR CHALK RIVER		51
0214008	0 11	G	53	QR		AA	PEPCH LAKE INLET NO 5 NEAR CHALK RIVER		52
0214001	4120 00	G	52	QR	M	AA	PETAWAWA RIVER NEAR PETAWAWA		53
02LA012	3170 00	G	52	QR	M	AA	RIDEAU RIVER BELOW MANDOTIC		54
02LA011	110 00	G	52	QR	M	AA	RIDEAU RIVER BELOW MERRICKVILLE		55
02LA004	5020 00	G	51	QR	D	AA	RIDEAU RIVER AT OTTAWA		56
02LA005	1290 00	G	52	QR	D	AA	RIDEAU R. ABOVE SMITH FALLS OCT 1 - APR 30		57
02CE01	0 00	M	00	HR	N	AA	SALVESEN LAKE NEAR OUTLET		58
02EL000	0 00	G	13	QR		AA	SEVERN RIVER AT BIG FALLS		59
02007	0 00	G	13	QR		AA	SEVERN RIVER AT LITTLE FALLS		60
02EC014	3310 00	G	13	QR	D	AA	SEVERN RIVER ABOVE WASDELL FALLS		61
02E001	0 00	G	13	QR		AA	SEVERN RIVER AT WASHAGO		62
02L400E	4810 00	G	51	QR	S M	AA	S. NATION R. NR PLANTAGENET SPRINGS (MAR-JUN)		63
040A0	150 00	G	00	QR	M T	AA	SEVERN RIVER AT WOODBURY MILLS		64
02E01	150 00	M	00	QR	N	AA	SEVERN RIVER AT OUTLET OF SALVESEN LAKE		65
021416	500 00	G	52	QR	D	AA	TRAY RIVER AT PORT ELMOLBY		66
021416	100 00	G	52	QR	D	AA	THREE MILE CREEK AT MOUNT HOPE		67
021417	1000 00	G	52	QR	D	AA	TRENT RIVER AT GLEN ROSS		68
021418	900 00	G	52	QR	D	AA	TRENT RIVER AT HEALEY FALLS (SPILLWAY)		69
0214009	2 08	G	52	QR	D	AA	TRAY RIVER AT PEPCH LAKE INLET NO 4 NEAR CHALK RIVER		70
021419	2 00	M	00	QR	D	AA	TROUTLAKE RIVER BELOW BIG FALLS		71
021420	6 70	M	00	QR	M	AA	WATKINSON RIVER NEAR OUTBELL		72
021421	7 08	G	4	QR		AA	WFLAND RIVER NEAR MOUNT HOPE		73
051451	0 00	M	30	HR	N	AA	WINNIFER RIVER ABOVE BOUNDARY FALLS (S)		74

JANUARY

WINNIFER	PERMIT	WATER LEVEL	=	4
		DISCHARGE	=	4
	CONVENTIONAL	WATER LEVEL	=	7
		DISCHARGE	=	7
SUB-TOTAL	WATER LEVEL	=	11	
	DISCHARGE	=	11	
WATKINSON	TOTAL			17
	REGULATED	WATER LEVEL	=	0
		DISCHARGE	=	0
	CONVENTIONAL	WATER LEVEL	=	4
	DISCHARGE	=	4	
SUB-TOTAL	WATER LEVEL	=	4	
	DISCHARGE	=	4	
TOTAL				57

MAY 05 1986

FEDERAL 2 INTERPROVINCIAL WATERS OPERATED BY FEDERAL(W50)

STATION NO	DR AREA DIS	TECH	CAUSE	DRIA	ELND CD	STATION NAME	UNITS	NO
0JRC001	5770 00 W	00	DR N L	BA		REPENS RIVER ABOVE BERENS LAKE		1

SUMMARY

WINNIPEG	REMOTE	WATER LEVEL	-	0
		- DISCHARGE	-	1
	CONVENTIONAL	WATER LEVEL	-	0
		- DISCHARGE	-	0
	SUB TOTAL	WATER LEVEL	=	0
		DISCHARGE	=	1
	TOTAL			1
GUELPH	REMOTE	WATER LEVEL	-	0
		DISCHARGE	-	0
	CONVENTIONAL	WATER LEVEL	-	0
		DISCHARGE	-	0
	SUB-TOTAL	WATER LEVEL	=	0
		DISCHARGE	=	0
	TOTAL		=	0

MAY 05 1986

FEDERAL 3 INTERNATIONAL WATERS OPERATED BY FEDERAL (WSC)

TA NO	DR AREA	DIST	TECH	GAUGE	RAIN	FUND CD	STATION NAME	UNITS	NO
0JFB018	232 00	W	00	QR	D	CA	ATIQUAN RIVER AT ATIQUAN		1
0JFB002	825 00	G	32	QR	JD	CA	SABLE RIVER NEAR SPRINGBANK		2
02CE002	150 00	G	44	QR	M	CA	ANY SABLES RIVER AT MASSEY		3
0JFB012	4510 00	W	00	QR	N L	CA	BASSWOOD RIVER NEAR WINTON	ENGLISH	4
0JFB001	1120 00	G	44	QR		CA	BATCHAWANA RIVER NEAR BATCHAWANA		5
0JFB007	466 00	G	31	QR	C	CA	RAYFIELD RIVER NEAR VANDER MISC SED		6
0JFB009	22 00	G	23	QR	SD	CA	BEAR CREEK BELOW SPIDEN MISC SED		7
0JFB009	57 00	G	13	QR	D	CA	BEAVER RIVER NEAR CLARSBURG		8
0JFB007	591 00	G	34	QR	S	CA	PIC CREEK NEAR WALSINGHAM		9
0JFB000	227 00	G	13	QR	D	CA	BILFORD RIVER NEAR MEAFORD		10
0JFB026	676 00	G	34	QR	S M	CA	BIG CREEK NEAR CALTON		11
0JFB002	1980 00	G	61	QR	S	CA	BLACK RIVER NEAR MARATHON MISC SED		12
0JFB002	2520 00	G	60	QR		CA	BLACK STURGEON RIVER AT HIGHWAY NO 17		13
0JFB005	379 00	G	11	QR		CA	BOWMANVILLE CREEK AT BOWMANVILLE		14
0JFB011	5 00	G	24	QR		CA	BONNIE CREEK NEAR ZIMMERMAN		15
0JFB007	177 00	G	12	QR		CA	COLDWATER RIVER AT COLDWATER		16
0JFB012	25 00	G	24	QR	LD	CA	CROFT RIVER AT ERINDALE		17
0JFB015	457 00	G	6	QR		CA	CURRENT RIVER NEAR STEPHSTONE		18
0JFB011	310 00	G	2	QR	SD	CA	DON RIVER AT DUMFRIES		19
0JFB011	240 00	G	11	QR	M	CA	DUFFINS CREEK AT PICKERING		20
0JFB014	101 00	G	24	QR		CA	EAST DAVENPORT CREEK NEAR DAVENPORT		21
0JFB010	224 00	G	2	QR	SD	CA	ETOBICOKE CREEK BELOW Q E W MISC SED		22
0JFB010	0 00	W	00	QR		CA	FRENCH LAKE NEAR ATIQUAN		23
0JFB012	23 00	G	11	QR	SD	CA	GANARASKA RIVER ABOVE DALE MISC SED		24
0JFB001	5210 00	G	14	QR		CA	GRAND RIVER AT BRANTFORD		25
0JFB001	50 00	G	45	QR		CA	HARRIS RIVER AT HWY NO 69		26
0JFB013	2 10	G	22	QR	SD	CA	HIGHLAND CREEK NEAR WEST HILL MISC SED		27
0JFB003	500 00	G	2	QR	M	CA	HUMBER RIVER AT WESTON		28
0JFB007	329 00	G	32	QR	SD	CA	HEYLE CREEK AT ST THOMAS MISC SED		29
0JFB011	0 00	W	00	QR	N L	CA	LAC LA PLOIE AT CAMPBELLS CAMP		30
0JFB011	0 00	W	00	QR		CA	LAKE OF THE WOODS AT CLEARWATER BAY		31
0JFB019	0 00	W	00	QR	N L	CA	LAKE OF THE WOODS AT CYCLONE ISLAND		32
0JFB007	0 00	W	00	QR	D	CA	LAKE OF THE WOODS AT HANSON BAY		33
0JFB011	0 00	W	00	QR	M	CA	LAKE OF THE WOODS AT PEESWATER		34
0JFB006	0 00	W	00	QR		CA	LAKE OF THE WOODS EAST OUTLET AT KENORA P H		35
0JFB005	0 00	W	00	QR		CA	LAKE OF THE WOODS OUTLET AT MINNISCOTT		36
0JFB011	0 00	W	00	QR		CA	LAKE OF THE WOODS OUTLET AT NORMAN DAM AND P H		37
0JFB001	0 00	W	00	QR	N L	CA	LAKE OF THE WOODS AT WARRINGTON	ENGLISH	38
0JFB003	1220 00	G	61	QR		CA	LITTLE PICT RIVER NEAR OLDWELL		39
0JFB012	777 00	G	2	QR		CA	LITTLE ROUSE CREEK NEAR LOCUST HILL		40
0JFB011	2850 00	G	45	QR		CA	MAGNETAWAN RIVER NEAR BRITT		41
0JFB004	1920 00	G	61	QR	M	CA	MADISON RIVER NEAR MICHIPICOTEN		42
0JFB004	1760 00	G	31	QR		CA	MARITIME RIVER NEAR DONNYBROOK		43
0JFB016	745 00	G	62	QR		CA	MONTYRE RIVER AT THUNDER BAY		44
0JFB010	171 00	G	14	QR		CA	MONTYRE CREEK NEAR CALEDONIA		45
0JFB008	9300 00	G	44	QR		CA	MUSKOGEE RIVER AT MUSKOGEE ROUTE		46
0JFB001	2520 00	G	11	QR	D	CA	MUSKOGEE RIVER NEAR FOXBORO		47
0JFB011	0 00	G	13	QR		CA	MUSKOGEE RIVER AT HIGHWAY NO 69		48
0JFB012	0 00	G	13	QR		CA	MUSKOGEE RIVER AT HIGHWAY NO 69		49
0JFB005	0 00	W	00	QR	N L	CA	MUSKOGEE RIVER ABOVE LITTLE FALLS DAM		50

CANADA/CANADIAN WATERWAYS AGREEMENT ACTIVE STATION LIST FOR SCHEDULE A FOR THE FISCAL YEAR 86/87 (FINAL)  
 MA 03 1986

FEDERAL & INTERNATIONAL WATERWAYS OPERATED BY FEDEPAL (W5C)

AC NO	IR AREA DIST	TECH	GAUGE DATA	FUND CD	STATION NAME	UNITS	NO
03A006	13400 00 W	00	QP 1	CA	NAMAHAN RIVER AT OUTLET OF LAC LA CROIX		51
03A022	181 00 G	54	QR S	CA	NANTICOKE CREEK AT NANTICOKE MISC SED		52
03AM007	694 00 G	57	QP S M	CA	NAPANEE RIVER AT CAMDEN EAST MISC SED		53
03AB008	167 00 G	62	QR	CA	NEBBINI RIVER NEAR THUNDER BAY		54
03A073	1180 00 G	13	QR S M	CA	NOTTAWASAGA RIVER NEAR WATKINS		55
03AP004	93 60 G	24	QR D	LA	ORVILLE CREEK AT MILTON		56
03PE003	4270 00 G	61	QP	CA	PIC RIVER NEAR MATHON		57
03AA001	1550 00 G	60	QR	CA	PIGEON CREEK AT MIDLE ALL	ENGLISH	58
03PE015	443 00 W	00	QR M	CA	PESTONE RIVER ABOVE RAINY LAKE		59
03PE019	2700 00 W	60	QP	CA	RAINY RIVER AT FORT FRANCES		60
03PE007	0 00 W	00	HR M	CA	RAINY LAKE NEAR FORT FRANCES		61
03PL002	3600 00 W	00	HR	CA	RAINY RIVER AT FORT FRANCES INT FALLS PP		62
03PC004	38600 00 W	00	HR	CA	RAINY RIVER AT FORT FRANCIS INT FALLS PP FB	ENGLISH	63
03A005	38600 00 W	00	HR	CA	RAINY RIVER AT FORT FRANCIS INT FALLS PP CANAL	ENGLISH	64
03PC003	38600 00 W	00	HR	CA	RAINY RIVER AT FORT FRANCIS INT FALLS PP TR		65
03AF018	50200 00 W	00	QR L	CA	RAINY RIVER AT MANITOU RAPIDS	ENGLISH	66
03AC022	136 00 G	22	QR M	CA	ROBE RIVER NEAR MATHON		67
03A003	891 00 G	11	QR	CA	SALMON RIVER NEAR SHANNONVILLE		68
03FA001	977 00 G	31	QR	CA	SAUBLE RIVER AT SAUBLE FALLS		69
03PE001	3960 00 G	31	QR D	CA	SAUGEEN RIVER NEAR PORT ELGIN		70
03FD001	1750 00 G	42	QR	CA	SEPPENT RIVER AT HIGHWAY NO 17		71
03AD007	77 70 G	11	QR	CA	SUPER CREEK AT BOWMANVILLE		72
03AC007	0 00 G	51	QR	CA	S. RAISON P DIVERSION AT LONG SAULT (JUN-SEP)		73
03AB007	169 00 G	24	QR M	CA	SPENCER CREEK AT DUNDAS		74
03AA005	0 00 G	44	HR	CA	ST MARYS RIVER NEAR GARDEN RIVER		75
03AB007	181 00 G	13	QR D	CA	SYDENHAM RIVER NEAR OWEN SOUND		76
03GE003	4500 00 G	37	QR M	CA	THAMES RIVER AT THAMESVILLE		77
03AA006	293 00 G	24	QR	CA	TWENTY MILE CREEK AT BULLS FALLS		78
03DB005	3130 00 G	45	QR	CA	WANAPITSI RIVER NEAR WANUP		79
03AA007	230 00 G	24	QR	LA	WELLAND RIVER BELOW CAISBOR CORNERS		80
03E004	4170 00 G	61	QP N	CA	WHITE RIVER BELOW WHITE LAKE		81
02HM004	112 00 G	52	QR	CA	WILTON CREEK NEAR NAPANEE		82
03PE001	0 00 W	00	HR	CA	WINNIPEG RIVER BELOW KENDRA POWERHOUSE		83
03PE020	70400 00 W	00	QP	CA	WINNIPEG R. BELOW LAKE OF THE WOODS OUTLETS		84
03PE012	0 00 W	00	HR	CA	WINNIPEG R. BELOW NORMAN DAM & POWERHOUSE		85
03AF001	736 00 G	60	QR	CA	WOLF RIVER AT HIGHWAY NO 17		86

FEDERAL 3 INTERNATIONAL WATERS OPERATED BY FEDERAL(WSC)

SUMMARY

WINNIPEG	REMOTE	- WATER LEVEL	2
		- DISCHARGE	3
	CONVENTIONAL	WATER LEVEL	12
		- DISCHARGE	7
	SUB-TOTAL	WATER LEVEL	15
		- DISCHARGE	10
	TOTAL		25
GUELPH	REMOTE	- WATER LEVEL	0
		- DISCHARGE	1
	CONVENTIONAL	- WATER LEVEL	1
		DISCHARGE	59
	SUB-TOTAL	- WATER LEVEL	1
		- DISCHARGE	60
	TOTAL		61



CHAMPLAIN/ONTARIO CO-THE SHARON AGREEMENT ACTIVE STATION LIST FOR SCHEDULE A FOR THE FISCAL YEAR 86/87 (FINAL)  
MAY 05 '87

FEDERAL 4 NATIONAL WATER QUANTITY INVENTORY OPERATED BY FEDERAL (WSC)

