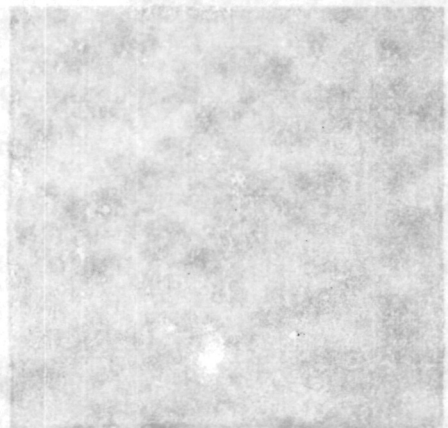
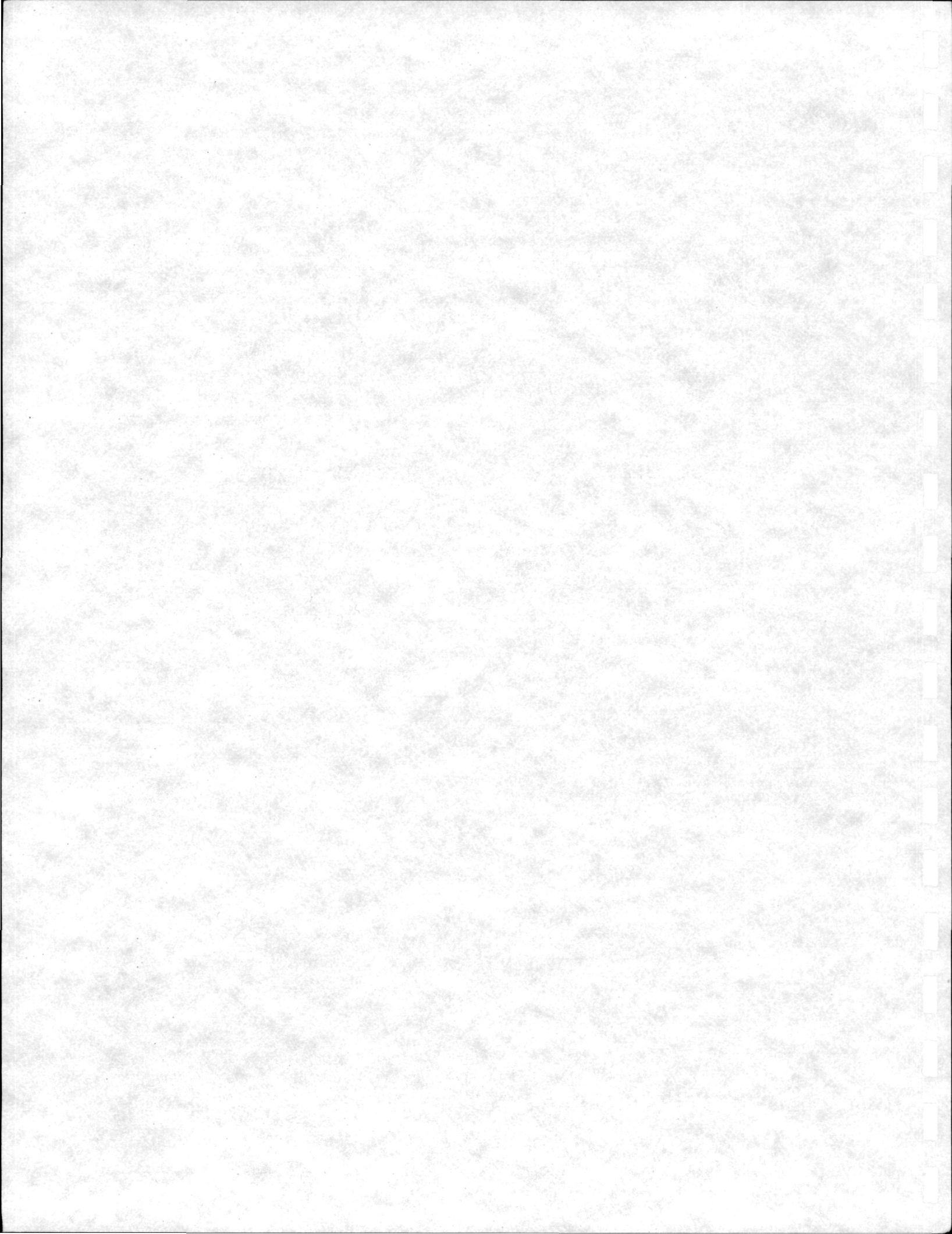


**CANADA/ONTARIO
COST SHARING AGREEMENT
FOR
WATER QUANTITY SURVEYS**

**ANNUAL REPORT
1988/1989**

APRIL 1990





TO Ministry of Environment - Dr J S Ashman
Ministry of Natural Resources - Mr M G Lewis
Administrators for Ontario

Environment Canada - 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 1988/1989

Province of Ontario

Government of Canada



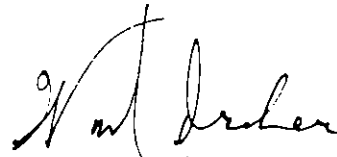
R Fox
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Environment Canada



L A Logan
Ontario Ministry of
the Environment



W M Archer
Environment Canada

Ontario Hydro



R P Metcalfe
Ontario Hydro

April 1990

**CANADA/ONTARIO
COST SHARING AGREEMENT
FOR
WATER QUANTITY SURVEYS**

**ANNUAL REPORT
1988/1989**

APRIL 1990

EXECUTIVE SUMMARY

This is the fourteenth 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 1985/1986 to coordinate network studies also held two meetings during the year

Effective April 1, 1988, the Ontario network, excluding 126 contributed data stations, consisted of 435 hydrometric stations Of this number 382 were operated by the Water Resources Branch in Guelph, 47 were operated by the Manitoba District of the Water Resources Branch and 6 were operated by Ontario Hydro The sediment network consisted of 53 continuous, seasonal and miscellaneous stations operated by Water Resources Branch, Guelph

During 1988/1989 a total of 32 new, reactivated or transferred hydrometric stations were added to the network and 7 stations were discontinued A total of 28 new miscellaneous sediment stations were added and 1 miscellaneous station was discontinued The WRB construction crew had one of its busiest seasons ever as 28 new hydrometric stations were constructed and 4 relocations were completed An additional PY was allocated from Headquarters because of this increase in stations and work done for third parties

For the 1988/1989 reporting period, WRB Ontario region responded to 508 requests for data, advice and information related to the hydrometric and sediment networks. A keen interest was expressed by all provincial parties in using compact disk technology which WRB began to use and demonstrate the latter part of 1988/1989.

The most notable streamflow conditions was the very low flows experienced in many streams in Southern Ontario during the summer. Streams with longer periods of record experienced low flows in a range that had occurred only once or twice in the last 20 years. Many good measurements were made to define or verify the lower end of rating curves.