TH NO	TH AREA DIST	TECH	GAUGE DATA	FUND CD	STATION NAME	UNITS	NO
04HE003	2,100 00	G	43 QR NS	DA	ARBITER RIVER AT ONAWANA MISC SED		1
04LF002	16,100 00	G	61 QR N	DA	ALBANY RIVER BELOW ACHARI LAKE		2
04HA001	11,900 00	G	41 QR NS L	DA	ALBANY RIVER NEAR HAT ISLAND MISC SED		3
04FE001	24,200 00	G	41 QR N L	DA	ATTAWAPISKAT RIVER BELOW ATTAWAPISKAT LAKE		4
04FC001	36,000 00	G	41 QR NS L	DA	ATTAWAPISKAT R. BELOW MURKIN P. MISC SED		5
04PD026	744 00	W	00 QR	DA	BERRY CREEK AT OUTLET OF BERRY LAKE		6
04E001	0 00	G	61 QR N	DA	LITTLE TROUT LAKE AT TROUT LAKE		7
04CB005	11,700 00	G	62 QR N L	DA	BRIGHTON RIVER AT ROBERTS LAKE		8
02DD015	106 00	G	41 QR	DA	COMMANDA CREEK AT COMMANDA		9
04E001	1,400 00	F	41 QR N L	DA	WOLF RIVER BELOW NORTH WASHAGAMI RIVER		10
05DA002	6,400 00	W	00 QR L	DA	ENGLISH RIVER AT WIMFREVILLE		11
04CE002	4,200 00	G	61 QR N L	DA	FRANK RIVER BELOW BIG TROUT LAKE		12
04H002	133 00	G	42 QR	DA	HALFWAY CREEK AT MOOSE LAKE		13
04JA001	3,780 00	G	41 QR	DA	LABINARAGAMI RIVER AT HIGHWAY NO 11		14
04JG001	26,200 00	L	41 QR N L	DA	LABOGAMI RIVER NEAR MAMMAMAITAWA		15
04L001	4,250 00	G	43 QR N	DA	LAWATAGAN RIVER NEAR THE MOUTH		16
04JP001	5,760 00	C	41 QR N L	DA	LITTLE CURRENT RIVER AT PEPCY LAKE		17
02EA006	650 00	G	43 QR	DA	MAGNETAWAN RIVER NEAR BURY'S FALLS		18
01LG004	60,100 00	G	42 QR NS L	DA	MOOSE RIVER ABOVE MOOSE RIVER MISC SED		19
04FP001	1,890 00	G	41 QR N	DA	MUSWABIK RIVER AT OUTLET OF MUSWABIK LAKE		20
04MP001	6,680 00	G	43 QR N L	DA	NORTH FRENCH RIVER NEAR THE MOUTH		21
03EA005	321 00	G	42 QR M	DA	NORTH MAGNETAWAN RIVER NEAR BURY'S FALLS		22
04JD005	2,020 00	G	41 QR	DA	PAGWA HUAN RIVER AT HIGHWAY NO 11		23
04FC001	9,430 00	G	61 QR N L	DA	SEVERN RIVER AT LIMESTONE RAPIDS		24
04DC002	4,710 00	G	41 QR N L	DA	SHAMATTAWA RIVER AT OUTLET OF SHAMATTAWA LAKE		25
04TC003	290 00	G	41 QR	DA	SHEWAN RIVER AT HIGHWAY NO 11		26
05PF014	4,870 00	W	00 QR	DA	TURTLE RIVER NEAR MINE CENTRE		27
04DF001	50,000 00	G	61 QR NS L	DA	WINIFR. BELOW ASHEWIG R. TRIB MISC SED		28

SUMMARY

WINNIPEG	REMOTE	- WATER LEVEL = 0
		- DISCHARGE = 0
	CONVENTIONAL	- WATER LEVEL = 0
		- DISCHARGE = 3
	SUB-TOTAL	- WATER LEVEL = 0
		- DISCHARGE = 3
	TOTAL	= 3
QUELPH	REMOTE	WATER LEVEL = 1
		- DISCHARGE = 17
	CONVENTIONAL	- WATER LEVEL = 0
		- DISCHARGE = 7
	SUB-TOTAL	- WATER LEVEL = 1
		- DISCHARGE = 24
	TOTAL	= 2

CANADA/ONTARIO COST SHARING AGREEMENT ACTIVE STATION LIST FOR SCHEDULE A FOR THE FISCAL YEAR 86/87(FINAL)

MAY 05 1986

FEDERAL-PROVINCIAL 1 OPERATED BY FEDERAL(WSC) O M O E

STA NO	DP AREA DIST	TECH	GAUGE DATA	FUND CD	STATION NAME	UNITS	NO
02LC018	287 00 G	32	QR SD	FAD	CATFISH CREEK NEAR SPARIA MISC SED		1
02AE006	6470 00 G	32	QR N	FAD	KAMINISTIQUIA RIVER AT KAMINISTIQUIA		2
05PC016	243 00 W	00	QR	FAD	LA VALLEE RIVER NEAR DEJLIN		3
02EM005	293 00 G	13	QR	FAD	MAD RIVER NEAR GLENCAIRN		4
05PL011	461 00 W	00	QR	FAD	PINEWOOD RIVER NEAR PINEWOOD		5
02CA003	102 00 G	44	QR	FAD	POOT RIVER AT SAULT STE MARIE		6
02FH002	123 00 G	33	QR S	FAD	RUSCOM RIVER NEAR RUSCOM STATION MISC SED		7
05PL010	168 00 W	00	QR	FAD	STURGEON RIVER NEAR BARWICK		8

SUMMARY

WINNIPEG	REMOTE	WATER LEVEL	0
		DISCHARGE	- 0
	CONVENTIONAL	WATER LEVEL	0
		DISCHARGE	= 3
	SUB-TOTAL	WATER LEVEL	= 0
		DISCHARGE	= 3
	TOTAL		- 3
GUELPH	REMOTE	WATER LEVEL	= 0
		DISCHARGE	- 0
	CONVENTIONAL	WATER LEVEL	- 0
		DISCHARGE	= 5
	SUB-TOTAL	WATER LEVEL	= 0
		DISCHARGE	5
	TOTAL		- 5

CANADA/ONTARIO LOGGING SHAPING AGREEMENT ACTIVE STATION LIST FOR SCHEDULE A FOR THE FISCAL YEAR 86/87 (FINAL)  
 MAY 05 1986

FEDERAL PROVINCIAL 1 OPERATED BY FEDERAL (WSC) O M N R

STA NO	DR AREA	DIST	TELE	GAUGE	DATA	FUND ID	STATION NAME	UNITS	NO
010027	58 00	G	2	QR	D	FAE	BLACK CREEK NEAR WESTON		1
026007	360 00	G	14	QR		FAE	FAIRFIELD CREEK NEAR BRANTFORD MISC SED		2
010010	1350 00	G	45	QR	M	FHE	FRANK PIVOT AT DRY PINE BAY		3
026008	174 00	G	34	QR		FAE	LYNN RIVER AT SIMCOE		4
026033	70 60	G	22	QR	D	FAE	MINNICO CREEK AT ISINGTON		5
026008	95 90	G	1	QR		FAE	DEHARA CREEK AT OMAHA		6
026009	376 00	G	1	QR	SD	FAE	SOUTH MAILLAND RIVER AT SUMMERHILL		7
026003	1160 0	G	2	QR	SD	FHE	SYDENHAM RIVER AT FLORENCE (SED FEB-MAY)		8

SUMMARY

WINNIPEG	REMOTE	- WATER LEVEL	0
		- DISCHARGE	- 0
	CONVENTIONAL	- WATER LEVEL	0
		- DISCHARGE	- 0
GUELPH	SUB-TOTAL	- WATER LEVEL	= 0
		- DISCHARGE	- 0
	TOTAL		= 0
	REMOTE	- WATER LEVEL	0
	- DISCHARGE	0	
GUELPH	CONVENTIONAL	WATER LEVEL	0
		DISCHARGE	= 8
	SUB-TOTAL	WATER LEVEL	0
		- DISCHARGE	= 8
TOTAL			8

CANADA/ONTARIO COST-SAVING AGREEMENT ACTIVE STATION LIST FOR SCHEDULE A FOR THE FISCAL YEAR 86/87 (FINAL)

MAY 05 1986

FEDERAL-PROVINCIAL 2 OPERATED BY FEDERAL(WSC) ONTARIO HYDRO

STA NO	DP	AREA	DIS*	TECH	GAUGE DATA	FUND CD	STATION NAME	UNITS	NO
02PC009	2380	00	G	53	QR	GAC	BONNECEPEE RIVER NEAR CASTLEFORD		1
02PD004	5800	00	G	53	QR M	GAC	MAJAWASCA RIVER AT PALMER RAPIDS		2
04LM001	27900	00	G	43	QR M	GAC	MISISSAUGA R. BELOW WABOOSE W.		3
02KD002	837	00	G	53	QR	GAL	YORK RIVER NEAR BANCROFT		4

SUMMARY

WINNIPEG	REMOTE	- WATER LEVEL	0
		DISCHARGE	- 0
	CONVENTIONAL	WATER LEVEL	- 0
		DISCHARGE	= 0
SUB TOTAL	- WATER LEVEL	= 0	
	- DISCHARGE	= 0	
TOTAL	- WATER LEVEL	= 0	
	- DISCHARGE	= 0	
CUFLPH	REMOTE	- WATER LEVEL	= 0
		- DISCHARGE	1
CONVENTIONAL	- WATER LEVEL	= 0	
	- DISCHARGE	= 3	
SUB-TOTAL	- WATER LEVEL	= 0	
	- DISCHARGE	4	
TOTAL	-	4	

CANADA/ONTARIO COST SHARING AGREEMENT ACTIVE STATION LIST FOR SCHEDULE A FOR THE FISCAL YEAR 86/87 (FINAL)  
 MAY 01 1986

FEDERAL PROVINCIAL ? OPERATED BY FEDERAL (WS) O M N P

STA NO	IN AREA DIST	TECH	GAUGE DATA	FUND CD	STATION NAME	UNITS	NO
07LA007	559 00 R	52	OP D	GAF	JOLI RIVER NEAR RICHMOND		1
07UD006	0 00 L	4J	HR M	GAE	LAKE NIPISSING AT NORTH BAY		2

SUMMARY

WINNIPEG	REMOTE	- WATER LEVEL =	0
		- DISCHARGE =	0
	CONVENTIONAL	WATER LEVEL =	0
		DISCHARGE =	0
	SUB-TOTAL	- WATER LEVEL =	0
		DISCHARGE =	0
	TOTAL	-	0
SUDBY	REMOTE	WATER LEVEL =	0
		- DISCHARGE =	0
	CONVENTIONAL	WATER LEVEL =	1
		DISCHARGE =	1
	SUB-TOTAL	WATER LEVEL =	1
		DISCHARGE =	1
	TOTAL		2

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST FOR SCHEDULE A FOR THE FISCAL YEAR 86/87(FINAL)

MAY 05 1987

FEDERAL-PROVINCIAL 2 OPERATED BY PROVINCE(ONTARIO HYDRO)

STA NO	WK AREA	DIST	TECH	PAIR	DATA	FUND CD	STATION NAME	UNITS	NO
04MD002	3870 00	G	82	QM		GRC	FREDERICK HOUSE RIVER AT F 4 LAKE DAM		1
02JD011	1370 00	F	82	QM		GBC	LADY EVELYN RIVER AT LADY EVELYN LAKE DAM		2
02FD007	2720 00	G	82	QM		GBC	MADAWASKA RIVER AT BARK LAKE DAM		3
02IL002	1360 00	G	82	QM		GBC	TEMAGAMI RIVER AT RED CEDAR LAKE DAM		4
04MB003	238 00	G	92	QM		GBC	WATABLAG RIVER AT WATABLAG LAKE DAM		5
07JD012	1780 00	G	82	QM		GBC	WEST MONTREAL RIVER AT MONTINIKON LAKE DAM		6

SUMMARY

WINNIPEG	REMOTE	- WATER LEVEL	= 0
		- DISCHARGE	= 0
	CONVENTIONAL	WATER LEVEL	= 0
		- DISCHARGE	= 0
	SUB-TOTAL	WATER LEVEL	= 0
		- DISCHARGE	= 0
	TOTAL		= 0
GUELPH	REMOTE	- WATER LEVEL	= 0
		DISCHARGE	= 0
	CONVENTIONAL	- WATER LEVEL	= 0
		DISCHARGE	= 6
	SUB-TOTAL	- WATER LEVEL	= 0
		- DISCHARGE	= 6
	TOTAL		= 6

MAY 15 1986

FEDERAL PROVINCIAL 3 OPERATED BY FEDERAL (WS) O M O E

STA NO	DR AREA DIST	TELE	GAUGE DATA	FIND CD	STATION NAME	UNITS	NO
04DB001	7900 00 G	61	QR N L	HAD	ASHENWIG RIVER AT STRAIGHT LAKE		1
04GA002	5300 00 G	62	QR N L	HAD	CAT RIVER BELOW WELBY LAKE		2
04GB004	11200 00 G	61	QR N	HAD	OGOKI RIVER ABOVE WHITECLAY LAKE		3
04EA001	9010 00 G	62	QR	HAD	OTIS WIN RIVER BELOW BADESDAWA LAKE		4
04EA003	4900 00 G	61	QR N	HAD	PINLUNTA PIKE AT EYES LAKE		5
04DA001	5960 00 G	62	QR N	HAD	PIPE TONE RIVER AT PARL LAKE		6
04CA003	619 00 G	62	QR N	HAD	ROSEBERRY P ABOVE ROSEBERRY LAKE		7
04CD001	1270 00 G	62	QR N	HAD	SACHIGO RIVER BELOW OUTLET OF SACHIGO LAKE		8
04LA004	0 00 G	62	QR N	HAD	SEVERN RIVER BELOW OUTLET OF DEEP LAKE		9
04LA002	70500 00 G	62	QR N	HAD	SEVERN RIVER AT OUTLET OF MUSKRAT DAM LAKE		10
04CS001	10200 00 G	62	QR N	HAD	WINDIGO RIVER ABOVE MUSKRAT DAM LAKE		11

SUMMARY

WINNIPEG	REMOTE	WATER LEVEL = 0
		- DISCHARGE = 0
	CONVENTIONAL	WATER LEVEL = 0
		- DISCHARGE = 0
	SUB TOTAL	WATER LEVEL = 0
		- DISCHARGE = 0
	TOTAL	WATER LEVEL = 0
		- DISCHARGE = 0
GUELPH	REMOTE	WATER LEVEL = 0
		- DISCHARGE = 10
	CONVENTIONAL	WATER LEVEL = 0
		DISCHARGE = 1
	SUB-TOTAL	WATER LEVEL = 0
		DISCHARGE = 11
	TOTAL	WATER LEVEL = 0
		DISCHARGE = 11

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST FOR SCHEDULE A FOR THE FISCAL YEAR 86/87 (FINAL)  
 MAY 01 1986

PROVINCIAL OPERATED BY FEDERAL (WSC) ONTARIO HYDRO

STA NO	DR AREA	DIST	TECH	GAUGE DATA	FUND CD	STATION NAME	UNITS	NO
046L001	32400	00 G	41	QR M	IAC	ALBANY RIVER ABOVE NOTTIV ISLAND		1
04LD001	11900	00 G	41	QR D	IAC	GROUNDHOG RIVER AT FAUQUIER		2
02JD009	4300	00 C	43	QR	IAC	MONTREAL RIVER AT MOUNTAIN CHUTE		3
04JC002	2400	00 G	41	QR	IAC	WAGAHMI RIVER AT HIGHWAY NO 11		4
02FC00J	0	00 C	53	HR	IAC	OTTAWA RIVER NEAR WESTMEATH		5
02AB009	2900	00 G	62	QR	IAC	PEBANJOWAN RIVER AT SUNSHINE		6

SUMMARY

WINNIPEG	REMOTE	- WATER LEVEL	=	0
		DISCHARGE	=	0
	CONVENTIONAL	WATER LEVEL	=	0
		DISCHARGE	=	0
	SUB-TOTAL	- WATER LEVEL	=	0
		DISCHARGE	=	0
	TOTAL		=	0
GULLIPH	REMOTE	WATER LEVEL	=	0
		DISCHARGE	=	1
	CONVENTIONAL	WATER LEVEL	=	1
		DISCHARGE	=	4
	SUB TOTAL	WATER LEVEL	=	1
		DISCHARGE	=	5
	TOTAL		=	6



CA WADA/ONTARIO COST SHARING AGREEMENT ACTIVE STATION LIST FOR THE FISCAL YEAR 86/7 (FINAL)

MAY 05 1986

PROVINCIAL OPERATED FEDERAL(WSC) O M O E

STA NO	DR AREA	D 51	TECH	GAGE DATA	FUND (U)	STATION NAME	UNITS	NO
02640 J	49 70	F	14	QR	IAD	ALDER CREEK NEAR NEW DUNDEE		1
026D018	144 00	F	32	QR	IAD	AVON RIVER BELOW STAFFORD		2
02FC017	50 10	G	31	QR	IAD	BEATTY AUGER RIVER NEAR HOLSTEIN		3
02EL011	232 00	F	23	QR	IAD	BEAVERTON RIVER NEAR BEAVERTON		4
02EL008	274 00	G	23	QR	IAD	BLAIR RIVER AT RAIDWIN		5
07AD010	633 00		60	QP	IAD	BLACKWATER RIVER AT BEAVERMOUND		6
02LF004	71 80	F	23	QP	IAD	BOB CREEK NEAR MINDEN		7
02FB004	201 00	F	61	QP	IAD	CEDAR CREEK NEAR HEMLO		8
02HM005	125 00	G	52	QP	IAD	COLLINS CREEK NEAR KINGSTON		9
02DF007	59 00	J	4	QP	IAD	CONISTON CREEK ABOVE WAPWITON RIVER		10
02LB012	76 70	G	51	QR	IAD	E BR SC R NR ST ISIDORE DE PRESCOTT MARI-DECI		11
02HD014	52 00	G	11	QR	IAD	FAREWELL CREEK AT OSHAWA		12
02AE001	616 00	J	60	QR	IAD	GRAVEL RIVER NEAR SAVERS MISC SED		13
02HB013	41 60	F	11	QR	IAD	HARMON CREEK AT OSHAWA		14
02EC009	181 00	G	13	QR	IAD	HOLLAND RIVER AT HOLLAND LANDING		15
02F012	207 00	F	42	QP	IAD	JUNCTION CREEK BELOW KELLEY LAKE		16
04FH002	1240 00	F	42	QR	IAD	KANADANS RIVER NEAR PTILE CROW		17
02LA006	409 00	F	51	QP	IAD	KEMMILLIE CR E NEAR KEMMILLIE MISC SED		18
02FH007	4 56	F	42	QR	IAD	LITTLE NORDIC CREEK AT ELLIOT LAKE		19
02HM006	120 00	F	52	QR	IAD	MILLHAVEN CREEK NEAR MILLHAVEN		20
02LF012	40 60	G	42	QR	IAD	MOOSE CREEK AT LEVACK		21
02HJ003	267 00	F	23	QR	IAD	MOUSE RIVER NEAR WESTWOOD		22
02J001	14 00	G	71	QR	IAD	PINE RIVER AT LURGAN MISC SED		23
04MD004	401 00	F	43	QP	IAD	POPLARINE RIVER AT HOYLE		24
02HC037	33 20	F	11	QR	IAD	REAR CREEK ABOVE GREEN RIVER		25
02CD002	109 00	G	42	QP	IAD	SEPPENT RIVER AT OUTLET OF DUNDAS LAKE		26
02CD004	267 00	G	42	QP	IAD	SEPPENT RIVER BELOW PELORO LAKE		27
02FD006	17 00	F	42	QR	IAD	SEPPENT RIVER ABOVE QUINKE LAKE		28
02ID003	19 00	F	42	QR	IAD	SEPPENT RIVER BELOW QUINKE LAKE		29
02FA002	50 50	G	31	QP	IAD	TOLE RIVER NEAR FERRIS		30
02CF011	04 00	G	42	QR	IAD	VEPMILION RIVER NEAR VAL LARON		31
02UD012	741 00	J	45	QP	IAD	WAVE RIVER NEAR VEPMILION		32
02LB013	99 00	G	51	QP	IAD	W BR SC R NR ST ISIDORE DE PRECOTT MARI-JUNI		33
02FD011	168 00	J	13	QR	IAD	WAVE RIVER AT WYEBRIDGE		34

SUMMARY

WINNIPEG	REMOTE	WATER LEVEL	-	0
		- DISCHARGE	=	0
	CONVENTIONAL	WATER LEVEL	-	0
		- DISCHARGE	-	0
	CUR DATA	WATER LEVEL	-	0
		- DISCHARGE	-	0
	TOTAL			0
GULLIFF	REMOTE	WATER LEVEL	-	0
		- DISCHARGE	-	0
	CONVENTIONAL	WATER LEVEL	-	0
		- DISCHARGE	-	0
	CUR DATA	WATER LEVEL	-	0
		- DISCHARGE	-	0
	TOTAL			0

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST FOR SCHEDULE A FOR THE FISCAL YEAR 86/87 (FINAL)

MAY 1987

PROVINCIAL 1 OPERATED BY FEDERAL (W-5), O M N R

STA NO	DR AREA	DIST	TECH	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
07HP021	0 00	G	24	QP	D	IAE	ANCAIT P CREEK AT ANLASTER		1
02LB008	440 00	G	51	QR		IAE	NEAR BROOK NEAR BOURGEE		2
07ML07C	134 00	G	51	QP	D	IAE	PEAUDETTE RIVIERE NEAR GLEN NEVIS		3
02MR005	541 00	H	23	QR		IAE	BEAVER CREEK NEAR MARMORA		4
02BC006	365 00	G	24	QP		IAE	RIS CREEK NEAR DELHI		5
02RF004	51 0	F	44	QR		IAE	BIG CARR RIVER NEAR SAULT STE MARIE		6
073D017	97 20	J	34	QP		IAE	PIS OFFER CREEK ABOVE OTTERVILLE		7
025F016	342 00	J	4	QR	M	IAE	SIG O TEE CREEK AT TULLOUBURG		8
02HL000	401 00	J	13	QP	D	IAE	RIOCH RIVER NEAR A TINDLITE		9
02HE001	1 20	F	11	QR		IAE	BLOOMFIELD CREEK AT BLOOMFIELD		10
02CA031	44 50		11	QR		IAE	BLUE SPRINGS CREEK NEAR EDEN MILLS		11
02EE0	77 70	L	31	QR	D	IAE	BLUTH BROOK BELOW BLUTH		12
02HE0	124 00	L	24	QR	D	IAE	FRONTIE CREEK AT PROGRESS TOWN		13
074F09	82 30	F	23	QR	D	IAE	SWANLEY CREEK ABOVE WARKWORTH		14
077A05	119 00		14	QR		IAE	CHANGARICOU RIVER NEAR ELHIRA		15
0777	1 4 00	F	33	QR		IAE	CAHARD RIVER NEAR IUPRESVILLE		16
02F01	261 00	F	33	QR	D	IAE	CAMP RIVER NEAR IUPRESVILLE		17
02FC011	103 00	G	21	QP		IAE	CAPRICI CREEK NEAR CARLISLE		18
07LF006	433 00	G	51	QR		IAE	CAT TOP RIVER AT PULSHELL		19
02FD011	93 20	F	34	QR	D	IAE	CLDAP CREEK AT WOODSISIDE		20
07BD014	57 20	G	47	QP		IAE	CHIPPEWA CREEK AT NORTH BAY		21
07703	280 30	G	53	QR	D	IAE	CLYDE RIVER AT GORDON RAPIDS		22
07FF01C	614 00	F	53	QP	D	IAE	CLYDE RIVER NEAR LANARK		23
074	3 0	F	22	QR		IAE	COLD CREEK NEAR BOLTON		24
07HF007	15 00	F	23	QP	D	IAE	COLD CREEK AT ORLAND		25
077000	220 00	F	14	QR	S	IAE	CONNECTICO RIVER ABOVE TRAYLON MISC SED		26
02FA070	570 00	G	14	QR		IAE	CONNECTICO RIVER AT GLEN ALLAN		27
07F002	114 00	G	11	QR		IAE	CONLECON CREEK AT ALL SONVILLE		28
07HF010	59 50		24	QP	D	IAE	CREDIT RIVER ALTON BRANCH ABOVE ALTON		29
074E01	40 00		24	QR	D	IAE	CREDIT RIVER AT BOTTOM MILLS		30
07HB01	10 00	F	24	QP	D	IAE	CREDIT RIVER NEAR CATARACT		31
074E010	2 30	L	24	QP	D	IAE	CREDIT RIVER ERIN BRANCH ABOVE EXTN		32
07HB01	62 20	J	24	QP	D	IAE	CREDIT RIVER NEAR SPANJEVILLE		33
07HB02	27 00	F	24	QR		IAE	CREDIT RIVER WEST BRANCH AT NORVAL		34
07HK005	456 20	G	13	QP	D	IAE	CROW RIVER NEAR GLEN HEDA		35
074000	24 10		1	QR		IAE	DELI LE RIVIERE NEAR ANTONIA		36
07HM002	189 00	F	37	QR		IAE	DEPOY CREEK AT BULLOCK		37
025E01	146 00	G	22	QR		IAE	DINGMAN CREEK BELOW LAMBETH		38
07HL007	98 10	F	27	QP	M	IAE	DON RIVER AT YONG MILLS		39
074L019	90 50	G	11	QR	D	IAE	DUFFIN CREEK ABOVE PIERING		40
02EB012	593 00	F	43	QP	D	IAE	EAST RIVER NEAR HUNTSVILLE		41
07H032	94 80	G	22	QR		IAE	EAST HUMBER RIVER AT THE CREEK		42
02HC009	197 00	F	27	QR	F	IAE	EAST HUMBER RIVER NEAR PINE GROVE		43
074024	270 00	F	11	QR		IAE	EMMO RIVER ABOVE GUELPH		44
027017	62 20	G	27	QP		IAE	EMMO RIVER CREEK AT BRANTFORD		45
07F014	277 00	G	13	QR		IAE	FALL RIVER NEAR ALLBROOK		46
026D010	1 0 00	G	27	QP		IAE	FISH CREEK NEAR PROSPECT HILL		47
07HD002	67 30	G	1	QR	D	IAE	GANAPASA RIVER NEAR GANAN		48
074A005	370 00	G	14	QP		IAE	GRAND RIVER AT GALL		49
075F014	694 00	G	14	QR	L	IAE	GRAND RIVER NEAR MARGVILLE		50

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PROVINCIAL 1 OPERATED BY FEDERAL(WS) OWNERS

STA NO	UR AREA DIST	TECH	GAUGE DATA	FUND CD	STATION NAME	UNITS	NO
01CA016	900 00	F	14 QR	IAE	GRAND PIVER BELOW SHAND DAM		1
025A034	1170 00	F	14 QP	IAE	GRAND PIVER AT WEST MONTROSE		2
02HB017	82 60	G	14 QF	IAE	SPINDSTONE CREEK NEAR ALDERSHOT		3
02GB006	150 00	G	14 QR	IAE	HOPNER CREEK NEAR PRINCETON		54
02HC075	300 00	G	14 QR S M	IAE	HUMBER RIVER AT ELDER MILLS		55
02HE004	117 00	F	14 QR	IAE	HUMBER RIVER NEAR PALGRAVE		56
02HF017	07 00	F	53 QP D	IAE	INDIAN RIVER NEAR BLAEMAY		57
02HI001	110 00	F	14 QP D	IAE	JACKSONS CREEK AT PETERBOROUGH		58
02HF007	09 10	G	14 QR	IAE	JUNCTION CREEK AT SUDBURY		59
02HG009	1 30	F	14 QR	IAE	FLANNY CREEK NEAR BOWEN		60
025C029	135 00	G	14 QP M	IAE	LITTLE CREEK ABOVE ST THOMAS		61
02JI010	56 00	G	43 QR N L	IAE	LARDER RIVER ABOVE KAYEN LAKE		62
02FA074	59 60	G	14 QP	IAE	LAUREL CREEK AT WATFLOOD		63
02BU017	70 40	G	14 QR	IAE	LA VASE RIVER AT NORTH BAY		64
025A011	50 50	G	14 QP	IAE	LITTLE RIVER AT WINDSOR		65
02HE009	120 00	G	14 QP M	IAE	LITTLE DON RIVER AT DON MILLS		66
02FE007	326 00	G	14 QR I	IAE	LITTLE MAITLAND RIVER AT BUEVALE		67
02GL013	104 00	F	14 QR S M	IAE	LITTLE OTTER CREEK NEAR TRAFFORDVILLE MISC SED		68
02FD002	54 90	G	14 QR DM	IAE	LUCIFER RIVER AT LUCIFER		69
02GA003	6 70	F	14 QR	IAE	LUTTERAL CREEK NEAR QUINCY		70
02HE006	0 00	G	14 QP	IAE	LYN CREEK NEAR LYN		71
02HL019	106 00	F	14 QR S	IAE	LYNDE RIVER NEAR WHITBY MISC SED		72
02FE011	117 30	F	14 QP DT	IAE	MAITLAND RIVER NEAR HARRISTON		73
02FE005	578 00	G	14 QR DM	IAE	MAITLAND RIVER ABOVE WILSHAM		74
02FL000	1620 00	G	14 QR D	IAE	MAITLAND RIVER BELOW WILSHAM		75
02HG001	189 00	G	14 QR M	IAE	MARIPOSA POND NEAR LITTLE BRITAIN		76
02LA000	5540 00	G	14 QP	IAE	MATAGAMI RIVER NEAR TIMMINO		77
02FL007	307 00	G	14 QR SUM	IAE	MCGREGOR CREEK NEAR CHATHAM (SEL MAR-MAY)		78
02AB019	46 40	G	14 QR	IAE	MICAP RIVER AT THUNDER BAY		79
02LD000	200 00	G	14 QR D	IAE	MIDWAY RIVER AT LONDON		80
02FE000	647 00	G	14 QR D	IAE	MIDDLE M-ITLAND RIVER NEAR PELGAL		81
02FE013	416 00	F	14 QR D	IAE	MIDDLE MAITLAND RIVER ABOVE ETHEL		82
02FE007	77 70	G	14 QR DM	IAE	MIDDLE MAITLAND RIVER NEAR LISTOWEL		83
02FD004	206 00	G	14 QR D	IAE	MIDDLE THAMES RIVER AT THAMESFORD		84
02KE001	2620 00	G	14 QR D	IAE	MISSISSIPPI RIVER AT ELRIGSONS FARMS		85
02HL001	208 00	G	14 QR D	IAE	MOIRA RIVER NEAR DELORO		86
02GA010	1030 00	G	14 QR S	IAE	NITH RIVER NEAR CANNING MISC SED		87
02GA019	552 00	G	14 QR	IAE	NITH RIVER AT NEW HAMBURG		88
02LA008	326 00	G	14 QP	IAE	NITH RIVER ABOVE NITHBURG		89
02LE004	21 50	G	14 QR	IAE	MOLTN CREEK AT SUDBURY		90
02FE004	1390 00	G	14 QR M	IAE	NORTH BRANCH MUSKOGA RIVER AT PORT SYDNEY		91
02LP017	69 20	G	14 QR	IAE	NORTH BRANCH SOUTH NATION RIVER NEAR HERTON		92
02FE013	267 00	G	14 QR	IAE	NORTH SAUNDERS RIVER NEAR PALSBY		93
02LD003	1450 00	G	14 QR	IAE	NORTH THAMES RIVER BELOW EANSHAW DAM		94
02GN014	319 00	G	14 QR I	IAE	NORTH THAMES RIVER NEAR MITCHELL		95
02FD000	20 00	G	14 QR D	IAE	NORTH THAMES RIVER AT ST MAR'S		96
025C015	1340 00	G	14 QP SD	IAE	NORTH THAMES RIVER NEAR THORNDALE MISC SED		97
02HD014	47 20	G	14 QR	IAE	NORTH WEST SASKATCHEWAN RIVER NEAR OSACA		98
02FC010	1520 00	G	14 QP	IAE	ONAPING RIVER NEAR LEVACY		99
02FD014	701 00	G	14 QR D	IAE	OXFORD RIVER NEAR DWIGHT		100