The unit cost of operating a station during 1988/1989 was \$3,425 per station-year for conventional stations and \$8,545 per station-year for remote stations. These costs represent an increase of 8.2% over 1987/1988 for conventional stations and 9.4% for remote stations. The total shareable portion of the program, including costs for the network in Northwest Ontario, was \$2,226,500 of which the Provincial share was \$1,129,253. The three provincial agencies shared the actual cost as follows:

Ontario Ministry of Natural Resources	\$ 822,329
Ontario Ministry of Environment	263,883
Ontario Hydro	<u>43,041</u>
Total	<u><u>\$1,129,253</u></u>

The Water Resources Branch paid Ontario Hydro \$7,340 for the operation of six Federal/Provincial stations. The net amount paid by Ontario Hydro was therefore \$35,701.

In 1989/1990 there are firm plans for another 12 new gauging stations to the network as well as additional miscellaneous sediment stations. Meanwhile, because of financial constraints, MNR will develop more detailed plans and proposals for reductions in the stations funded by the Ministry. For these reasons, network planning and evaluation will continue to be an important activity.

On a National level, WRB is expected to make significant progress in planning the modernization of the network and will begin some of the software development.

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1 0 INTRODUCTION

This is the fourteenth 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 these networks was established by a Memorandum of Agreement between Canada and Ontario in 1975. A sample copy of the Agreement 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, 1988/1989, 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 the three provincial agencies to Environment Canada and by Environment Canada to Ontario Hydro.

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 construction and operation of stations designated "Provincial" and 50% of the specified costs of operation and construction of stations designated "Federal/Provincial" The basic water level 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 Provincial parties also sponsor a number of stations that are paid by other provincial interests

In 1977 a set of national guidelines were developed for designating stations in the above categories In 1982/1983, 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 Directorate The Manitoba District prepares a separate Annual Report for this

portion of the network in Northwest Ontario which for 1988/1989, included only Federal stations. Tables in Appendices E and F provide data for the province and for the Ontario network operated from the regional office in Guelph.

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 1988/1989, and gives highlights on construction and operation of the network over the past year. The section concludes with a summary of network evaluation/planning. Section 4 highlights activities related to services and products and Section 5 provides information on network costs and the shareable portion for each party. Section 6 briefly identifies some activities and issues that will be particularly significant in the future.

2 0 COMMITTEE ACTIVITIES

Members of the Coordinating Committee during 1988/1989 were

L J Kamp (Chairman) - Environment Canada
W M Archer (Secretary) - Environment Canada
P N Gryniewski/R Fox - Ontario Ministry of Natural Resources
L A Logan - Ontario Ministry of Environment
R P Metcalfe - Ontario Hydro

The Committee held meetings on July 6, 1988 and February 2, 1989 Highlights of each meeting were as follows

Meeting No 26 -- July 6, 1988

- Discussed the proposed construction program for 1989/1990 Accurate projections are required so that Environment Canada can build these items into the Main Estimates in August and receive adequate Third Party funding in the following year
- Members were requested to advise NEPS of any suggestions for relocating a northern station in 1989/1990 that would improve the inventory
- MNR advised that the Ministry has a serious financial shortfall and that consideration is being given to reducing the network funded by MNR as

well as transferring funding responsibilities for some stations to the Conservation Authorities. A meeting of the Federal and MNR Administrators was scheduled to discuss the matter and consider all factors.

- Environment Canada reported on the Soil and Water Environmental Enhancement Program (SWEEP) stations that are being constructed and operated in Southwestern Ontario.
- WRB presented options as a result of the Task Force's review of hydro-metric operations and workload.

Meeting No 27 -- February 2, 1989

- MNR updated members on the current funding status of the Ministry and the possibility of a cutback in stations.
- Schedule 'A' for 1989/1990 was reviewed and approved along with the station unit costs.
- Environment Canada reported that a review of the Federal network was underway so that stations that have become a lower priority can be replaced by stations for high priority areas, possibly Northern Ontario.
- The proposed network of 7 seasonal and 73 miscellaneous sediment stations for 1989/1990 was tabled for members' comments and input.

- It was noted that a number of stations will have artificial controls installed in order to improve the quality of data and also reduce the number of measurements caused by unstable controls

- Provincial agencies were briefed on the WRB Modernization proposal, the CD ROM, and the Direct Readout Ground Station (DRGS)

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. It should be noted that the total number of stations on April 1, 1975, was 414 which has increased to 435 as of April 1, 1988. Of this number, 382 were operated by the Water Resources Branch in Guelph, 47 were operated by the Manitoba District of the Branch and 6 were operated by Ontario Hydro. During the twelve year period the network reached a maximum of 449 stations in 1984 and a minimum of 396 stations in 1977.

A number of agencies, like Ontario Hydro and 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 126 as of April 1, 1988. 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, 1988.

In 1988/1989 WRB continued to add seasonal and miscellaneous stations to the sediment network. This was done to provide additional coverage in Ontario at a 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, 1988 there were 53 continuous, seasonal and miscellaneous stations. All were operated by WRB, Ontario Region.