CANADA/ONTARIO COST SHARING AGREEMENT ACTIVE STATION LIST FOR SCHEDULE A FOR THE FISCAL YEAR 86/87 (FINAL)  
MAY 05 1986

PROVINCIAL OPERATED BY FEDERAL (WSC) O M N R

STA NO	DR AREA	BIST	TECH	GAUGE DATA	FUND CD	STATION NAME	UNITS	NO
02FF002	110 00	G	32	QP S M	IAE	PARKHILL CREEK AT PARKHILL RESERVOIR MISC SED		01
02HL006	205 00	G	33	QR D	IAE	PAPPEL CREEK NEAR LATA		102
02GC012	51 30	G	34	QP M	IAE	PATER ON CREEK NEAR SIMCOE		103
02LB022	152 00	G	51	QR	IAE	PAYNE RIVER NEAR BERWICK		04
02MC027	129 00	G	51	QP	IAE	RAISIN RIVER AT BLACK RIVER FEB 15-MAY 15		05
02MF001	404 00	G	51	QR D	IAE	RAISIN RIVER NEAR WILLIAMSTOWN		106
0278 00	96 70	G	11	QP D	IAE	RAVEN CREEK NEAR WEST HUNTINGDON		107
024A014	60 90	G	24	QR S M	IAE	REYNHILL CREEK AT HAMILTON MISC SED		08
02FC016	329 00	G	31	QP FM	IAE	SAUGREEN RIVER ABOVE DUPHAM		09
02FC003	2150 00	G	31	QR DM	IAE	SAUGREEN RIVER NEAR WALKERTON		110
02GA007	25 10	G	14	QP	IAE	SCHNEIDER CREEK AT FITCHENER		111
02EC010	42 90	G	7	QR	IAE	SCHOMBERG RIVER NEAR SCHOMBERG		11
02HU010	64 70	G	11	QP	IAE	SHELLEY VALLEY BROOK NEAR GRAFTON		113
02FL004	712 00	G	53	QR D	IAE	SKOOTAMATIA RIVER NEAR ACTINOLITE		14
02DD009	318 00	G	41	QP	IAE	SOUTH RIVER AT SOUTH RIVER		115
02EB008	1390 00		13	QM	IAE	SOUTH BRANCH MUSKOKA RIVER AT BAYSVILLE		116
02LB030	129 00	G	51	QR	IAE	SOUTH CASTOR PIVOT AT KENNEDY		117
02LB013	2470 00	G	51	QR M	IAE	SOUTH NATION RIVER AT CASSELMAN		118
02LB017	1050 00	G	52	QM	IAE	SOUTH NATION RIVER AT CHESTERTON (MAR-MAY)		119
02LP007	246 00	G	52	QR	IAE	SOUTH NATION RIVER AT SPENCERVILLE		120
02FT004	41 40	G	7	QP M	IAE	SOUTH PAPPHILL CREEK NEAR PAPPHILL		121
0270 00	34 00		7	QP	IAE	SOUTH RAISIN RIVER NEAR CORNWALL (MAR-MAY)		122
02FL012	625 00	G	31	QP D	IAE	SOUTH SAUGREEN RIVER NEAR MANOUEF		123
02GA040	167 00	G	14	QR S	IAE	SPEED RIVER NEAR ARMSTRONG MILLS MISC SED		124
02FA011	593 00	G	14	QR	IAE	SPEED RIVER BELOW GUELPH		125
02HB015	63 50	G	24	QR M	IAE	SPENCER CREEK NEAR WESTOVER		
02JL004	2930 00	G	44	QP L	IAE	STURGEON RIVER NEAR GLEN AETON		
02HO001	14 20	G	57	QR	IAE	STURGEON CREEK NEAR LEAMINGTON		
02WC012	1200 00	G	44	QP M L	IAE	STURGEON RIVER AT UPPER CROSS FALLS		
0270 00	720 00	G	20	QR D	IAE	SYDENHAM RIVER NEAR ALVINGTON		130
02BO05	122 00	G	3	QP M	IAE	SYDENHAM RIVER AT KATHROY		131
025008	0 00	G	33	QR D	IAE	SYDENHAM RIVER AT WALLACEBURG		132
027015	663 00	G	3	QP D	IAE	TEESWATER RIVER NEAR PAISLEY		133
02GF002	3110 00	G	37	QR DM	IAE	THAMES RIVER AT BYRON		134
02BE004	4610 00	G	33	QM M	IAE	THAMES RIVER AT CHATHAM		135
02EF001	760 00	G	34	QR M	IAE	THAMES RIVER NEAR DUTTON		136
02GD001	1340 00	G	22	QP D	IAE	THAMES RIVER NEAR CALIN		137
02GD016	518 00	G	33	QR DT	IAE	THAMES RIVER AT INGERDOLL		138
02GD021	149 00	G	34	QP SD	IAE	THAMES RIVER AT INNERDOLL (MAY-MAY)		139
02FD012	254 00	G	34	QP	IAE	THAMES RIVER AT WOODSTOCK		140
02GD019	56 00	G	33	QP	IAE	TROUT CREEK NEAR FAIRVIEW		141
02GU004	140 00	G	32	QR	IAE	TROUT CREEK NEAR ST MARYS		142
02GP004	29 60	G	33	QR D	IAE	TUFFY CREEK AT WINDSOR		143
027021	68 40	G	34	QR	IAE	VENISON CREEK NEAR WALTONHAM		144
02GF020	108 00	G	52	QP D	IAE	VENISON CREEK NEAR DOUCHE TEF		145
024C036	98 10	G	11	QR D	IAE	WEST DUFFINS CREEK AT GREECE RIVER		146
024C031	148 00	G	22	QP I	IAE	WEST HUMBERT RIVER AT HIGHWAY NO 7		147
02AB017	210 00	G	62	QR I	IAE	WHITEFISH RIVER AT NGLALU		148
023B008	383 00	G	14	QP	IAE	WHITELAND CREEK NEAR MOUNT VERNON		149
02CP007	243 00	G	4	QR	IAE	WHITSON RIVER AT LHTLMSTOWN		150

MAY 01 1986

PROVINCIAL 1 OPERATED BY FEDERAL (WSL) O M N R

IA NO	OR AREA DIST	TECH	GAUGE DATA	FUND CD	STATION NAME	UNITS	NO
022000	15 00 G	45	QR	IAE	WHITSON RIVER AT VAL CARON		151
022003	94 80 G	13	QR	IAE	WILLOW CREEK ABOVE LITTLE LAKE		152
022010	127 00 G	13	QR	IAE	WILLOW CREEK AT MIDPURST		153
022009	62 60 G	11	QR D	IAE	WILLOW CREEK NEAR NEWCASTLE		154
022013	33 80 G	52	QR	IAE	WYE CREEK NEAR THORNDALE		155

SUMMARY

WINNIPEG	REMOTE	- WATER LEVEL	0
		- DISCHARGE	0
	CONVENTIONAL	WATER LEVEL	0
		- DISCHARGE	= 0
SUB-TOTAL		- WATER LEVEL	0
		DISCHARGE	- 0
	TOTAL		- 0
CULLEPH	REMOTE	WATER LEVEL	- 0
		- DISCHARGE	?
	CONVENTIONAL	WATER LEVEL	- 2
		DISCHARGE	= 151
SUB-TOTAL		- WATER LEVEL	= 2
		DISCHARGE	= 153
TOTAL			- 155

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST FOR SCHEDULE A FOR THE FISCAL YEAR 86/87(FINAL)  
MAY 05 1986

PROVINCIAL 1 OPERATED BY FEDERAL(WJF) O M O E / O M N R

TA NO	DR AREA	DIST	TECH	GAUGE DATA	FUND CD	STATION NAME	UNITS	NO
02CG003	17 90	G	42	QP	IAF	BLUE JAY CREEK NEAR TEHUAMMAH		1
02AB014	112 00	G	60	QR	IAF	NORTH CURRENT RIVER NEAR THUNDER BAY		2
02BA002	1190 00	G	61	QR	IAF	STEEL RIVER NEAR TERRACE BAY		3

SUMMARY

WINNIPEG	REMOTE	WATER LEVEL =	0
		- DISCHARGE =	0
	CONVENTIONAL	- WATER LEVEL =	0
		- DISCHARGE =	0
	SUB-TOTAL	WATER LEVEL =	0
		DISCHARGE =	0
	TOTAL		0
QUELPH	REMOTE	WATER LEVEL =	0
		DISCHARGE =	0
	CONVENTIONAL	- WATER LEVEL =	0
		DISCHARGE =	3
	SUB-TOTAL	- WATER LEVEL =	0
		- DISCHARGE =	3
	TOTAL		3

CANADA/ONTARIO CO-OPERATING AGREEMENT ACTIVE STATION LIST FOR SCHEDULE A FOR THE FISCAL YEAR 86/87 (FINAL)  
 MAY 05 1986

PROVINCIAL 1 OPERATED BY FEDERAL (WSC) ONTARIO HYDPO/ O M N R

SIA NO	DR AREA DIST	TECH	GAUGE DATA	FUND CD	STATION NAME	UNITS	NO
02CB003	1440 01 G	44	QP TL	IAC	QUELNADONG FIVER ABOVE SESARIC CREEK		1
02CC005	1960 00 G	42	LR M	IAG	LITTLE WHITE RIVER NEAR BELLINGHAM		2
02CC010	1190 00 G	42	QP TL	IAG	LITTLE WHITE RIVER BELOW BOLAND RIVER		3

SUMMARY

WINNIPEG	REMOTE	- WATER LEVEL -	0
		DISCHARGE -	0
	CONVENTIONAL	- WATER LEVEL	0
		DISCHARGE =	0
SUB-TOTAL	WATER LEVEL	-	0
	DISCHARGE	-	0
TOTAL			0
GUELPH	REMOTE	- WATER LEVEL -	0
		DISCHARGE =	0
	CONVENTIONAL	WATER LEVEL	0
		DISCHARGE =	3
SUB-TOTAL	WATER LEVEL	-	0
	DISCHARGE	-	3
TOTAL			= 3

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST FOR SCHEDULE A FOR THE FISCAL YEAR 86/87(FINAL)  
 MAY 05 1986

PROVINCIAL ? OPERATED BY FEDERAL(WSC) O M O E

TA NO	DR AREA	DISI	T-CH	CAUSL	DATA	FUND CD	STATION NAME	UNITS	NO
02FF009	113 00	G	37	QP	D	JAD	AUSABLE RIVER NEAR EXETER		1
02GA041	62 90	G	14	QR		JAD	GRAND RIVER NEAR DUNDALK		2
04LK001	0 00	G	41	QR		JAD	MATTAWISHKWINIA RIVER AT HEARST		3

SUMMARY

WINNIPEG	REMOTE	- WATER LEVEL	0
		DISCHARGE	= 0
	CONVENTIONAL	- WATER LEVEL	= 0
		DISCHARGE	= 0
	SUB TOTAL	WATER LEVEL	0
		DISCHARGE	= 0
	TOTAL		0
GUELPH	REMOTE	- WATER LEVEL	= 0
		DISCHARGE	= 0
	CONVENTIONAL	- WATER LEVEL	= 0
		DISCHARGE	3
	SUB TOTAL	- WATER LEVEL	- 0
		- DISCHARGE	- 3
	TOTAL		= 3



CANADA/ONTARIO COST SHARING AGREEMENT ACTIVE STATION LIST FOR SCHEDULE A FOR THE FISCAL YEAR 86/87 (FINAL)  
MAY 05 1986

PROVINCIAL 2 OPERATED BY FEDERAL (WSC) O M O E / , O M N F

STA NO	IR	AREA	DIST	TECH	GAUGE	DATA	FUND	CD	STATION NAME	UNITS	NO	
0266006	267	00	G	33	QP	D	JAF	PEAR	CPEEN	NEAR	PETROLIA	1

SUMMARY

WINNIPEG	REMOTE	- WATER LEVEL	= 0
		DISCHARGE	= 0
	CONVENTIONAL	WATER LEVEL	= 0
		- DISCHARGE	= 0
	SUB TOTAL	WATER LEVEL	0
		- DISCHARGE	= 0
	TOTAL		= 0
GUELPH	REMOTE	- WATER LEVEL	= 0
		- DISCHARGE	0
	CONVENTIONAL	WATER LEVEL	= 0
		DISCHARGE	= 1
	SUB-TOTAL	- WATER LEVEL	= 0
		DISCHARGE	= 1
	TOTAL		= 1

LANCASHIRE/ONTARIO COST SHARING W/FF EMPLOY ACTIVE STATION LIST FOR SCHEDULE A FOR THE FISCAL YEAR 96/97 (FINAL)  
MAY 05 1996

FEDERAL FUNDING PROGRAMS OPERATED BY FEDERAL (WSF)

TA NO	DR AREA	DIST	TELE	GAUGE DATA	FUND CO	STATION NAME	UNITS	NO
04M003	27500 00	G	43	QR NS	SAA	ARITIAI RIVER AT ONAKAWANA MISC SED		1
04H001	118000 00	G	41	QR NS L	SAA	ALBANY RIVER NEAR HAT ISLAND MISC SED		2
04S001	36000 00	G	41	QR NS L	SAA	ATAWAPISKAT R BELOW MOUNTIE F MISC SED		3
02FE002	865 00	G	32	QR SD	AA	AU ABLE RIVER NEAR SPRINGBANK		4
02FE007	466 00	G	31	QR S	SAA	BAYFIELD RIVER NEAR VAPNA MISC SED		5
02G009	533 00	G	33	QR SD	SAA	BEAR CREEK BELOW BRIDEN MISC SED		6
02GC007	591 00	L	34	QR S	SAA	BIG CREEK NEAR WATSONHAM		7
02H006	675 00	G	4	QR S M	SAA	BIG OTTER CREEK NEAR CATION		8
02E002	1990 00	G	61	QR S	SAA	BLACK RIVER NEAR MANTON MISC SED		9
02G018	287 00	G	32	QR SD	SAA	CATIE H CREEK NEAR SPARTA MISC SED		10
02FA039	272 00	G	14	QR S	SAA	CONESTOGO RIVER ABOVE DAYTON MISC SED		11
02HB002	795 00	G	24	QR SD	SAA	CREDIT RIVER AT ERINDALE		12
02PC004	316 00	G	27	QR SD	SAA	DOM RIVER AT TOMMORDEN		13
02AF030	704 00	G	22	QR SD	SAA	ETOBICOKE CREEK BELOW Q E W MISC SED		14
02G007	360 00	G	14	QR S	SAA	FAIRCHILD CREEK NEAR SPANTOORD MISC SED		15
02HD012	232 00	G	11	QR SD	SAA	GANARACIA RIVER ABOVE DALF MISC SED		16
02FF002	1150 00	G	44	QR SQL	SAA	GOULAIS RIVER NEAR SEAFCHMONT MISC SED		17
02LE001	614 00	G	60	QR S	SAA	GRAVEL RIVER NEAR LAVERG MISC SED		18
02HI013	8 10	G	22	QR SD	SAA	HIGHLAND CREEK NEAR WEST HILL MISC SED		19
02LA005	409 00	G	51	QR S M	SAA	HEMPYVILLE LAKE NEAR HEMPTVILLE MISC SED		20
02GL007	29 00	G	22	QR SD	SAA	KETTLE CREEK AT ST THOMAS MISC SED		21
02FC015	104 00	G	34	QR S M	SAA	LITTLE OTTER CRK NR STRAFORDVILLE MISC SED		22
02Y018	105 00	G	17	QR S	SAA	LYNDE CREEK NEAR WHITEY MISC SED		23
02EC007	202 00	G	13	QR SDM	SAA	MOSPEGOR LAKE NEAR CHATHAM (SED MAR-MAY)		24
04J004	60700 0	G	42	QR NS L	SAA	MOOSE RIVER ABOVE MOOSE RIVER MISC SED		25
02G022	181 00	G	24	QR S	SAA	NANTICOKE CREEK AT NANTICOKE MISC SED		26
02FM007	24 00	G	32	QR S M	SAA	NAPANEE RIVER AT CAMDEN EAST MISC SED		27
02GA010	1050 00	G	14	QR S	SAA	NITH RIVER NEAR CANNING MISC SED		28
02H015	1 40	G	32	QR SD	SAA	NORTH THAMES RIVER NEAR THORNHALL MISC SED		29
02CB003	1180 00	G	13	QR S M	SAA	NOTTAWANAGA RIVER NEAR FAXTER		30
02FF00	110 00	G	32	QR S M	SAA	PAPPHILL CRY AB PAPHILL RESERVOIR MISC SED		31
02FD001	154 00	G	31	QR S	SAA	PINE RIVER AT LURGAN MISC SED		32
02HA014	60 90	G	24	QR S M	SAA	POTTER CREEK AT HAMILTON MISC SED		33
02L002	125 00	G	23	QR S	SAA	RICHMOND RIVER NEAR RUSCOM STATION MI C ED		34
02S009	375 00	G	31	QR SD	SAA	SOUTH HAMILTON RIVER AT SUMMERHILL		35
02L005	810 00	G	51	QR S M	SAA	SUNNATION R NR PLANTAGENET SPRINGS (MAR-JUN)		36
02G040	167 00	G	14	QR S	SAA	SPEER RIVER NEAR ARMSIFONG MILLS MISC SED		37
02G003	1150 00	G	33	QR SD	AA	STURGEON RIVER AT ELOPENCE (SED FEB-MAY)		38
02FD021	147 00	G	34	QR SD	SAA	THAMES RIVER AT INNER TP (SED MAR-MAY)		39
04D001	50000 00	G	62	QR NS L	AA	WINNIP R BELOW ACHEJEIT R TRIBUTARY MISC SED		40

FEDERAL SEDIMENT PROGRAM OPERATED BY FEDERAL (W5C)

SUMMARY

WINNIPEG	REMOTE	WATER LEVEL	0
		DISCHARGE	= 0
	CONVENTIONAL	WATER LEVEL	0
		- DISCHARGE	= 0
	SUB-TOTAL	- WATER LEVEL	- 0
		- DISCHARGE	0
	TOTAL		0
GUELPH	REMOTE	WATER LEVEL	= 0
		- DISCHARGE	= 0
	CONVENTIONAL	- WATER LEVEL	- 0
		DISCHARGE	- 35
	SUB-TOTAL	- WATER LEVEL	= 0
		- DISCHARGE	40
	TOTAL		= 40

CANADA/ONTARIO COOPERATING AGREEMENT ACTIVE STATION LIST FOR SCHEDULE A FOR THE FISCAL YEAR 86/87 (FINAL)  
MAY 05 1986

PROVINCIAL 2 SEDIMENT PROGRAM OPERATED BY FEDERAL (WSC), O M N R

TA NO	JW AREA	DIST	TECH	GWUGE DATA	FUNJ CD	STATION NAME	UNITS	NO
02HC025	303 00	G	27	QR S M	SJAE	HUMBEE RIVER AT ELDER MILLS		1

SUMMARY

WINNIPEG	REMOTE	- WATER LEVEL	0
		- DISCHARGE	0
	CONVENTIONAL	WATER LEVEL	= 0
		- DISCHARGE	= 0
	SUB-TOTAL	WATER LEVEL	= 0
		- DISCHARGE	= 0
	TOTAL		0
FUELPH	REMOTE	- WATER LEVEL	= 0
		- DISCHARGE	= 0
	CONVENTIONAL	WATER LEVEL	= 0
		DISCHARGE	= 1
	SUB-TOTAL	WATER LEVEL	= 0
		DISCHARGE	= 1
	TOTAL		= 1

CONTRIBUTED DATA OPERATED BY FEDERAL (WSC) M L D S / C H S

STATION NO	BR	AREA	DIST	T-CH	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
05H008	0	00	G	30	HF		PAT	DETROIT RIVER AT AMHERSTBURG		1
05P007	0	00	G	30	HR		PAT	DETROIT RIVER AT LASALLE		2
02L4009	0	00	G	33	HF	D	RAT	LAKE ERIE AT BAP POINT		3
02LE002	0	00	G	33	HR		RAT	LAKE ERIE AT WHELAN		4
02L4010	0	00	G	33	HF		PAT	LAKE ERIE AT KINGVILLE		5
02L4017	0	00	G	34	HR	DM	RAT	LAKE ERIE AT PORT CHARLES		6
02L4020	0	00	G	34	HF		RAT	LAKE ERIE AT PORT DOVER		7
02L4027	0	00	G	34	HR	D	RAT	LAKE ERIE AT PORT STANLEY		8
02LE017	0	00	G	37	HF	D	PAT	LAKE HURON AT COLLINGWOOD		9
02LE012	0	00	G	37	HR	D	RAT	LAKE HURON AT G. DEKICH		10
02L6002	0	00	G	40	HR		PAT	LAKE HURON AT LITTLE CURRENT		11
02EA014	0	00	G	40	HR	D	RAT	LAKE HURON AT PARRY SOUND		12
02CA006	0	00	G	44	HF	I	PAT	LAKE HURON AT THESSALON		13
02EA009	0	00	G	37	HR		RAT	LAKE HURON AT TOBERMORGY		14
02HE001	0	00	G	24	HF	D	RAT	LAKE ONTARIO AT BURLINGTON		15
02L0015	0	00	G	11	HR	D	RAT	LAKE ONTARIO AT COBourg		16
02L0009	0	00	G	12	HR	D	PAT	LAKE ONTARIO AT LINCOLN		17
02HA018	0	00	G	24	HF	DM	RAT	LAKE ONTARIO AT POPP WELLS		18
02HL004	0	00	G	22	HR	D	PAT	LAKE ONTARIO AT TORONTO		19
02L4005	0	00	G	23	HR	DM	RAT	LAKE ST CLAIR AT BELLE RIVER		20
02L4006	0	00	G	33	HR		RAT	LAKE ST CLAIR AT TROMPSH		21
02LE010	0	00	G	40	HR		RAT	LAKE SUPERIOR AT GROS CAP		22
02LE004	0	00	G	61	HR	D	RAT	LAKE SUPERIOR AT MICHIGAN HARBOUR		23
02BA004	0	00	G	0	HR		RAT	LAKE SUPERIOR AT ROSSPORT		24
02AP018	0	00	G	62	HR	L	RAT	LAKE SUPERIOR AT THUNDER BAY		25
02GG010	0	00	G	25	HR		RAT	ST CLAIR RIVER AT SAINT EDWARD		26
02CC011	0	00	G	33	HR		RAT	ST CLAIR RIVER AT PORT LAMETON		27
02MB00	0	00	G	52	HR		RAT	ST LAWRENCE RIVER AT BROCKVILLE		28
02ML022	0	00	G	51	HR		RAT	ST LAWRENCE R. BELOW CORNWALL CANAL		29
02MB008	0	00	G	52	HR		RAT	ST LAWRENCE R. AT IROQUOIS ISLAND (AB)		30
02MB009	0	00	G	52	HF		RAT	ST LAWRENCE R. AT IROQUOIS ISLAND (BE)		31
02MC023	0	00	G	51	HR	I	RAT	ST LAWRENCE R. AT SUMMERSTOWN		32
02BF011	0	00	G	44	HF		RAT	ST MARYS R. AT S S MARIE (ABOVE)		33
02FA005	0	00	G	44	HR	M	RAT	ST MARYS R. AT S S MARIE (BELOW)		34

SUMMARY

WINNIPEG	RFPORT	WATER LEVEL	=	0
		DISCHARGE	=	0
	CONVENTIONAL	WATER LEVEL	=	0
		DISCHARGE	=	0
MELB	JB-TOTAL	WATER LEVEL	=	0
		DISCHARGE	=	0
	TOTAL	WATER LEVEL	=	0
		DISCHARGE	=	0
MELB	CONVENTIONAL	WATER LEVEL	=	34
		DISCHARGE	=	0
	JB-TOTAL	WATER LEVEL	=	34
		DISCHARGE	=	0
TOTAL	WATER LEVEL	=	34	
	DISCHARGE	=	0	

MAY 05 198

COMPUTER DATA OPERATED BY PROVINCE (ONTARIO HYDRO)

STA NO	PF AREA DIST	TECH	GAUGE DATA	FUND CD	STATION NAME	UNITS	NO
04ME002	22000 00	F	80	QP	RBC	ABITIBI RIVER AT ABITIBI CANYON	1
04ME004	22400 00	G	80	QP	RBC	ABITIBI RIVER AT OTTER RAPIDS	2
05OE005	52 00 00	W	00	QP	RBC	ENGLISH RIVER AT CARTROU FALLS	3
05OE006	26100 00	W	00	QP	RBC	ENGLISH RIVER AT EAR FALLS	4
05OE007	37000 00	W	00	QP	RBC	ENGLISH RIVER AT MARYBON FALLS	5
04ND001	540 00	G	82	HM	RBC	FREDERICK HOUSE PIVER AT NICHINAWI LAKE	6
04AR012	14 00	F	83	QM	RBC	GREENWATER CREEK AT OUTLET OF GREENWATER LAKE	7
04AR001	150 00	G	82	CP	RBC	MINISTIQUE RIVER AT OUTLET OF DOG LAKE	8
02AB0	17 00	G	81	QP	RBC	MINISTIQUE RIVER AT TABAKA FALLS P.H.	9
02AB01	12 00	G	83	QM	RBC	ASHABOWIE PIVER AT OUTLET OF ASHABOWIE LAKE	10
04JD001	1 00	G	82	QM	RBC	EMOGAMI RIVER AT EMOGAMI DAM	11
02AD007	00	F	82	HP	RBC	LAKE NIPIGON AT MA DIAPMID	12
04GA001	0 00	G	83	QM	RBC	LAKE ST JOSEPH OUTFLOW TO ALBANY RIVER	13
04GA004	0 00	G	82	HP	RBC	LAKE ST JOSEPH ABOVE RPT RAPIDS DAM	14
04GA005	0 00	W	00	HR	RBC	LAKE ST JOSEPH DIVERSION ABOVE CONTROL DAM	15
04OE006	0 00	W	00	QP	RBC	LAKE ST JOSEPH DIVERSION AT FOOT PORTAGE	16
04JE001	0 00	F	81	QP	RBC	LONG LAKE DIVERSION TO LAKE SUPERIOR	17
04JD001	0 00	G	82	HM	RBC	LONG LAKE AT LONG LAKE	18
04JE001	0 00	F	81	QP	RBC	MADAME RIVER AT ST MARTVILLE	19
04JE001	0 00	G	82	QM	RBC	MATAWICHUAN RIVER AT RABBIT LAKE DAM	
04LC00	3470 00	G	82	QP	RBC	MATTAGAMI RIVER AT LITTLE LONG RAPIDS	21
02LE001	4040 00	G	82	QP	RBC	MISSISSAGI PIVER BELOW AUBREY FALLS	22
04LC007	5640 00	G	83	QP	RBC	MISSISSAGI RIVER AT KAYNER GENERATING STATION	23
02LC003	5010 00	G	82	QP	RBC	MISSISSAGI RIVER AT WIND ROCK FALLS	24
02LC007	2150 00	F	82	QM	RBC	MISSISSAGI RIVER AT ROCKY ISLAND LAKE	25
04LE002	0 00	F	81	HR	RBC	MOHAWK LAKE RESERVOIR AT MOJIKIT LAKE	26
04LE010	5600 00	G	80	QP	RBC	MONTREAL RIVER AT LOWER NOTCH GENERATING STA	27
02AR002	24500 00	G	81	QP	RBC	NIPIGON RIVER AT PILL PORTAGE	28
02AD009	0 00	G	81	QP	RBC	NIPIGON RIVER DIVERSION TO LAKE NIPIGON	29
04GE001	12 00	G	82	QP	RBC	ONONDAGA PIVER AT WABOOSE FALLS DAM	30
02PL012	0 00	G	81	HR	RBC	OTTAWA RIVER AT ARNPATOR	31
02PL009	8 600 00	G	81	QP	RBC	OTTAWA PIVER AT CHATS FALLS	32
02PL002	5 000 00	G	81	QP	RBC	OTTAWA RIVER AT DE TOLHIMS	33
02JE012	47900 00	G	81	QP	RBC	OTTAWA RIVER AT LA CAVE RAPIDS	34
02PL013	0 00	G	82	HR	RBC	OTTAWA RIVER AT PAMERUKE	35
02AP011	0 00	G	83	QP	RBC	SHEPARDWAN RIVER AT OUTLET OF SHEPARDWAN L	36
02PL003	6660 00	G	80	QP	RBC	STURGEON RIVER AT CRYSTAL FALLS	37
02PL007	120 00	G	82	QP	RBC	TEMAGAMI RIVER AT CROSS LAKE DAM	38
04IC010	0 00	F	81	HM	RBC	TEMAGAMI LAKE AT TEMAGAMI	39
04HB007	9000 00	G	23	QP	RBC	TRENT RIVER AT HALEY FALLS (P.P., L.P. (P.P.))	40
04IB001	0 00	G	82	HP	RBC	WABOOSE LAKE RESERVOIR AT WABOOSE DAM	41
04DA002	0 00	G	82	HP	RBC	WANAPITIE LAKE AT HOWLANDS BAY	42
04PL009	0 00	W	00	HP	RBC	WINNIPEG RIVER AT MINA I	43
04FE010	0 00	W	00	QP	RBC	WINNIPEG P. AT WHITEING FALLS POWERHOUSE	44

CONTRIBUTED DATA OPERATED BY PROJINCO (ONTARIO HYDRO)

SUMMARY

WINNIPEG	REMOTE	WATER LEVEL	=	0
		DISCHARGE	=	0
	CONVENTIONAL	WATER LEVEL	=	2
		DISCHARGE	=	-
SUB-TOTAL		WATER LEVEL	=	2
		DISCHARGE	=	-
TOTAL				
GUELPH	REMOTE	WATER LEVEL	=	1
		DISCHARGE	=	1
	CONVENTIONAL	WATER LEVEL	=	10
		DISCHARGE	=	25
SUB TOTAL		WATER LEVEL	=	11
		DISCHARGE	=	26
TOTAL				37

CANADA/ONTARIO POST-CHARGING AGREEMENT ACTIVE STATION LIST FOR SCHEDULE A FOR THE FISCAL YEAR 86/87 (FINAL)

As of 1985

COMPUTED DATA OPERATED BY PROVINCE (O M E)

STA NO	DR AREA	DIST	TELE	GAUGE	DATE	FUND CD	STATION NAME	UNIT	NO
01ED100	86 00	G	70	QR		WBD	WELTON CREEK NEAR TOTIENHAM		1
02ED107	211 00	G	90	QR		RPD	POYNE POND AT EARL ROWE POND		1
02EC103	33 00	G	90	QR		RPD	PEPPERLAW BROOK NEAR UUDRA		
01ED103	195 00	G	90	QR	M	RPD	PINE RIVER NEAR EVERETT		4
02EC101	24 50	G	90	QR		RPD	HARRIDGE BROOK AT UXBIDGE		

SUMMARY

WINNIPEG	REMOTE	- WATER LEVEL =	0
		- DISCHARGE	0
	CONVENTIONAL	- WATER LEVEL =	0
		- DISCHARGE	0
QUELPH	SUB-TOTAL	- WATER LEVEL	0
		- DISCHARGE	0
	TOTAL	- WATER LEVEL	0
		- DISCHARGE	0
GUELPH	REMOTE	- WATER LEVEL =	0
		- DISCHARGE =	0
	CONVENTIONAL	- WATER LEVEL =	0
		- DISCHARGE =	5
GUELPH	SUB-TOTAL	- WATER LEVEL	0
		- DISCHARGE =	5
TOTAL		- WATER LEVEL	0
		- DISCHARGE =	5



CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST FOR SCHEDULE A FOR THE FISCAL YEAR 86/87(FINAL)

MAY 03 1986

CONTRIBUTED DATA OPERATED BY PRIVATE AGENCY

TA NO	DR AREA	DIST	TECH	GAUGE DATA	FUND CD	STATION NAME	UNITS	NO
04M001	13300	00 G	70	QP	RDP	ABITIBI RIVER AT IROQUOIS FALLS		1
04M002	2950	00 G	70	QP	RDP	ABITIBI RIVER AT TWIN FALLS		2
0500003	2310	00 W	00	QP	RDP	EAGLE RIVER AT EAGLE RIVER	ENGLISH	3
04LF001	6760	00 G	76	QP	PDP	LAPUSCASING RIVER AT LAPUSCASING	ENGLISH	4
04LR001	0000	00 G	70	QP	RDP	MATIAGAMI RIVER AT SMOOTH ROCK FALLS	ENGLISH	5
02FD002	5150	00 G	77	QP	PDP	MICHIPICOTEN RIVER AT HIGH FALLS	ENGLISH	6
07BEC01	2870	00 G	77	QR	RDP	MONTREAL RIVER NEAR MONTREAL RIVER HARBOUR	ENGLISH	7
05B0009	5370	00 W		QP	PDP	WINE RIVER AT STURGEON FALLS GEN STA		8
03EL002	1000	00 G	73	QP	RDP	SEVERN RIVER AT SWIFT RAPIDS(CONTR 01)	ENGLISH	9
02CE001	11400	00 G	73	QP	RDP	SPANISH RIVER AT SPANOLA	ENGLISH	10
02CE004	6900	00 G	78	QP	RDP	SPANISH RIVER AT HIGH FALLS	ENGLISH	11
02CF004	4190	00 G	78	QP	RDP	VERMILION RIVER AT LORNE FALLS	ENGLISH	12
02GU016	2900	00 W	00	QP	RDP	WABIGON RIVER AT DRYDEN	ENGLISH	13

SUMMARY

WINNIPEG	REMOTE	- WATER LEVEL	= 0
		- DISCHARGE	= 0
	CONVENTIONAL	- WATER LEVEL	= 0
		- DISCHARGE	= 3
	SUB TOTAL	- WATER LEVEL	= 0
		- DISCHARGE	= 3
	TOTAL		= 3
GUELPH	REMOTE	- WATER LEVEL	= 0
		- DISCHARGE	= 0
	CONVENTIONAL	- WATER LEVEL	= 0
		- DISCHARGE	= 10
	SUB TOTAL	- WATER LEVEL	= 0
		- DISCHARGE	= 10
	TOTAL		= 10

MAY 05 1987

CONTRIBUTED DATA OPERATED BY FEDERAL(OTHER)

STA NO	WQ AREA	WQ DIST	LOCY	CHG DIA	FUND CD	STATION NAME	UNITS	NO
0265012	579000	00	G	87	0	FE0 TAKE MURON OUTFLOW TO ST CLAIR RIVER		1
070001	0	00	C	45	HM	FE0 LAKE NIPISQUIN AT FRENCH P OUTLET(EXT (92))		2
0265012	596000	00	G	87	0	FE0 LAKE ST CLAIR OUTFLOW TO DETROIT RIVER		3
05P1001	0	00	W	94	HP	FE0 LAKE 114 NEAR KENORA(S)		4
05P012	0	00	W	94	GR	FE0 LAKE 114 OUTLET NEAR KENORA(S)		5
05P013	0	00	W	94	HP	FE0 LAKE 223 NEAR KENORA(S)		6
05P014	0	00	W	94	GR	FE0 LAKE 223 OUTLET NEAR KENORA(S)		7
05P015	0	00	W	94	GR	FE0 LAKE 224 OUTLET NEAR KENORA(S)		8
05P016	0	00	W	94	GR	FE0 LAKE 225 OUTLET NEAR KENORA(S)		9
05P017	0	00	W	94	GR	FE0 LAKE 226 OUTLET NEAR KENORA(S)		10
05P018	0	00	W	94	GR	FE0 LAKE 227 OUTLET NEAR KENORA(S)		11
05P019	0	00	W	94	HP	FE0 LAKE 227 NEAR KENORA(S)		12
05P020	0	00	W	94	HR	FE0 LAKE 239 NEAR KENORA		13
05P021	0	00	W	94	GR	FE0 LAKE 239 OUTLET NEAR KENORA		14
05P022	0	00	W	94	GR	FE0 LAKE 239 LOWER EAST INLET NEAR KENORA(S)		15
05P023	0	00	W	94	0	FE0 LAKE 39 UPPER EAST INLET NEAR KENORA(S)		16
05P015	0	00	W	94	GR	FE0 LAKE 240 OUTLET NEAR KENORA		17
05P024	0	00	W	94	HP	FE0 LAKE 302 NEAR KENORA(S)		18
05P025	0	00	W	94	0	FE0 LAKE 302 OUTLET NEAR KENORA(S)		19
05P026	0	00	W	94	AR	FE0 LAKE 303 NEAR KENORA(S)		20
05P019	0	00	W	94	GR	FE0 LAKE 303 OUTLET NEAR KENORA(S)		21
05P010	0	00	W	94	HP	FE0 LAKE 304 NEAR KENORA(S)		22
05P011	0	00	W	94	GR	FE0 LAKE 470 OUTLET NEAR KENORA		23
05P024	0	00	W	94	GR	FE0 LAKE 601 OUTLET NEAR KENORA(S)		24
0265000	666000	00	G	37	GR	FE0 NIAGARA RIVER AT QUEENSTON	ENGLISH	25
05P027	0	00	W	94	GR	FE0 NORTHWEST TRIBUTARY TO LAKE 239 NEAR KENORA(S)		26
0265000	900000	00	C	96	GR	FE0 ST LAWRENCE RIVER AT CORNWALL	ENGLISH	27
0265000	710000	00	G	85	GR	FE0 ST MARYS RIVER AT SAULT STE MARIE	ENGLISH	28
0265016	0	00	C	13	GR	FE0 TIENT CUNAL LOCK 42 NEAR WACHUSSO(CONTR 04)		29
0265019	0	00	G	93	GR	FE0 WELLSLAND CANAL DIVERSION FROM LAKE STIC		30

SUMMARY

WINNIEB	POMOTE	WATER LEVEL -	7
		- DISCHARGE	5
		CONVENTIONAL - WATER LEVEL	5
		- DISCHARGE	10
SUB-TOTAL		WATER LEVEL -	7
		- DISCHARGE =	15
TOTAL			= 22
			= 22
CULLEPM	REMOLE	WATER LEVEL =	0
		- DISCHARGE =	0
		CONVENTIONAL WATER LEVEL =	1
		DISCHARGE =	7
SUB-TOTAL		WATER LEVEL -	1
		- DISCHARGE -	7
TOTAL			= 8

APPENDIX B

SCHEDULE 'D'  
ANNUAL PAYMENT FOR  
1986/87



This schedule provides a summary of the annual payment. The details of the calculations for operation and construction are available and have been jointly reviewed by officers of each party.