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

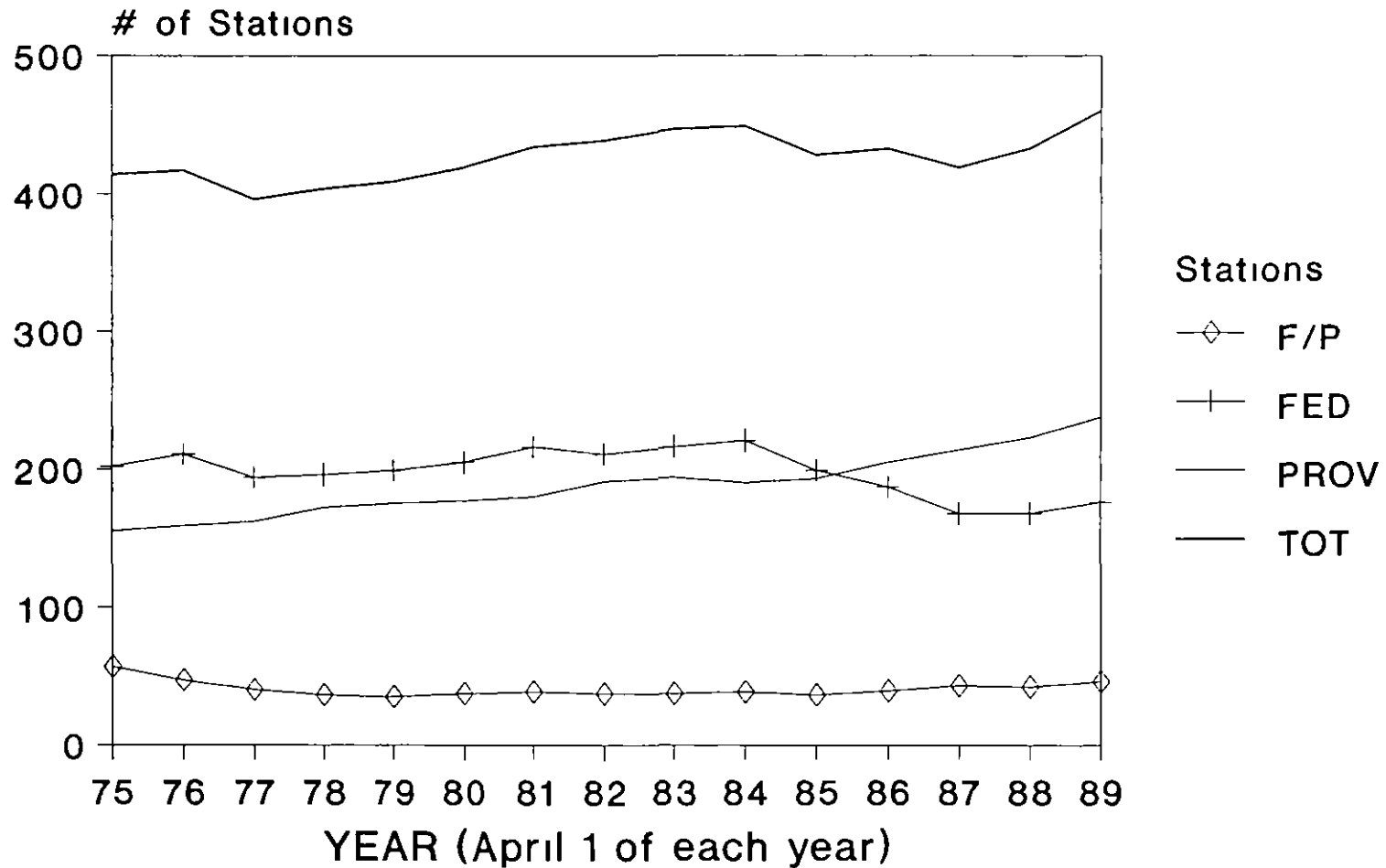


Figure 1

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 operated by WRB Guelph are located in Quebec.

3.2 Network Changes During 1988/1989

During 1988/1989, 32 hydrometric stations were added and 7 discontinued in the province. The list of added stations includes 2 that were reactivated and one that had been operating as a "contributed" station.

A number of changes were also made to the sediment network, all involving Federal Stations. Twenty-eight (28) new miscellaneous stations were added and one continuous station was changed to miscellaneous. The net increase in sediment stations was 27. Annual sediment network reviews are carried out to enhance the sediment data base as well as to meet user needs. The additional sediment stations, include sampling sites on the Great Lakes Tributaries to assist in the interpretation of pollutant loadings to the Great Lakes System.

3.3 Network Construction and Maintenance

The WRB, Ontario Region Construction Section completed one of the busiest seasons ever. In order to successfully complete the planned program two construction crews were formed. Projects included 28 new stations, 3

relocations, 13 artificial controls, 6 shelter upgrades and 4 cableway upgrades. Also, 42 minor maintenance projects were included in the program. Categories of construction projects include

a) Field Investigations

Included in this category were

- 1) 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, 30 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>
02MB010 Buell's Creek at Brockville (new)	P2 - MNR
02ED019 Copeland Creek near Penetanguishene (new)	FP1 - MOE
02HB025 Credit River at Norval (new)	P2 - MNR
02AB021 Current River at Stepstone (relocated)	FP2 - MNR
02ED017 Hog Creek near Victoria Harbour (new)	FP1 - MOE
02ED015 Mad River below Avening (relocated)	FP1 - MOE
02BD005 Magpie River at Esnagi Lake (Remote)(new)	P2 - MNR
02ED021 Matchedash Bay above Highway #69 (new)	P2 - MNR
02ED020 Matchedash Bay below Highway #69 (new)	P2 - MNR
02ED022 North River near Coldwater (new)	P2 - MNR
02ED023 North River near Lovering (Misc)(new)	P2 - MNR
02ED024 North River at the Falls (new)	P2 - MNR
02HA024 Oswego Creek at Canboro (new)	P2 - MNR
02HA023 Redhill Creek at Albion Falls (new)	P2 - MNR
02HA022 Stoney Creek at Stoney Creek (new)	P2 - MNR
02ED018 Sturgeon River at Sturgeon Bay (new)	FP1 - MOE
02BF013 Trib to Norberg Creek at Turkey Lake (new)	FED-1
02ED016 Trib to Wye River below Elmvale (new)	FP1 - MOE
02HA021 Welland River near Binbrook (new)	P2 - MNR
02HA025 Welland River at the Welland Canal (new)	P2 - MNR
02HM009 W Br Little Cataraqui Creek at Kingston (new)	P2 - MNR
02HC039 W Duffins Creek above Green River (relocated)	P1 - MOE
Mountjoy Creek near Timmins (new)(operated outside CSA by CA)	
Newboro Lake at Chaffey's Locks (new)(operated outside CSA by PC)	

***** SWEEP STATIONS *****

02GH013	Fifth Concession Drain near Essex (test)(new)	FED-1
02GH014	Second Concession Drain near Essex (control)(new)	FED-1
02GC032	Holtby Drain at Concession #7 (Kettle Ctl)(new)	FED-1
02GC033	Madier Drain at Concession #7 (Kettle test)(new)	FED-1
02GD025	Goring Drain at Concession #13 (Pittcock test)(new)	FED-1
02GD024	Webber Drain at Highway #59 (Pittcock Ctl)(new)	FED-1

c) Upgrading of Stations

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. Twenty-three (23) 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.

Details of the 1988/1989 Construction program are provided in the Annual Construction Report 1988/1989 which is available from the WRB office in Guelph

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

During the year, 370.5 equivalent station years of data were collected by the Ontario Region. Equivalent station years take into account the type of station (water level or discharge), seasonal operation, record loss, startup of new stations and discontinued stations during the year. The net hydrometric P.Y.s expended to collect the data which includes hydrometric supervisors, technicians, term staff and students, was 27.4 or approximately 13.5 station units per P.Y.

Field staff conducted a total of 2,913 discharge measurements and made an additional 1,787 station visits during the reporting period. Many of the measurements and visits were made to stations with unstable controls. Of particular note are the six SWEEP stations which required an above normal number of visits and measurements because of channel conditions and highly variable flows that are event related.

The most unusual streamflow conditions were the low flows that were recorded during June and July in Southern Ontario. Below normal precipitation, caused flows in many streams with long term records to experience flows in ranges that have only been observed once or twice in the last 20 years. Staff were able to take many measurements to update rating curves at these lower flows.

A Task Force, established within WRB Ontario Region to review and study changes in operations and methods and procedures that would help reduce technician workload, completed its report during the year. Two of the options proposed, the installation of more artificial controls and the hiring of students, have been implemented to the extent possible with existing resources.

In an effort to cut down program costs and eliminate the associated inconvenience and risk of using propane for heating wells, the North Bay Sub-Office insulated wells at nine sites. None of the wells froze during the winter and insulation of more wells in 1989/1990 is planned.

More and more stations in Ontario are being equipped with devices that allow users to access data from off-site on a real time basis. About 65% of the stations in Ontario are so equipped. These devices not only improve services to users but allow technicians to plan their trips to improve data quality and reduce loss of data. One data collection platform (DCP) was installed at the remote hydrometric station on Magpie River at Esnagi Lake for the retransmission of data via satellite for Great Lakes Power Company. Three more units were also installed in May 1988 to complete the 5 year DCP Expansion Program. A total of 30 DCP's were installed during the 5 year program. These DCP's have allowed WRB to monitor conditions at the 30 remote sites, to schedule trips better in order to correct any problems identified and to better schedule field trips to obtain discharge measurements to define stage-discharge rating curve over the entire range of flows. The installation of DCP's has therefore resulted in reduced record loss, less estimation of data

and a more reliable stage-discharge curve, thus improving the overall data quality at the remote site. In addition, a number of real time data units were installed at southern stations at the request of clients and WRB made arrangements with 2 additional conservation authorities to service such equipment. This brings the total number of such arrangements with Provincial and other Federal agencies to 16.