ANNUAL PAYMENT tables are provided separately for each of the three provincial agencies involved in financing the water quantity survey program.

A ANNUAL PAYMENT for 1986 87 to be paid to Receiver General of Canada by Ontario Hydro

	<u>OPERATION</u>	<u>CONSTRUCTION</u>	<u>TOTAL</u>
a) Streamflow and water level installations (6 stations operated by and 4 stations cost shared with Water Survey of Canada and 3 stations cost shared with OMNR)	\$ 37 170	\$ 5 850	\$ 43 020
b) Specialized Equipment (cost shared operation of 2 existing DCP s with OMNR and installation of 2 new DCP s with costs to be billed equally over 1986/87 and 1987/88 with 1 station funded FED/OH and 1 100% OH funded)	\$ 1 200	\$ 5 925	\$ 7 125
		<b>ANNUAL PAYMENT</b>	<b>\$ 50,145</b>

B ANNUAL PAYMENT for 1986 87 to be paid to Ontario Hydro by Water Survey of Canada

	<u>OPERATION</u>	<u>CONSTRUCTION</u>	<u>TOTAL</u>
Streamflow and water level (6 stations cost shared with OH)	\$ 6 510	\$ NIL	\$ 6 510
		<b>ANNUAL PAYMENT</b>	<b>\$ 6,510</b>

C ANNUAL PAYMENT for 1986 87 to be paid to Receiver General of Canada by Ontario Ministry of the Environment

	<u>OPERATION</u>	<u>CONSTRUCTION</u>	<u>TOTAL</u>
a) Streamflow and water level installations (37 stations operated by and 16 stations cost shared with Water Survey of Canada, and 4 stations cost shared with OMNR)	\$179 580	\$ 15 400	\$194 980
b) Specialized Equipment (installation and operation of 11 new DCP s with costs to be billed in three equal payments over 1986/87, 1987/88 and 1988/89 with 10 stations funded FED/MOE and 1 funded 100% MOE)	\$ 875	\$ 15 800	\$ 16 675
		<b>ANNUAL PAYMENT</b>	<b>\$211,655</b>

D ANNUAL PAYMENT for 1986 87 to be paid to Receiver General of Canada by Ontario Ministry of Natural Resources

	<u>OPERATION</u>	<u>CONSTRUCTION</u>	<u>TOTAL</u>
a) Streamflow and water level installations (155 stations operated by and 10 stations cost shared with Water Survey of Canada and 4 stations cost shared with MOE, and 3 stations cost shared with OH)	\$569 820	\$ 98 800	\$668 620
b) Sediment installations (one station operated by Water Survey of Canada)	\$ 4 200	\$ NIL	\$ 4 200
c) Specialized Equipment (operation of 11 DCP s 2 cost shared with OH)	\$ 10 800	\$ NIL	\$ 10 800
		<b>ANNUAL PAYMENT</b>	<b>\$683,620</b>

*P. Crabtree*

(Signature)

for Director of Water Resources Branch  
Ministry of Environment

*M. G. Lewis*

(Signature)

Director of Conservation Authorities  
and Water Management Branch  
Ministry of Natural Resources

*E. T. Wagner*

(Signature)

Regional Director  
Inland Waters Directorate



APPENDIX C

CHANGES TO NETWORK AND SCHEDULE 'A'

TABLE C 1 - Changes in Gauging Network April 2 1986 to April 1 1987

TABLE C 2 - Changes between Schedule 'A' 86/87 and Schedule 'A' 87/88





TABLE C 1

CHANGES IN GAUGING NETWORK - APRIL 1 1986 TO APRIL 1 1987

(Ontario Region Only)

A HYDROMETRIC STATIONS ADDED  
 \*\*\*\*\*

1	0LHR027	Fronte Creek at Carlisle	QR	P1-MNR	Feb	16	1986
2	02GC030	Catfish Creek at Aylmer	QR	P1-MNP	Dec	16	1986
3	02JE002	Gordon (Ruisseau) @ Pipawa	QR	Feb -1	Jan	1	1987
4	02JE017	Pipawa (Lac) @ Laniel	HR	Feb -1	Jan	1	1987
5	02JE015	Pipawa (Riviere) en Aval de Laniel	QR	Feb -1	Jan	1	1987
6	02AF020	McIntyre River above Thunder Bay	QR	Feb 3	Dec		1986
7	02GD022	Missouri Creek near Embro	QR	P1-MOE	Apr	1	1987
8	02FE017	North Saugeen River above Chesley	QR	P1-MNP	Dec	4	1986
9	02JE024	Ottawa River below Temiscaming	HR	Feb -1	Apr	1	1987
10	02EC018	Pefferlaw Brook near Utopia	QR	P1-MOE/MNP	Apr	1	1987
11	02JB017	Quinze (Lac des) @ Angliers	HR	Feb -1	Apr	1	1987
12	02JB011	Quinze (Lac des) @ la Pointe du Pin Rouge	HR	Feb -1	Apr	1	1987
13	02FA004	Sauble River at Allenford	QR	P1-MNR	Dec	19	1986
14	02JB012	Simard (Lac) @ LaForce	HR	Feb -1	Apr	1	1987
15	02HB023	Spencer Creek at Highway #5	QR	P2-MNR	Jan	1	1987
16	02JE025	Temiscamingue (Lac) @ Temiscaming	HR	Feb -1	Apr	1	1987
17	02JE026	Temiscamingue (Lac) @ Ville-Marie	HR	Feb -1	Apr	1	1987
18	02HA020	Twenty Mile Creek above Smithville	QR	P1-MNR	Nov	4	1986
19	02ED013	Wye River near Wyevale	QR	P1-MOE	Oct	21	1986

B HYDROMETRIC STATIONS DISCONTINUED  
 \*\*\*\*\*

1	04GC002	Albany River below Achapi Lake	QR	Feb -4	May	29	1986
2	0LHD006	Bowmanville Creek at Bowmanville	QR	Feb -3	Apr	1	1987
3	02HP016	Fronte Creek at Progreston	QR	P1-MNR	Dec	31	1986
4	02HB011	Fronte Creek near Zimmerman	QR	Feb -3	Apr	1	1987
5	02FA010	E Inlet Perch Lk Inlet #2 nr Chalk R	QR	Feb -1	Apr	1	1987
6	02FA017	Harris River at Highway #69	QR	Feb -3	Apr	1	1987
7	04JA002	Katinakagami River at Highway #11	QR	Feb -4	Apr	1	1987
8	02FE004	Maitland River near Donnybrook	QR	Feb -3	Apr	1	1987
9	02AB016	McIntyre River at Thunder Bay	QR	Feb -3	Jun	22	1986
10	02CD008	Nordic Mine Tail Pit #1 nr El Lk	QR	Feb -1	Jun	4	1986
11	02CD009	Nordic Mine Tail Pit #2 nr El Lk	QR	Feb -1	Jun	4	1986
12	02CD010	Nordic Mine Tail Pit #3 nr El Lk	QR	Feb -1	Jun	4	1986
13	02FC010	North Saugeen River near Parley	QR	P1-MNR	Sep	10	1986
14	02FA004	Perch Lk Inlet #1 nr Chalk River	QR	Feb -1	Apr	1	1987
15	02FA005	Perch Lk Inlet #2 nr Chalk River	QR	Feb -1	Apr	1	1987
16	02FA006	Perch Lk Inlet #3 nr Chalk River	QR	Feb -1	Apr	1	1987
17	02FA007	Perch Lk Inlet #4 nr Chalk River	QR	Feb -1	Apr	1	1987
18	02FA008	Perch Lk Inlet #5 nr Chalk River	QR	Feb -1	Apr	1	1987
19	04CA004	Severn R below Outlet of Deer Lk	QR	EP3-MOE	Feb		1987
20	04JC003	Sheboy River at Highway #11	QR	Feb -4	Apr	1	1987
21	02HD007	Soper Creek at Bowmanville	QR	Feb -3	Apr	1	1987
22	02FA009	Trib Perch Lk Inlet #2 nr Chalk R	QR	Feb 1	Apr	1	1987
23	02ED011	Wye River at Wyebridge	QR	P1-MOE	Jan	7	1987

TABLE C 1 (continued)

CHANGES IN GAUGING NETWORK - APRIL 2 1990 TO APRIL 1 1987

(Ontario Region Only)

C CHANGES IN FUNDING AND/OR CLASSIFICATION OF HYDROMETRIC STATIONS  
 \*\*\*\*\*

1	02JE019	Amable du Fond R at Samuel de Champlain Prov Park	QP	Fed -1 to P1-MNR	Apr	1 1987
2	02FF007	Bayfield River near Varna	QR	Fed -3 to FP2-MNR	Apr	1 1987
3	02FF009	Beaver River near Clarkburg	QR	Fed -3 to FP2-MNR	Apr	1 1987
4	02FB010	Bighead River near Meaford	QR	Fed -3 to FP2-MNR	Apr	1 1987
	02FC009	Bonnechere River near Castleford -funding classification unchanged but agreement partners changed from DOE/OR to Ottawa R Reg Rd/OR	QP	FP2-OH	Apr	1 1987
6	02ED007	Coldwater River at Coldwater	QP	Fed -3 to FP2-MOE	Apr	1 1987
7	02AF015	Currant River near Stepstone	QR	Fed -3 to FP2-MNP	Apr	1 1987
8	02A004	East Little Creek near Onash	QR	Fed -3 to FP2-MOE	Apr	1 1987
	02A006	Magnetawan River near Burks Falls	QR	Fed -4 to P1-MOE/MNR	Apr	1 1987
10	02FE002	Maitland River below Wincham	QR	P1-MNR FP1-MNR	Apr	1 1987
11	02JE020	Mattawa River below Rouillon Lake	QP	Fed -1 to P1-MNR	Apr	1 1987
12	02HC033	Mimico Creek at Kelington	QR	FP1-MNP to FP1-MOE/MNR	Apr	1 1987
13	02AB020	McIntyre River above Thunder Bay	QR	Fed -3 to P1-MNP	Apr	1 1987
14	02LE017	N Br S Nation R Nr Heckston	QR	P1-MNP to P2-MNR	Apr	1 1987
15	02EA005	N Magnetawan R nr Burks Falls	QR	Fed -4 to FP2-MNR	Apr	1 1987
16	02LB022	Payne River near Forwick	QR	P1-MNR to P2-MNR	Apr	1 1987
17	02EA004	Sable River at Allenford	QR	P1-MNR to P2-MNR	Apr	1 1987

D OTHER CHANGES IN THE HYDROMETRIC NETWORK  
 \*\*\*\*\*

1	02HY006	Beaver Creek near Marmora -gauge relocated upstream	QR	P1-MNP	Jul	23 1986
2	02GH011	Little River at Windsor -converted to waterlevel data only	HR	P1-MNR	May	1 1986
3	02ER004	N Br Mucklowe River at Fort Sydney -converted from manual to recorder	QR	P1-MNR	Aug	19 1986
4	02MC030	South Raisin River near Cornwall -gauge relocated upstream	QR	P1-MNR	Nov	25 1986
5	02LA016	Tay River at Port Elmsley -converted to seasonal (Mar 1-May 31)	QR	Fed -1	Apr	1 1987
6	02GE004	Innes River at Chatham converted from manual to recorder	HR	P1-MNR	Jul	30 1987

\*\* table re produced to reflect final names and numbers of the DPW station

TABLE C 1 (continued)  
 CHANGES IN GAUGING NETWORK - APRIL 2 1986 TO APRIL 1 1987  
 -----  
 (Ontario Region Only)

E SEDIMENT STATIONS ADDED  
 \*\*\*\*\*

1	02FB009	Beaver River near Clarkburg (Misc )	Fed -1-Sed	Jan 1	1987
2	02FB010	Bighead River near Meaford (Misc )	Fed -1-Sed	Jan 1	1987
3	02BA003	Little Pic River near Coldwell (Misc )	Fed -1-Sed	Jan 1	1987
4	02MB000	Lyn Creek near Lyn (Misc )	Fed -1-Sed	Jan 1	1987
5	02FB003	Pic River near Marathon (Misc )	Fed -1-Sed	Jan 1	1987
6	02FB007	Sydenham River near Owen Sound (Misc )	Fed -1-Sed	Jan 1	1987
7	02HF004	Trent River at Glen Ross (Misc )	Fed -1-Sed	Jan 1	1987
8	02HA006	Twenty Mile Crk at Ball's Falls (Misc )	Fed -1-Sed	Jan 1	1987

F SEDIMENT STATIONS DISCONTINUED  
 \*\*\*\*\*

1	02GC007	Big Creek near Walsingham (Contin )	Fed -1-Sed	Jan 1	1987
2	02HM007	Mapanee River at Camden East (Misc )	Fed -1-Sed	Jan 1	1987

G CHANGES TO FUNDING AND/OR CLASSIFICATION OF SEDIMENT STATIONS  
 \*\*\*\*\*

-- NIL --

H OTHER CHANGES IN THE SEDIMENT NETWORK  
 \*\*\*\*\*

1	02GC026	Big Otter Creek near Calton -converted from continuous to seasonal (ie open water only)	Fed -1-Sed	Jan 1	1987
2	02ED003	Nottawasaga River near Bester -converted from continuous to seasonal (ie open water only)	Fed -1-Sed	Jan 1	1987
3	02FE009	South Mattland River at Summerhill -converted from continuous to seasonal (ie open water only)	Fed -1-Sed	Jan 1	1987
4	02GD021	Innes River at Innerkip -converted from seasonal to miscellaneous	Fed -1-Sed	Jan 1	1987

I CONTRIBUTED STATIONS (HYDROMETRIC) ADDED  
 \*\*\*\*\*

-- NIL --

J CONTRIBUTED STATIONS (HYDROMETRIC) DISCONTINUED  
 \*\*\*\*\*

1	02EC103	Pfefferlaw Brook near Ujora - to be operated by WSC	QR	Contrib-MOE to P1-MOE/MNR	Apr 1 1987
---	---------	--	----	------------------------------	------------

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 \*\* title reproduced to reflect final name and numbers of the 9 DPW stations

TABLE C 2  
 CHANGES BETWEEN SCHEDULE A - 1986/1987 AND SCHEDULE A - 1987/1988  
 (Ontario Region Only)

FEDERAL CATEGORIES (HYDROMELIORIC)  
 \*\*\*\*\*

A FEDERAL 1 Net Change = -3

1	02JE019	Amable du Fond R. at S de Champlain P P	To P1-MNR	Apr	1	1987
2	02FA010	E Irit Perch Lt Inlet #2 nr Chalk R	Disc	Apr	1	1987
3	02JE002	Gordon (Ruisseau) a tipawa	New	Jan	1	1987
4	02JE017	tipawa (Lac) a Laniel	New	Jan	1	1987
5	02JE015	tipawa (Riviere) en Aval de Laniel	New	Jan	1	1987
6	02JE020	Mattawa River below Bouillon Lake	To P1-MNP	Apr	1	1987
7	02CD008	Nordic Mine Tail Dit #1 nr El Lk	Disc	Jun	4	1986
8	02CD009	Nordic Mine Tail Dit #2 nr El Lk	Disc	Jun	4	1986
9	02CD010	Nordic Mine Tail Dit #3 nr El Lk	Disc	Jun	4	1986
10	02JE024	Ottawa River below Temiscaming	New	Apr	1	1987
11	02FA004	Perch Lk Inlet #1 nr Chalk River	Disc	Apr	1	1987
12	02FA005	Perch Lk Inlet #2 nr Chalk River	Disc	Apr	1	1987
13	02FA006	Perch Lk Inlet #3 nr Chalk River	Disc	Apr	1	1987
14	02FA007	Perch Lk Inlet #4 nr Chalk River	Disc	Apr	1	1987
15	02FA008	Perch Lk Inlet #5 nr Chalk River	Disc	Apr	1	1987
16	02JB017	Quinze (Lac des) a Anabiers	New	Apr	1	1987
17	02JB011	Quinze (Lac des) a la Pointe du Pin Rouge	New	Apr	1	1987
18	02JP012	Simard (Lac) a LaForce	New	Apr	1	1987
19	02JE025	Lami Laminque (Lac) a Temiscaming	New	Apr	1	1987
20	02JE026	Temiscamingue (Lac) a Ville-Marie	New	Apr	1	1987
21	02FA009	Trib Perch Lk Inlet #2 nr Chalk River	Disc	Apr	1	1987
22	02LA016	Tay River at Port Elmsley	To Seas	Apr	1	1987