WRB continued to operate a small sediment laboratory in support of the network and special surveys. A total of 505 samples were submitted and 707 analyses performed. An estimated 1.0 person year was utilized for the sediment program in field, office and laboratory work.

A number of meetings of the Streamflow Network Liaison Committee were held. Members of the committee include selected representatives of Conservation Authorities and the Assistant Regional Engineer, WRB. Items addressed included specialized equipment and network operation.

3.5 Network Evaluation/Planning and Other Studies

a) Hydrometric

Network evaluation and planning studies are carried out under the terms of the Canada/Ontario Cost Sharing Agreement to ensure the hydrometric network provides the required data at lowest cost. Due to ever changing data requirements and costs, network evaluation and planning is an on-going activity.

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 meetings on May 17, 1988 and February 23, 1989. Attendees at one or both meetings included R. Phinney (Chairman, WRB), B. Whitehead (Member, MOE), C. Stevens (Member, OH), M. Odell (Member, MNR), H. Goertz (WRB), J. Power (WRB), W. Bilozor (WRB). Minutes of each meeting were distributed to members/attendees, the Coordinating Committee, and WRB offices in Winnipeg and Ottawa.

The Network Evaluation and Planning Sub-committee completed a report in March 1989 entitled "Plan to Improve Hydrometric Network for Estimating Hydrologic Characteristics in Ontario". The plan calls for the construction of 3 new federally funded stations as resources become available. The new stations will be located on the Pukaskwa River, Chapleau River, and the Attwood River. These stations will significantly improve the network for the purpose of estimating hydrologic characteristics.

WRB started work on a fact sheet entitled "Hydrologic Characteristics of Selected Ontario Rivers". The fact sheet will give various types of hydrologic information for three large rivers in Southern Ontario, Grand River, Saugeen River, Thames River.

Ontario was well represented at the national workshop on network evaluation and planning, held in Winnipeg October 5-6, 1988. The purpose of the workshop was for federal and provincial representatives to discuss how the process of network evaluation and planning should be implemented across Canada. Six people from the Canada/Ontario Coordinating Committee and the Network Evaluation and Planning Sub-committee hosted a display on Ontario activities and participated in the formal presentations. Workshop proceedings have been prepared and distributed by WRB Headquarters.

b) Sediment

A number of activities were carried out to enhance the Sediment Surveys Program in the Region. Several recommendations in the National and Regional Action Plans were carried out. One recommendation was the implementation of the Sediment Station Management Plan (SMP). These provide data and information on objectives, types of data and other summary information. In addition they allow a yearly technical assessment of the objectives which provide specific input for work planning. Of a total of 151 (active and discontinued) stations, 138 SMP's were completed with recommendations for future data collection.

4 0 SERVICES AND PRODUCTS

4 1 Data Dissemination

During the reporting period, WRB responded to 508 requests for data, advice and information related to the hydrometric and sediment networks. Some 3,679 station years of record were disseminated. In addition a large number of telemetry units were accessed directly by data users.

Data products were supplied to clients during the years in various formats and using several different media. Data book publications were updated/distributed. Surface Water Data 1987, Historical Streamflow Summary, Water Level Publications, Sediment Publications. Some data requests were answered with data on floppy diskette. WRB began to use CD-ROM technology for extraction of selected historical data. Computer accounts were continued for access by several data clients via computer communications. Many requests were answered by photocopy of selected portions of hardcopy data archives. Conventional methods are being used to provide data and further developments are underway to improve methods utilizing new technologies.

4 2 Computer System

The WRB computer system functioned well and was utilized extensively during the year. Much of the equipment has been used for quite some time and some maintenance was required. A new development was the installation of a MicroVAX computer system in the Thunder Bay Sub-Office. This multi-user

system allows data computations by the sub-office staff. Data are exchanged with the main computer system in Guelph via computer communications (i.e. using modems) or by transfer of computer tapes (i.e. TK50).

4.3 New Technology and Services

The Water Resources Branch enhanced its level of service to the water resources community by obtaining a CD-ROM reader and a CD-ROM optical disk containing the daily water level and streamflow data for all of Canada. This compact disk technology makes it possible for the Guelph office of WRB to store volumes of data much larger than was previously possible. As a result, the Guelph office can now respond to data requests that previously had to be referred to Headquarters in Ottawa. In addition, the compact disk can provide summary statistics (e.g. minimum monthly flow) that have not been readily available to data users in the past. Copies of the CD-ROM optical disk, and training on how to use the system, will be given to the Provincial members of the Coordinating Committee in early 1989/90.

The Water Resources Branch, through a contract with NUCOR Computer Resources Inc., began implementing computerized geographical information system (GIS) in the Guelph office. The following types of water resource information will be entered into the GIS:

- the drainage system (locations of major lakes and rivers)
- the locations of water use/regulation projects
- the locations of all hydrometric stations

- the watershed boundary for each hydrometric station
- other information on each hydrometric station such as drainage area, types of data, and period of record

The GIS will provide several major benefits. It will help the Water Resources Branch to manage (store, retrieve, update, etc.) massive volumes of water resource data/information in a more efficient, economical manner. Drainage areas will be easily computed from the digital watershed boundaries. Output from the GIS (maps showing watershed information, etc.) will be useful in hydrologic studies and other activities. The result is that the Water Resources Branch will be able to provide a better, more cost effective service to the water resources community.

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 \$3,925 for conventional stations and \$8,545 for remote stations. Table 1 gives a comparison of the actual unit costs for 1988/89 to estimated unit costs for 1988/89 and actual costs for 1987/88.

**TABLE 1
COMPARISON OF UNIT COSTS FOR
OPERATING WATER QUANTITY STATIONS**

	1987/88 Actual Costs	1988/89 Estimated Costs	1988/89 Actual Costs	% Increase(+) Decrease (-) From 1987/88
Conventional	\$3,626	\$3,920	\$3,925	+ 8.2%
Remote	\$7,812	\$9,440	\$8,545	+ 9.4%

Station unit costs for conventional stations were very close to the estimated costs while remote stations were considerably less than estimated. Inflation caused some increase but the most impact for conventional stations was caused by salaries where term employees and students were used to offset the higher than normal workload in terms of stations per technician.