B FEDERAL 2 Net Change = 0

-- NIL --

C FEDERAL 3 Net Change = -10

1	02FE007	Bayfield River near Varna	To EP2-MNR	Apr	1	1987
2	02FE009	Beaver River near Clarkstura	To EP2-MNR	Apr	1	1987
3	02FE010	Bighead River near Meaford	To EP2-MNR	Apr	1	1987
4	02HB000	Bowmanville Creek at Bowmanville	Disc	Apr	1	1987
5	02HB011	Bronte Creek near Zimmerman	Disc	Apr	1	1987
6	02EB007	Coldwater River at Coldwater	To EP2-MOE	Apr	1	1987
7	02AB015	Current River near Stepstone	To EP2-MNR	Apr	1	1987
8	02HB004	East Oakville Creek near Omsah	To EP2-MOE	Apr	1	1987
9	02EA013	Harris Creek at Highway #69	Disc	Apr	1	1987
10	02FE004	Maitland River near Honeybrook	Disc	Apr	1	1987
11	02AB020	McIntyre River above Thunder Bay	New	Dec		1986
12	02AFC00	McIntyre River above Thunder Bay	To P1-MNP	Apr	1	1987
13	02AB016	McIntyre River at Thunder Bay	Disc	Jun	20	1987
14	02HD007	Soper Creek at Bowmanville	Disc	Apr	1	1987

D FEDERAL 4 Net Change = -5

1	4GC002	Alkany River below Annapis Lake	Disc	May	29	1986
2	01JAC02	Albion River at Highway #11	Disc	Apr	1	1987
3	02EA006	Magnetawan River near Burks Falls	To P1-MOE/ MNP	Apr	1	1987
4	02EA005	Magnetawan River nr Burks Falls	To EP2-MNR	Apr	1	1987
5	01JAC007	Onkay River at Highway #11	Disc	Apr	1	1987

TABLE C 2 (continued)  
 CHANGES BETWEEN SCHEDULE A - 1986/1987 AND SCHEDULE A - 1987/1988  
 (Ontario Region Only)

FEDERAL-PROVINCIAL CATEGORIES (HYDROMETRIC)  
 \*\*\*\*\*

A FEDERAL-PROVINCIAL 1 - MNP Net Change = 0

1	02FE002	Maitland River below Wingham	From P1-MNR	Apr 1	1987
2	02HC033	Mimico Creek at Islington	to P1-MOE/MNR	Apr 1	1987

B FEDERAL-PROVINCIAL 1 - MOE/MNR Net Change = +1

1	02HC033	Mimico Creek at Islington	From P1-MNR	Apr 1	1987
---	---------	---------------------------	-------------	-------	------

C FEDERAL-PROVINCIAL 2 - ONI HYD Net Change = 0

1	02FC007	Bonnechere River near Castleford -change in Federal partner from DOE to Ottawa River Reg Bd		Apr 1	1987
---	---------	---	--	-------	------

D FEDERAL-PROVINCIAL 2 - MOE Net Change = +2

1	02ED007	Coldwater River at Coldwater	From Fed -3	Apr 1	1987
2	02HB004	East Oakville Creek near Omagh	From Fed -3	Apr 1	1987

E FEDERAL-PROVINCIAL 2 - MNR Net Change = +5

1	02FE100	Bayfield River near Yarna	From Fed -3	Apr 1	1987
2	02FB009	Beaver River near Clarkstown	From Fed -3	Apr 1	1987
3	02FB010	Bighead River near Meaford	From Fed -3	Apr 1	1987
4	02AP015	Current River near Stepstone	From Fed -3	Apr 1	1987
5	02EA005	N Magnetawan R nr Burks Falls	From Fed -4	Apr 1	1987

F FEDERAL-PROVINCIAL 3 - MOE Net Change = -1

1	04CA004	Severn R below Outlet Deer Lake	Disc	Feb	1987
---	---------	---------------------------------	------	-----	------

G OTHER FEDERAL-PROVINCIAL Net Change = 0

-- No Changes to Remaining Federal-Provincial Categories --

\*\*\* table reproduced to reflect final names and numbers of DPW stations

TABLE C 2 (continued)  
 CHANGES BETWEEN SCHEDULE A - 1986/1987 AND SCHEDULE A - 1987/1988  
 (Ontario Region Only)

PROVINCIAL CATEGORIES (HYDROMETRIC)  
 \*\*\*\*\*

A PROVINCIAL 1 - ONT HYD Net Change = 0

-- NIL --

B PROVINCIAL 1 - OMOE Net Change = +1

1	02GD022	Missouri Creek near Entro	New	Apr 1 1987
2	02ED013	Wye River near Wyeville	New	Oct 21 1986
3	02ED011	Wye River at Wyebridge	Disc	Jan 7 1987

C PROVINCIAL 1 - OMNR Net Change = +2

1	01JE019	Amable du Fond R at S de Champlain P P	From Fed -1	Apr 1 1987
2	02HR022	Bronte Creek at Carlisle	New	Feb 1987
3	02HR016	Bronte Creek at Progreston	Disc	Dec 31 1986
4	02GL030	Catfish Creek at Aylmer	New	Dec 16 1986
5	02EE002	Maitland River below Wingham	To EP1-MNR	Apr 1 1987
6	02JE020	Mattawa River below Bouillon Lake	From Fed -1	Apr 1 1987
7	02AR020	McIntyre River above Thunder Bay	From Fed -3	Apr 1 1987
8	02EC015	North Sauguen River above Chesley	New	Dec 4 1986
9	02EP013	North Sauguen River near Parley	Disc	Sep 10 1986
10	02LP017	N Br S Nation River nr Heckston	To P2-MNR	Apr 1 1987
11	02LB022	Payne River near Berwick	To P2-MNR	Apr 1 1987
12	02EA004	Saulte River at Allenford	New	Dec 19 1986
13	02FA004	Saulte River at Allenford	To P2-MNR	Apr 1 1987
14	02HA020	Twenty Mile Creek above Smithville	New	Nov 4 1986
15	02GH011	Little River at Windsor	To W/L	May 1 1986
16	02EP004	N Br Muskoka River at Port Sydney	To Recor	Aug 19 1986
17	02GL004	Tnemes River at Latham	To Recor	Jul 30 1986

D PROVINCIAL 1 - OMOE/OMNP Net Change = +

1	02EA006	Magnetawan River near Burks Falls	From Fed -4	Apr 1 1987
2	02EC018	Pefferlaw Brook near Udora	From Contrib-MOE	Apr 1 1987

E PROVINCIAL 1 - ONT HYD /OMNP Net Change = 0

-- NIL --

F PROVINCIAL 2 - OMOE Net Change = 0

-- NIL --

++ table reproduced to reflect final names and numbers of DFW station

TABLE C 2 (continued)  
 CHANGES BETWEEN SCHEDULE A - 1986/1987 AND SCHEDULE A - 1987/1988  
 (Ontario Region Only)

G PROVINCIAL 2 - OMNR Net Change = +4

1	02LE017	N Br S Nation River near Heckston	From Pl-MNR	Apr 1	1987
2	02LE022	Payne River near Berwick	From Pl-MNR	Apr 1	1987
3	02FA004	Sauble River at Allenford	From Pl-MNR	Apr 1	1987
4	02HR023	Spencer Creek at Highway #5	New	Jan	1987

H PROVINCIAL 2 - OMOE/OMNR Net Change = 0

-- NIL --

SEDIMENT DATA CATEGORIES  
 \*\*\*\*

A FEDEPAL 1 - SEDIMENT Net Change = +6

1	02ER009	Beaver River near Clarksburg (Misc )	New	Jan 1	1987
2	02GC007	Big Creek near Walsingham (Contin )	Disc	Jan 1	1987
3	02ER010	Highway River near Meaford (Misc )	New	Jan 1	1987
4	02BA003	Little Pic River near Coldwell (Misc )	New	Jan 1	1987
5	02MB006	Lyn Creek near Lyn (Misc )	New	Jan 1	1987
6	02HM007	Napanee River near Camden East (Misc )	Disc	Jan 1	1987
7	02PR003	Pic River near Marathon (Misc )	New	Jan 1	1987
8	02FR007	Sydenham River near Owen Sound (Misc )	New	Jan 1	1987
9	02HR004	Trent River at Glen Ross (Misc )	New	Jan 1	1987
10	02HR006	Twenty Mile Creek at Ball's Falls (Misc )	New	Jan 1	1987
11	02GC006	Big Otter Creek near Calton	To Seas	Jan 1	1987
12	02ED003	Nottawasaga River near Ba ter	To Seas	Jan 1	1987
13	02FE007	South Maitland River at Summerhill	To Seas	Jan 1	1987
14	02GD021	Thames River at Innerkip	To Misc	Jan 1	1987

P PROVINCIAL 2 - SEDIMENT - OMNR Net Change = 0

-- NIL --

CONTRIBUTED DATA CATEGORIES  
 \*\*\*\*

A OPERATED BY PROVINCE OMOE Net Change = -1

1	02EC103	Pefferlaw Brook near Udora	To Pl-MOE/MNR	Apr 1	1987
---	---------	----------------------------	---------------	-------	------

E OTHER CONTRIBUTED CATEGORIES

-- No changes to Remaining Contributed Data Categories --

\*\*\*\* table is intended to reflect total number of stations and number of OPW stations





APPENDIX D

DERIVATION OF ACTUAL COSTS  
1986/87

TABLE D 1 - Salaries and Operating & Maintenance (O&M) Costs for Hydro-  
metric Network Operated by WRB Ontario Region 1986/87

TABLE D 2 - Derivation of Actual Operating Costs for Hydrometric Stations  
Operated by WRB Ontario Region By Funding Classification  
April 1 1986 - March 31 1987

TABLE D 3 Summary of Shareable Operating Costs by Agency for Hydro-  
metric Stations Operated by WRB Ontario Region 1986/87

TABLE D 4 - Actual Expenditures - Sediment Program 1986/87

TABLE D 5 - Summary of Construction Program Costs 1986/87



TABLE D 1  
SALARIES AND OPERATING & MAINTENANCE (O&M) COSTS FOR  
HYDROMETRIC NETWORK OPERATED BY WRB, ONTARIO REGION  
1986/87

<u>Salaries</u>			
Hydrometric Supervisors			\$199,905
Hydrometric Technicians			606 336
Other - Students part-time field help construction (minor maintenance) etc			36 576
			<u>\$842 817</u>
Less Salary for Sediment Network			<u>30,083</u>
Net Salaries for Hydrometric Network			<u>\$812,734</u>
<u>Operating &amp; Maintenance (O&amp;M)</u>			
	<u>Common</u>	<u>Conventional</u>	<u>Remote</u>
Transportation & Communications	\$121 231		
Professional & Special Services	42 066	\$ 13 270	
Rentals	12 113		\$137,668
Purchased Repairs & Upkeep	47 498		
Utilities Materials & Supplies	43 528	101,005	14 692
EDP Shareable Costs <sup>1</sup>	20 759		
Repair & Replacement Costs for Current Meters <sup>2</sup>	7 100		
Vehicle Depreciation	35 534		
Equipment Depreciation	<u>19,253</u>		
TOTAL	\$349 082	\$114 275	\$152 360

NOTE <sup>1</sup> Based on 1985/86 costs plus 2.8% (Government Price Index)  
(Ceiling costs as per National Coordinating Committee Meeting  
- February 6 1985) Pages 71 and 72 of Compendium Report

<sup>2</sup> See page 77 of Compendium Report

TABLE D 2  
DERIVATION OF ACTUAL OPERATING COSTS FOR STATIONS  
OPERATED BY WRB ONTARIO REGION BY FUNDING CLASSIFICATION  
APRIL 1 1986 to MARCH 31 1987

Agency	# of Flow Stations		# of Water Level Stations		Equivalent Station Yrs of Record (Fiscal)		Total Cost	
	Remote	Conventional	Remote	Conventional	Remote	Conventional	Remote	Conventional
Federal (1-4)	18 <sup>1</sup>	121 <sup>2</sup>	1 <sup>3</sup>	7 <sup>4</sup>	17 17	113 91	\$140 828	\$ 408 026
Fed/Prov 1 (MOE)	0	5	0	0	0 00	5 00	0	17 910
Fed/Prov 1 (MNR)	0	8	0	0	0 00	8 00	0	28 656
Fed/Prov 2 (OH)	1	3 <sup>5</sup>	0	0	1 00	3 00	8 202	10 746
Fed/Prov 2 (MNR)	0	1	0	1	0 00	1 50	0	5 373
Fed/Prov 3 (MOE)	10	1	0	0	9 50	1 00	77 919	3 582
Prov 1 (OH)	1	4	0	1	1 00	4 50	8 202	16 119
Prov 1 (MOE)	0	35 <sup>7</sup>	0	0	0 00	33 21	0	118 958
Prov 1 (MNR)	2	155 <sup>8</sup>	0	3 <sup>9</sup>	2 00	148 22	16 404	530 924
Prov 1 (MOE/MNR)	0	3	0	0	0 00	3 00	0	10 746
Prov 1 (OH/MNR)	0	3	0	0	0 00	3 00	0	10 746
Prov 2 (MOE)	0	3	0	0	0 00	3 00	0	10 746
Prov 2 (MOE/MNR)	0	1 <sup>10</sup>	0	0	0 00	0 25	0	896
Prov 2 (MOE/MNR)	0	1	0	0	0 00	1 00		3,582
	32	344	1	12	30 67	328 59	\$251 555	\$1 177 010

- NOTE
- 1 Includes 1 station with 2 months
  - 2 Includes 4 stations with no data 1 station with 1 5 months 1 station with 2 months 3 stations with 3 months 2 stations with 4 months 1 station with 6 25 months 1 station with 7 months
  - 3 Includes 1 station with no data
  - 4 Includes 1 station with 3 months
  - 5 Does not include 6 stations operated by Ontario Hydro for Federal on a cost share basis
  - 6 Includes 1 station with 6 months
  - 7 Includes 1 station with 3 months 1 station with 5 months 1 station with 8 months 1 station with 11 months 1 station with 11 4 months
  - 8 Includes 2 stations with no data 1 station with 1 2 months 1 station with 2 months 3 stations with 3 months 1 station with 4 months
  - 9 Includes 1 station with 10 7 months
  - 10 Includes 1 station with 3 months

Unit Costs			
Conv = Sal + O&M	812,734 00	+ 349,082 00	+ 114,275 00
	359 26	359 26	328 59
	2 262	972	348 = \$3 582
Remote = Sal + O&M	812,734 00	+ 349,082 00	+ 152,360 00
	359 26	359 26	30 67
	2,262	972	4,968 = \$8,202

TABLE D 3  
SUMMARY OF SHAREABLE OPERATING COSTS BY AGENCY FOR  
HYDROMETRIC STATIONS OPERATED BY WRB, ONTARIO REGION  
1986/87

Ontario Ministry of Natural Resources

Conventional	100% Prov 1 (MNR)	\$530,924/1	=	\$ 530 924
	100% Prov 1 (MNR)	896/1	=	896
	50% Fed/Prov 1 (MNR)	28,656/2	=	14 328
	50% Fed/Prov 2 (MNR)	5,373/2	=	2,686
	50% Prov 1 (MOE/MNR)	10 746/2	=	5 373
	50% Prov 1 (OH/MNR)	10,746/2	=	5,373
	50% Prov 2 (MOE/MNR)	3,582/2	=	1,791
Remote	100% Prov 1 (MNR)	16 404/1	=	<u>16,404</u>
	TOTAL			\$ 577 775

Ontario Ministry of Environment

Conventional	100% Prov 1 (MOE)	\$118 958/1	=	\$ 118 958
	100% Prov 2 (MOE)	10,746/1	=	10,746
	50% Fed/Prov 1 (MOE)	17 910/2	=	8 955
	50% Fed/Prov 3 (MOE)	3,582/2	=	1,791
	50% Prov 1 (MOE/MNR)	10 746/2	=	5 373
	50% Prov 2 (MOE/MNR)	3 582/2	=	1 791
Remote	50% Fed/Prov 3 (MOE)	77,919/2	=	<u>38,959</u>
	TOTAL			\$ 186 573