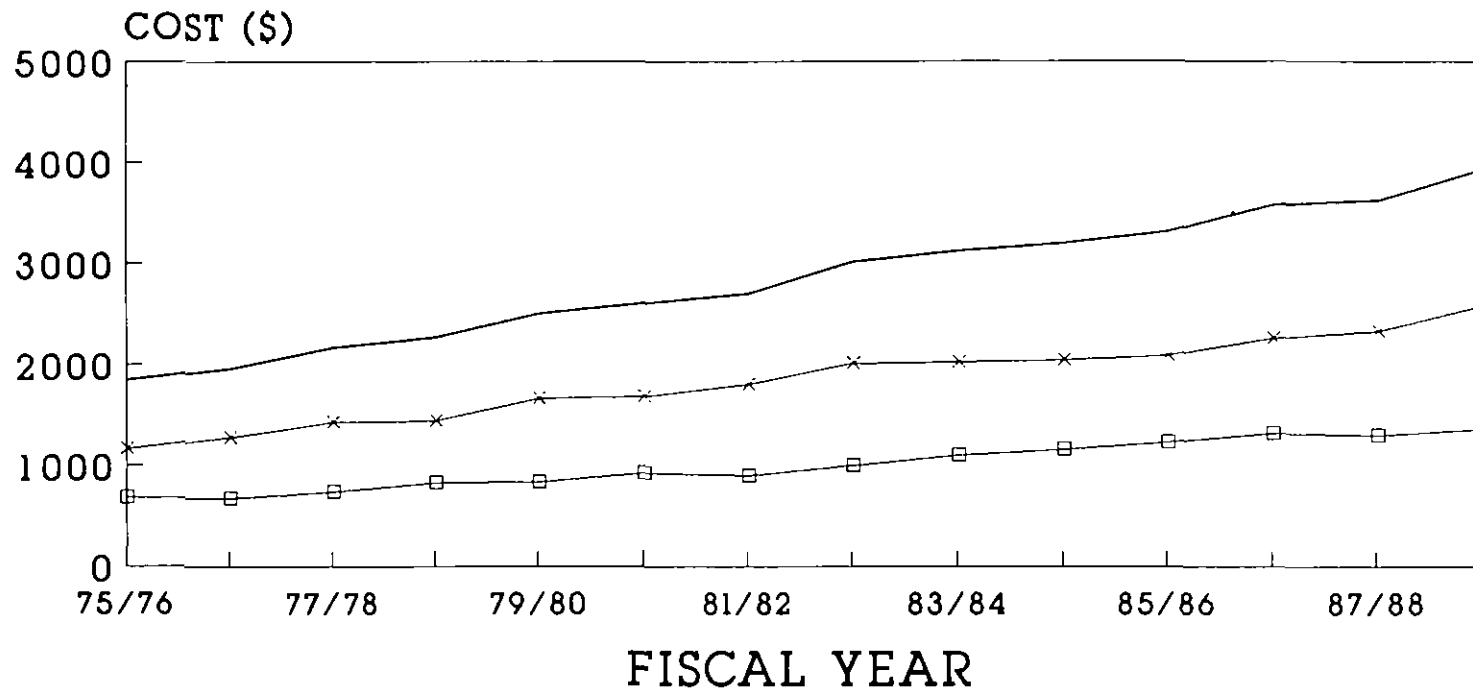
Figures 2 and 3 give a comparison of unit costs per station for remote and conventional stations since 1975.

The total shareable cost for construction of new stations, purchase and installation of equipment, and operation and maintenance of the hydrometric and sediment networks in the province was \$2,226,500 of which the provincial share was \$1,129,253 or 50.7%. Table 2 gives a summary of the provincial costs and the amount paid by the Water Resources Branch to Ontario Hydro for the operation of six Federal/Provincial stations. The tables in Appendix D show how these costs were derived.

Over and under payments by the province have been reconciled up to and including the year 1987/88. Table 3 summarizes the over and under payments since 1975 and indicates when payments were balanced. For 1988/89, MOE under paid by \$876, while MNR and Ontario Hydro over paid by \$131 and \$1,307 respectively.

Additional cost information is provided in Appendix E (WRB Ontario Region) and Appendix F (entire province). This information is used for the purpose of national reporting.