Ontario Hydro

Conventional	100% Prov 1 (OH)	\$ 16 119/1	=	\$ 16 119
	50% Fed/Prov 2 (OH)	10 746/2	=	5 373
	50% Prov 1 (MNR/OH)	10,746/2	=	5 373
Remote	100% Prov 1 (OH)	8,202/1	=	8 202
	50% Fed/Prov 2 (OH)	8,202/2	=	<u>4,101</u>
	TOTAL			\$ 39 168

TOTAL PROVINCIAL SHAREABLE HYDROMETRIC COST \$ 803,516

Federal

Conventional	100% Fed 1-4	\$408 026/1	=	\$ 408 026
	50% Fed/Prov 1 (MOE)	17 910/2	=	8 955
	50% Fed/Prov 1 (MNR)	28 656/2	=	14,328
	50% Fed/Prov 2 (OH)	10,746/2	=	5 373
	50% Fed/Prov 2 (MNR)	5,373/2	=	2 687
	50% Fed/Prov 3 (MOE)	3 582/2	=	1 791
Remote	100% Fed 1-4	140 828/1	=	140 828
	50% Fed/Prov 2 (OH)	8 202/2	=	4 101
	50% Fed/Prov 3 (MOE)	77 919/2	=	<u>38,960</u>

TOTAL FEDERAL SHAREABLE HYDROMETRIC COST \$ 625 049

GRAND TOTAL SHAREABLE HYDROMETRIC OPERATING COST \$1,428,565

TABLE D 4  
ACTUAL EXPENDITURES - SEDIMENT PROGRAM  
1986/87

<u>Total Ontario Region Program</u>	<u>Federal</u>	<u>Provincial</u>	<u>Total</u>
Number of station (full time equivalents)	9	1	10
a) Salary	\$27 075 15 + \$ 3 008 35 = \$30 083 50		
b) Operation & Maintenance (O&M)			
Transportation & Communications	\$ 959 00	\$ 115 00	\$ 1,074 00
Professional & Special Services	3 922 55	606 75	4 529 30
Purchase Repair & Upkeep	107 00	164 00*	271 00
Utilities Materials & Supplies	575 00	324 80	899 80
Publications	-	-	2,428 00
Subtotal	\$ 7 991 55	\$ 1 210 55	\$ 9 202 10
*Depreciated Cost of Sediment Sampler			
c) Laboratory Costs (Provincial Station)			
<u>Humber River at Elder Mills</u>	<u>Cost/Sample</u>	<u># Samples</u>	<u>Total Cost</u>
Bottom Withdrawal	\$47 86	2	\$ 95 72
Filtration	11 88	84	997 92
Dissolved Solids	2 26	22	49 72
Total Provincial Laboratory Costs			<u>\$ 1,143 36</u>
d) Laboratory Costs (Federal Stations)			
<u>Ausable River near Springbank</u>	<u>Cost/Sample</u>	<u># Samples</u>	<u>Total Cost</u>
Filtration	\$11 88	86	\$ 1 021 68
Dissolved Solids	2 26	19	42 94
Total Cost			<u>\$ 1,064 62</u>
<u>Big Creek near Walsingham</u>			
Filtration	11 88	105	1 247 40
Dissolved Solids	2 26	17	38 42
Total Cost			<u>\$ 1,285 82</u>

TABLE D 4 (continued)

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<u>Big Otter Creek near Calton</u>			
Filtration	11 88	38	451 44
Dissolved Solids	2 26	10	22 60
Total Cost			<u>\$ 474 04</u>
<u>Credit River at Erindale</u>			
Filtration	\$11 88	129	\$ 1 532 52
Dissolved Solids	2 26	27	61 02
Total Cost			<u>\$ 1,593 54</u>
<u>Nottawasaga River at Baxter</u>			
Filtration	\$11 88	70	\$ 831 60
Dissolved Solids	2 26	18	40 68
Total Cost			<u>\$ 872 28</u>
<u>South Martland River at Summerhill</u>			
Filtration	11 88	18	213 84
Dissolved Solids	2 26	6	13 56
Total Cost			<u>\$ 227 40</u>
<u>South Nation River near Plantagenet Springs</u>			
Filtration	\$11 88	41	\$ 487 08
Dissolved Solids	2 26	16	36 16
Total Cost			<u>\$ 523 24</u>
<u>Don River at Todmorden</u>			
Filtration	11 88	134	1 591 92
Dissolved Solids	2 26	22	49 72
Sieve	17 46	7	122 22
Total Cost			<u>\$ 1,763 86</u>
<u>MacGregor Creek at Chatham</u>			
Filtration	11 88	34	403 92
Dissolved Solids	2 26	14	31 64
Total Cost			<u>\$ 435 56</u>

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TABLE D 4 (continued)

<u>Sydenham River at Florence</u>			
Filtration	\$11 88	31	\$ 368 28
Dissolved Solids	2 26	12	27 12
Total Cost			<u>\$ 395 40</u>
<u>Northern Miscellaneous Program</u>			
Filtration	11 88	13	154 44
Dissolved Solids	2 26	13	29 38
Total Cost			<u>\$ 183 82</u>
<u>Southern Miscellaneous Program</u>			
Filtration	\$11 88	146	\$ 1,734 48
Dissolved Solids	2 26	131	296 06
Total Cost			<u>\$ 2,030 54</u>
Total Federal Laboratory Costs			<u>\$10,850 12</u>
e) Laboratory Costs (Projects)			
<u>NWRI St Clair Detroit River</u>			
Evaporation	\$ 3 40	38	\$ 129 20
Filtration	11 88	45	534 60
Dissolved Solids	2 26	24	54 24
Sieve	17 46	6	104 76
Hydrometer	31 55	2	63 10
Total Cost			<u>\$ 885 90</u>
<u>NHRI McKenzie River--Cost Recovered</u>			
Sieve	\$17 46	2	\$ 34 92
Hydrometer	31 55	51	1,609 05
Total Cost			<u>\$ 1,643 97</u>
<u>Goderich Harbour</u>			
Sieve	\$17 46	21	\$ 366 66
Hydrometer	31 55	6	189 30
Total Cost			<u>\$ 555 96</u>



TABLE D 4 (continued)

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<u>St Mary's River</u>			
Filtration	\$11 88	19	\$ 225 72
Dissolved Solids	2 26	6	13 56
Sieve	17 46	6	104 76
Hydrometer	31 55	6	<u>189 30</u>
Total Cost			<u>\$ 533 34</u>
Total Project Laboratory Costs (does not include NHRI)			<u>\$ 1,975 20</u>
f) Summary of Provincial Sediment Costs			
Salary	\$ 3 008 35		
O&M	1 210 55		
Laboratory	<u>1,143 36</u>		
	<u>\$ 5,362 26</u>		
g) Summary of Federal Sediment Costs			
Salary	\$27,075 15		
O&M	7 991 55		
Laboratory	<u>12,825 32</u>		
	<u>\$47,892 02</u>		
h) Total Sediment Program Costs (Provincial and Federal)			
Salary	\$30 083 50		
O&M	9 202 10		
Laboratory	<u>13,968 68</u>		
	<u>\$53,254 28</u>		

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TABLE D 5  
SUMMARY OF CONSTRUCTION PROGRAM COSTS\*  
1986/87

Project	Federal		Provincial - MOE		Provincial - MNR		Provincial - OM		Total	
	Estimated	Actual**	Estimated	Actual	Estimated	Actual	Estimated	Actual	Estimated	Actual
New Stations	\$ 78 000	\$ 0	\$ 0	\$ 0	\$ 52 000	\$38 558	\$ 0	\$ 0	\$130 000	\$ 38 558
Station Relocations	2 500	2 537	3 000	2 698	23 300	17 181	0	0	28 800	22 416
Controls	0	0	6 500	11 041	0	0	0	0	6 500	11 041
Cableways	0	0	0	0	0	0	0	0	0	0
Purchase of Construction Materials	1 220	1 220	0	0	0	0	0	0	1 220	1 220
Station Upgrading	10 000	5 953	0	0	32 200	16 245	11 700	8 886	53 900	31 084
Major Maintenance	<u>10,200</u>	<u>12,388</u>	<u>1,400</u>	<u>1,577</u>	<u>10,000</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>21,600</u>	<u>13,965</u>
TOTAL	\$101 920	\$22 098***	\$10 900	\$15 316	\$117 500	\$71 984	\$11 700	\$ 8 886	\$242 020	\$118 284

Does not include construction work carried out by WRB Winnipeg Office in N W Ontario

\* Cost of instrumentation not included Labour materials and equipment supplied directly by agency are not included

\*\*\* Includes \$9 405 in Major Maintenance work completed by WRB for the Canadian Hydrographic Service

APPENDIX E

ONTARIO REGION TABLES  
(not including portion of the network operated  
in N W Ontario by WRB Manitoba)

- TABLE E 1 - Water Quantity Surveys Gauging Station Data for 1986/87
- TABLE E 2 - Water Quantity Surveys Comparative Gauging Station Data  
April 1 1975 to April 1 1986
- TABLE E 3 - Water Quantity Surveys Detailed Gauging Station Data  
1986/87
- TABLE E 4 - Water Quantity Surveys Total Program Costs and Shareable  
Costs for 1986/87
- TABLE E 5 - Water Quantity Surveys Summary of Schedules D' and 'F'  
1986/87
- TABLE E 6 - Water Quantity Surveys Comparison - Scheduled and Actual  
Costs for 1986/87



REGION Ontario

NOTE All tables do not include data for the Northwest Ontario Network operated by Manitoba District

TABLE E 1  
WATER QUANTITY SURVEYS  
GAUGING STATION DATA FOR 1986/87

Number of Stations <sup>1</sup>			Changes During 1986/87 <sup>2</sup>		Station Designation April 1 1986			
April 1 1985	April 1 1986	Change	Added	Discontinued	Federal	Federal/Provincial	Provincial	Contributed
471 <sup>3</sup>	478 <sup>3</sup>	+7	19 <sup>4</sup>	23	143 (40)	36 <sup>3</sup> (0)	205 (1)	94 (0)

\* Bracket Sediment Stations

<sup>1</sup> Includes contributed data stations

<sup>2</sup> Stations operated by Water Resources Branch

<sup>3</sup> Includes 6 stations operated by OH for Federal use

<sup>4</sup> Includes 8 stations operated for OPW in Quebec

TABLE E 2  
WATER QUANTITY SURVEYS  
COMPARATIVE GAUGING STATION DATA APRIL 1 1975 TO APRIL 1 1986

Federal Stations			Federal/Provincial Stations			Provincial Stations			Total Stations		
Apr 1/75	Apr 1/86	Chge	Apr 1/75	Apr 1/86	Chge	Apr 1/75	Apr 1/86	Chge	Apr 1/75	Apr 1/86	Chge
142	143	+1	48	36	-12	152	205	+53	342	384	+42

TABLE E 3  
WATER QUANTITY SURVEYS  
DETAILED GAUGING STATION DATA 1986/87

F-1	F-2	F-3	F-4	Total F	F/P-1	F/P-2	F/P-3	Total F/P	P-1	P-2	Total P	Contributed	Total-All
57 (40)	0	61	25	143 (40)	13	12	11	36 (0)	201 (1)	4	205 (1)	94 (0)	478 (41)

Bracket Sediment Stations in all Categories

TABLE E 4  
 WATER QUANTITY SURVEYS  
 TOTAL PROGRAM COSTS & SHAREABLE COSTS FOR 1986  
 (X \$1000)

Total Program Costs					Shareable Costs						
P/Years	Salaries	Oper	Capital	Total	P/Years	Salaries	Oper	Construction	Total	F Share	P Share
47 5	1 650 2	896 2	390 3	2 936 7	27 1	883 2	659 8	108 9	1 651 9	705 6	946 3

TABLE E 5  
 WATER QUANTITY SURVEYS  
 SUMMARY OF SCHEDULES D/F - 1986/87

Streamflow & Water Level		Sediment		Total
Operation	Construction	Operation	Construction	
\$805 955	\$141 775	\$4 200	0	

TABLE E 6  
 WATER QUANTITY SURVEYS  
 COMPARISON - SCHEDULED & ACTUAL COSTS FOR 1986/87  
 (Dollars)

Salary & Operations		Construction		Total			Annual Payment Received	Received Minus Actual
Sch D/F	Actual Cost	Sch D/F	Actual Cost	Sch D/F	Actual Cost	Difference		
\$810 155	\$834 892	\$141 775	\$117 911	\$951 930	\$952 803	-\$873	\$935 130 <sup>1</sup>	\$17 673

<sup>1</sup> Includes \$6 510 WRB paid to OH for oper b stations

APPENDIX F

NATIONAL REPORT TABLES  
FOR THE PROVINCE OF ONTARIO

- TABLE F 1 - Water Quantity Surveys Gauging Station Data for 1986/87
- TABLE F 2 - Water Quantity Surveys Comparative Gauging Station Data  
April 1 1975 to April 1 1986
- TABLE F 3 - Water Quantity Surveys Detailed Gauging Station Data  
1986/87
- TABLE F 4 - Water Quantity Surveys Total Program Costs and Shareable  
Costs for 1986/87
- TABLE F 5 - Water Quantity Surveys Summary of Schedules D' and F'  
1986/87
- TABLE F 6 - Water Quantity Surveys Comparison - Scheduled and Actual  
Costs for 1986/87





PROVINCE Ontario

NOTE All tables include data for the Northwest Ontario Network operated by Manitoba District

TABLE F 1  
WATER QUANTITY SURVEYS  
GAUGING STATION DATA FOR 1986/87

Number of Stations <sup>1</sup>			Changes During 1986/87 <sup>2</sup>		Station Designation April 1 1986			
April 1 1985	April 1 1986	Change	Added	Discontinued	Federal	Federal/Provincial	Provincial	Contributed
555 <sup>3</sup>	561 <sup>3</sup>	+6	21 <sup>4</sup>	27	* 189 (40)	* 39 (0) <sup>3</sup>	* 205 (1)	128

\* Bracket Sediment Stations

<sup>1</sup> Includes contributed data stations

<sup>2</sup> Stations operated by Water Resources Branch

<sup>3</sup> Includes 6 stations operated by Ontario Hydro for Federal use

<sup>4</sup> Includes 8 stations operated by WRB Ontario for DPM in Quebec effective April 1/87

TABLE F 2  
WATER QUANTITY SURVEYS  
COMPARATIVE GAUGING STATION DATA APRIL 1 1975 TO APRIL 1 1986

Federal Stations			Federal/Provincial Stations			Provincial Stations			Total Stations		
Apr 1/75	Apr 1/86	Chge	Apr 1/75	Apr 1/86	Chge	Apr 1/75	Apr 1/86	Chge	Apr 1/75	Apr 1/86	Chge
202	189	-13	57	39	-18	155	205	+50	414	433	+19

TABLE F 3  
WATER QUANTITY SURVEYS  
DETAILED GAUGING STATION DATA 1986/87

F-1	F-2	F-3	F-4	Total F	F/P-1	F/P-2	F/P-3	Total F/P	P-1	P-2	Total P	Contributed	Total All
74 (40)	1	86	28	189 (40)	16	12	11	39	201 (1)	4	205 (1)	128	561 (41)

Bracket Sediment Stations in all Categories

**TABLE F 4**  
**WATER QUANTITY SURVEYS**  
**TOTAL PROGRAM COSTS & SHAREABLE COSTS FOR 1986/87**  
**(X \$1000)**

Total Program Costs					Shareable Costs						
P/Years	Salaries	Oper	Capital	Total	P/Years	Salaries	Oper	Construction	Total	F Share	P Share
50 8	1 759 2	966 2	400 0	3 125 4	30 4	981 6	727 5	133 9	1 843 0	891 7	951 3

**TABLE F 5**  
**WATER QUANTITY SURVEYS**  
**SUMMARY OF SCHEDULES D/F - 1986/87**

Streamflow & Water Level		Sediment		Total
Operation	Construction	Operation	Construction	
\$805 955	\$141 775	\$4 200	0	\$951 930

**TABLE F 6**  
**WATER QUANTITY SURVEYS**  
**COMPARISON - SCHEDULED & ACTUAL COSTS FOR 1986/87**  
**(Dollars)**

Salary & Operations		Construction		Total			Annual Payment Received	Received Minus Actual
Sch D/F	Actual Cost	Sch D/F	Actual Cost	Sch D/F	Actual Cost	Difference		
\$810 155	\$839 904 <sup>1</sup>	\$141 775	\$117 911	\$951 930	\$957 815 <sup>1</sup>	-\$5 885	\$940 142 <sup>1</sup>	-\$17 673

<sup>1</sup> Includes \$6 510 paid by WRB to OH to operate 6 stations (inc in Schedule D) and \$5 012 MOE paid to WRB Manitoba District to operate 3 F/P stations in the lower Rainy River watershed (not inc in Schedule D)

Agr-ONT-9

AUTHOR

Prov of Ont & IW/L, Guelph

TITLE CANADA/ONTARIO COST-SHARING

AGREEMENT FOR WATER QUANT SURVEYS

DATE

BORROWER'S NAME

Borrowed

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