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



Costs
—x— SAL —□— O & M ——— TOTAL

Figure 2

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

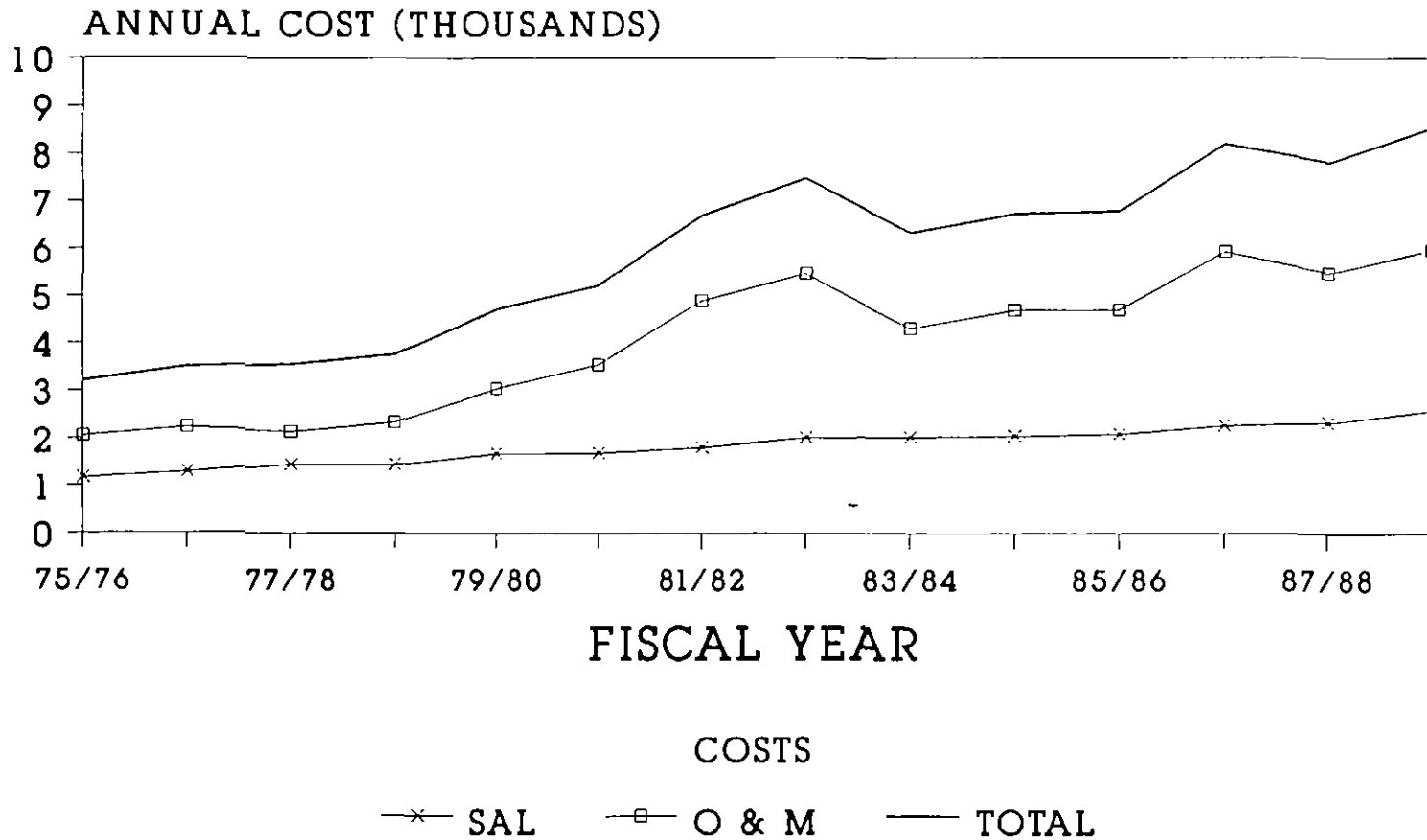


Figure 3

TABLE 2
SUMMARY OF PROVINCIAL COSTS
1988/1989

	Schedule 'D	Recovered and Paid During 1988/1989	Actual Cost	Difference (cost recover- ed less actual cost)
a) Hydrometric Operations ¹				
1 MNR	\$ 692,960	\$ 702,020	\$ 702,925	- \$ 905
2 MOE	225,740	225,740	226,616	- 876
3 OH	43,560	43,560	42,253	+ 1,307
4 WRB (to OH)	<u>7,340</u>	<u>7,340</u>	<u>7,340</u>	<u>0</u>
Subtotal	\$ 969,600	\$ 978,660	\$ 979,134	- \$ 474
b) Sediment				
1 MNR	<u>\$ 4,600</u>	<u>\$ 4,600</u>	<u>\$ 3,564</u>	<u>+ \$ 1,036</u>
Subtotal	\$ 4,600	\$ 4,600	\$ 3,564	+ \$ 1,036
c) Construction ²				
1 OH	\$ 0	\$ 0	\$ 0	\$ 0
2 MNR	80,000	112,970	112,970	0
3 MOE	<u>39,800</u>	<u>34,166</u>	<u>34,166</u>	<u>0</u>
Subtotal	\$ 119,800	\$ 147,136	\$ 147,136	\$ 0
d) Specialized Equipment ³				
1 MOE	\$ 2,600	\$ 3,101	\$ 3,101	\$ 0
2 MNR	6,000	2,870	2,870	0
3 OH	<u>1,200</u>	<u>788</u>	<u>788</u>	<u>0</u>
Subtotal	<u>\$ 9,800</u>	<u>\$ 6,759</u>	<u>\$ 6,759</u>	<u>\$ 0</u>
TOTAL	<u>\$1,103,800</u>	<u>\$1,137,155</u>	<u>\$1,136,593</u>	<u>+ \$ 562</u>
Total Actual Cost MNR				
		-	\$ 822,329	
Total Actual Cost MOE				
		-	263,883	
Total Actual Cost OH				
		-	43,041	
Total Actual Cost WRB Paid to OH				
		-	<u>7,340</u>	
TOTAL			\$1,136,593	

NOTES

- 1 Credits or debits from previous year over and under payments not included in above figures
- 2 Includes purchase of specialized equipment and projects sponsored but not paid by these agencies
- 3 Includes only the operation of specialized equipment

TABLE 3
SUMMARY OF OVER/UNDER PAYMENTS
1975/1976 TO DATE

	<u>1975/76¹</u>	<u>1976/77¹</u>	<u>1977/78¹</u>	<u>1978/79²</u>	<u>1979/80³</u>	<u>1980/81³</u>	<u>1981/82⁴</u>
<u>Hydrometric Operations</u>							
MNR	-\$6,071	+\$5,008	-\$ 542	+\$2,058	-\$4,667	+\$28,692	+\$19,537
MOE	- 2,293	- 1,275	+ 3,493	+ 3,190	- 4,028	+ 8,505	+ 3,286
OH	+ 354	+ 1,427	0	+ 300	- 354	+ 1,506	+ 574
<u>Sediment</u>							
MNR	- 4	- 431	+ 523	+ 24	+ 1,329	+ 2,603	+ 4,454

NOTE + Indicates overpayment, i e , the funds recovered are more than actual costs
- Indicates under payment, i e , the funds recovered are less than actual costs
1 Over/under payments for 1975/76, 1976/77 and 1977/78 were reconciled on the second quarter billing for 1978/79
2 Over/under payments for 1978/79 were reconciled on the second quarter billing for 1979/80
3 Over/under payments for 1979/80 and 1980/81 were reconciled on the second quarter billing for 1982/83
4 Over/under payments for 1981/82, 1982/83 and 1983/84 were reconciled on the second quarter billing for 1984/85

TABLE 3 (continued)
SUMMARY OF OVER/UNDER PAYMENTS
1975/1976 TO DATE

	<u>1982/83⁴</u>	<u>1983/84⁴</u>	<u>1984/85⁵</u>	<u>1985/86⁵</u>	<u>1986/87⁶</u>	<u>1987/88⁷</u>	<u>1988/89</u>
<u>Hydrometric Operations</u>							
MNR	+\$28,334	+\$ 1,072	+\$25,623	+\$14,113	-\$7,520	+\$2,604	-\$ 905
MOE	+ 2,393	+ 11,617	+ 11,323	- 4,526	- 6,993	- 6,816	- 876
OH	+ 745	+ 2,745	+ 3,571	+ 1,229	- 1,998	- 633	+ 1,307
<u>Sediment</u>							
MNR	+ 1,749	- 1,142	- 2,360	- 259	- 1,162	- 50	<u>+ 1,036</u>
							+\$ 562

NOTE + Indicates overpayment, i e , the funds recovered are more than actual costs
- Indicates under payment, i e , the funds recovered are less than actual costs
5 Over/under payments for 1984/85 and 1985/86 were reconciled on the second quarter billing for 1986/87
6 Over/under payments for 1986/87 were reconciled on the third quarter billing for 1987/88
7 Over/under payments for 1987/88 were reconciled on the fourth quarter billing for 1988/89

6 0 FUTURE PROGRAMS AND ISSUES**a) Network Expansion/Reduction**

Despite possible future reductions by MNR because of resource constraints, the Ontario network is expected to continue to have new stations added because of specific projects related to water quality assessments and other environmental data needs. In 1989/90 another 12 stations are planned for construction. Because of these additional stations, another PY for recoverable work has been requested by WRB.

With growing interest in sediment data, particularly as it relates to interpretation of water quality and computation of pollutant loadings, miscellaneous sediment stations will continue to be added to the network where there are hydrometric stations. This data can be collected at little increase in cost because WRB personnel are already at the sites for hydrometric purposes.

b) Modernization

Concrete steps were taken toward implementing the WRB modernization plan known as Project 2000. The plan, beginning in 1989/1990, consists of four phases and will cost \$10 million capital and \$1 0 million O&M over a 12 year period. It will introduce a new generation of field and office equipment to eliminate operational problems.

with outdated equipment and software. One of the most significant aspects is the phasing out of analogue recorders and replacing them with digital recorders. The new system will also make it possible to integrate various types of environmental sensors at selected stations with the capability of providing real time data.

Ontario will actively pursue modernization of the network and is receptive to testing and demonstrating equipment as well as having any pilot projects. In this regard, work has begun on acoustic velocity meters and installations were made on the Welland Canal and the Otonabee River at Lakefield. These units will be evaluated for possible installation at other sites.



APPENDIX A

SCHEDULE 'A'

MEMORANDUM OF AGREEMENT BETWEEN

GOVERNMENTS OF CANADA
AND
ONTARIO

FOR WATER QUANTITY SURVEYS

1988/1989

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

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
 SCHEDULE A
 FISCAL YEAR 1988/1989 (FINAL)

INDEX OF HYDROMETRIC CODES

GAUGE INFORMATION

H=WATER LEVEL STATION
 M=MANUAL STATION
 P=POWERPLANT RATING
 Q=DISCHARGE STATION
 R=RECORDING STATION
 S=SUMMATION OF FLOW

DATA MEASURED

N=NORTHERN REMOTE STATIONS
 S=SEDIMENT SAMPLING
 Q=WATER QUALITY SAMPLING
 T=CONT WATER TEMPERATURE
 M=TELEMARK
 L=SATELLITE STATION
 D=TELEPHONE DATA LOGGERS

RESPONSIBILITY CODE - TECHNICIAN

<u>S C ONTARIO AREA</u>	<u>S E ONTARIO AREA</u>	<u>S W ONTARIO AREA</u>	<u>NORTH BAY AREA</u>	<u>OTTAWA AREA</u>	<u>THUNDER BAY AREA</u>
10=BOB REES	20=REG LEBLANC	30=WAYNE YOUNG	40=DON COPELAND	50=DOUG ROWE	60=ROSS BISHOP
11=B HENRIKSON	22=B RUSSELL	31=D LAWLOR	41=D JACKSON	51=G WIGGINS	61=A CREIGHTON
12=M MASLEN	23=M ABRAHAMSE	32=J FIRMAN	42=J DOUCET	52=S TEEPLE	62=K MILLER
13=D GIBB	24=S SAUNDERS	33=K MUNN	43=E WAUGH	53=J MYKE	
14=B SMITH			44=B PESSAH		
			45=P LAVOIE		

RESPONSIBILITY CODE - CONTRIBUTOR

00=WINNIPEG DISTRICT STATIONS
 72=DEPARTMENT OF PUBLIC WORKS (KEY IN DATA)
 73=ST LAWRENCE SEAWAY AUTHORITY (KEY IN DATA)
 74=DEPT FISHERIES & OCEANS FRESH WATER INSTITUTE
 75=PARKS CANADA TRENT-SEVERN WATERWAY (KEY IN DATA)
 76=INT LAKE SUPERIOR BOARD OF CONTROL (KEY IN DATA)
 77=INT ST LAWRENCE BOARD OF CONTROL (CORNWALL - KEY IN DATA)
 78=COORD COMMITTEE ON GREAT LAKES (BURLINGTON - KEY IN DATA)
 79=M E D S - TIDES AND WATER LEVELS OTTAWA (VIA WRB HQ S)
 80=ONTARIO HYDRO (NORTH BAY)
 81=ONTARIO HYDRO (GUELPH - RUN MANUAL PROGRAM)
 82=ONTARIO HYDRO (GUELPH - KEY IN DATA)
 83=ONTARIO HYDRO (THUNDER BAY)
 84=ONT MIN OF ENVIRONMENT (SENDS OUTPUT CARDS AND PRINTOUTS)
 90=ABITIBI-PRICE INC (NORTH BAY)
 93=EDDY FOREST PRODUCTS LIMITED (NORTH BAY)
 95=ORILLIA LIGHT AND POWER (KEY IN DATA)
 96=SPRUCE FALLS POWER AND PAPER CO LTD (NORTH BAY)
 97=GREAT LAKES POWER COMPANY LTD
 98=INTERNATIONAL NICKEL CO OF CANADA LTD (NORTH BAY)

FUNDING CODES FOR STATIONS

AA =FEDERAL 1 FED HYD PROGRAMS OPERATED BY FED(WSC)
 BA =FEDERAL 2 INTERPROV WATERS OPERATED BY FED(WSC)
 CA =FEDERAL 3 INTERNATL WATERS OPERATED BY FED(WSC)
 DA =FEDERAL 4 NAT WAT QUAN INV OPERATED BY FED(WSC)
 FAD =FED-PROV 1 OPERATED BY FED(WSC) OMOE
 FAE =FED-PROV 1 OPERATED BY FED(WSC) OMNR
 FAF =FED-PROV 1 OPERATED BY FED(WSC) OMOE/OMNR
 GAC =FED-PROV 2 OPERATED BY FED(WSC) ONT HYDRO
 GAD =FED-PROV 2 OPERATED BY FED(WSC) OMOE
 GAE =FED-PROV 2 OPERATED BY FED(WSC) OMNR
 GBC =FED-PROV 2 OPERATED BY PROVINCE ONT HYDRO
 HAD =FED-PROV 3 OPERATED BY FED(WSC) OMOE
 IAC =PROVINCIAL 1 OPERATED BY FED(WSC) ONT HYDRO
 IAD =PROVINCIAL 1 OPERATED BY FED(WSC) OMOE
 IAE =PROVINCIAL 1 OPERATED BY FED(WSC) OMNR
 IAF =PROVINCIAL 1 OPERATED BY FED(WSC) OMOE/OMNR
 IAG =PROVINCIAL 1 OPERATED BY FED(WSC) ONT HYD/OMNR
 JAD =PROVINCIAL 2 OPERATED BY FED(WSC) OMOE
 JAE =PROVINCIAL 2 OPERATED BY FED(WSC) OMNR
 JAF =PROVINCIAL 2 OPERATED BY FED(WSC) OMOE/OMNR
 RAT =CONTRIBUTED DATA OPERATED BY FED(WSC) MEDS/CHS
 RBC =CONTRIBUTED DATA OPERATED BY PROV ONT HYD
 RBE =CONTRIBUTED DATA OPERATED BY PROV OMNR
 RDP =CONTRIBUTED DATA OPERATED BY PRIVATE AGENCY
 REO =CONTRIBUTED DATA OPERATED BY FED(OTHER)
 SAA =FED 1 SED PROG OPERATED BY FED(WSC)
 SJAE=PROV 2 SED PROG OPERATED BY FED(WSC) OMNR

NOTES 1) DRAINAGE AREAS ALL FIGURES SHOWN ARE IN METRIC UNITS (KM2)
 2) UNITS COLUMN ALL GAUGES OPERATE IN METRIC UNITS EXCEPT AS NOTED

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
 SCHEDULE A
 FISCAL YEAR 1988/1989 (FEDERAL)

MAY 2 1988

FEDERAL 1 FEDERAL DEPT PROGRAMS OPERATED BY FEDERAL (WSC)

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02JD013	0 00	G	43	HR		AA	BAY LAKE AT LATCHFORD		1
02EC002	1520 00	G	13	QR	M	AA	BLACK RIVER NEAR WASHAGO		2
02JC008	1780 00	G	43	QR	L	AA	BLANCHE RIVER ABOVE ENGLEHART		3
02HF003	1270 00	G	22	QR	M	AA	BURNT RIVER NEAR BURNT RIVER		4
02MA002	394 00	G	51	QR	M	AA	CATARAQUI R AT CHAPPEYS LOCKS (OCT15-MAY15)		5
02HK003	1990 00	G	22	QR	D	AA	CROWE RIVER AT MARMORA		6
02HH001	241 00	G	22	QR		AA	EELS CREEK BELOW APSLEY		7
02DD017	0 00	G	45	QM		AA	FRENCH RIVER AT CHAUDIERE DAM		8
02DD016	0 00	G	45	QM		AA	FRENCH RIVER AT PORTAGE DAM		9
02JE002	0 00	G	42	QR		AA	GORDON RUISSEAU AT KIPAWA		10
02BF002	1160 00	G	44	QR	S L	AA	GOULAIS RIVER NEAR SEARCHMONT MISC SED		11
02HF002	1280 00	G	22	QR	M	AA	GULL RIVER AT NORLAND		12
02JE015	0 00	G	42	QR	M	AA	KIPAWA RIVIERE BELOW LANIEL		13
02JB017	0 00	G	43	HR	D	AA	LAC DES QUINZE AT ANGLIERS		14
02JB011	0 00	G	43	HR	D	AA	LAC DES QUINZE AT LA POINTE DU PIN ROUGE		15
02JE017	0 00	G	42	HR	D	AA	LAC KIPAWA AT LANIEL		16
02JB012	0 00	G	43	HR		AA	LAC SIMARD AT LAFORCE		17
02JE025	0 00	G	42	HR		AA	LAC TEMISCAMINGUE AT TEMISCAMING		18
02JE026	0 00	G	42	HR	M	AA	LAC TEMISCAMINGUE AT VILLE MARIE		19
02EC015	0 00	G	22	HR		AA	LAKE SIMCOE NEAR GAMEBRIDGE		20
02JE011	0 00	G	43	HR	D	AA	LAKE TIMISKAMING AT HAILEYBURY		21
02DD020	0 00	G	45	QM		AA	LITTLE FRENCH RIVER AT OKIKENDAWT ISLAND		22
02EC013	0 00	G	13	QM		AA	MIDDLE SEVERN RIVER AT WASHAGO		23
04LJ001	8940 00	G	41	QR	D	AA	MISSINAIBI RIVER AT MATTICE		24
02HH002	326 00	G	22	QR		AA	MISSISSAGUA RIVER BELOW MISSISSAGUA LAKE		25
02KF006	2900 00	G	51	QR	SD	AA	MISSISSIPPI RIVER AT APPLETON MISC SED		26
02BF005	11 50	G	44	QR		AA	NORBERG CREEK(SITE A) ABOVE BATCHAMANA RIVER		27
02BF012	1 15	G	44	QR		AA	NORBERG CREEK(SITE F)AT OUTLET OF BATCHAMANA L		28
02BF009	2 02	G	44	QR		AA	NORBERG CREEK (SITE E) BELOW BATCHAMANA LAKE		29
02BF007	5 40	G	44	QR		AA	NORBERG CRK (SITE C)AT OUTLET OF LIT TURKEY L		30
02BF006	8 64	G	44	QR		AA	NORBERG CREEK(SITE B)AT OUTLET OF TURKEY LAKE		31
02BF008	4 08	G	44	QR		AA	NORBERG CREEK (SITE D) BELOW WISHART LAKE		32
02EA010	149 00	G	41	QR	T	AA	NORTH MAGNETAWAN RIVER ABOVE PICKEREL LAKE		33
02KF005	90900 00	G	50	QR	M	AA	OTTAWA RIVER AT BRITANNIA		34
02LB010	0 00	G	53	HR	D	AA	OTTAWA RIVER AT CUMBERLAND		35
02JE013	0 00	G	43	HR	M	AA	OTTAWA RIVER AT MATTAWA		36
02JE024	0 00	G	42	HR		AA	OTTAWA RIVER BELOW TEMISCAMING		37
02KA003	7 30	G	52	QR	T	AA	PERCH LAKE OUTLET NEAR CHALK RIVER		38
02KB001	4120 00	G	52	QR	M	AA	PETAWAWA RIVER NEAR PETAWAWA		39
02LA012	3120 00	G	51	QR	D	AA	RIDEAU RIVER BELOW MANOTICK		40
02LA018	0 00	G	51	HR	D	AA	RIDEAU RIVER AT MERRICKVILLE (APR 1-DEC 1)		41
02LA011	1920 00	G	51	QR	D	AA	RIDEAU RIVER BELOW MERRICKVILLE		42
02LA004	3830 00	G	53	QR	D	AA	RIDEAU RIVER AT OTTAWA		43
02LA005	1290 00	G	51	QR	D	AA	RIDEAU R ABOVE SMITHS FALLS OCT 1-APR 30		44
02EC006	0 00	G	13	QM		AA	SEVERN RIVER AT BIG FALLS		45
02EC007	0 00	G	13	QM		AA	SEVERN RIVER AT LITTLE FALLS		46
02EC014	5310 0	G	13	HR	D	AA	SEVERN RIVER ABOVE WASDELL FALLS		47
02EC005	0 00	G	13	QM		AA	SEVERN RIVER AT WASHAGO		48
02LB005	3810 00	G	53	QR	S M	AA	S NATION R NR PLANTAGENET SPRINGS MISC SED		49
02LA016	786 00	G	51	QR	D	AA	TAY RIVER AT PORT ELMSLEY (MAY1-MAY31)		50

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

FEDERAL 1 FEDERAL DEPT PROGRAMS OPERATED BY FEDERAL (WSC)

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02HK004	12000 00	G	22	QR	S M	AA	TRENT RIVER AT GLEN ROSS MISC SED		51
02HK902	9090 00	G	22	QR	M	AA	TRENT RIVER AT HEALEY FALLS (SPILLWAY)		52

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 =	14
		- DISCHARGE =	38
	SUB-TOTAL	- WATER LEVEL =	14
		- DISCHARGE =	38
	TOTAL	=	52

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FIRAL)

MAY 2 1988

FEDERAL 2 INTERPROVINCIAL WATERS OPERATED BY FEDERAL (WSC)

- - - N I L - - -

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 =	0
	SUB-TOTAL	- WATER LEVEL =	0
		- DISCHARGE =	0
	TOTAL	=	0

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
 SCHEDULE A
 FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

FEDERAL 3 INTERNATIONAL WATERS OPERATED BY FEDERAL (WSC)

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02FF002	865 00	G	32	QR	SD	CA	AUSABLE RIVER NEAR SPRINGBANK SED OPEN WAT		1
02CE002	1350 00	G	44	QR	M	CA	AUX SABLES RIVER AT MASSEY		2
02BF001	1190 00	G	44	QR		CA	BATCHAWANA RIVER NEAR BATCHAWANA		3
02GG009	533 00	G	32	QR	SD	CA	BEAR CREEK BELOW BRIGDEN MISC SED		4
02GC007	591 00	G	12	QR		CA	BIG CREEK NEAR WALSINGHAM		5
02GC026	676 00	G	12	QR	SD	CA	BIG OTTER CREEK NEAR CALTON SED OPEN WAT		6
02BB002	1980 00	G	61	QR	S	CA	BLACK RIVER NEAR MARATHON MISC SED		7
02AC002	2980 00	G	60	QR		CA	BLACK STURGEON RIVER AT HWY NO 17		8
02HB002	795 00	G	14	QR	SD	CA	CREDIT RIVER AT ERINDALE SED OPEN WAT		9
02HC024	316 00	G	23	QR	SD	CA	DON RIVER AT TODMORDEN		10
02HC006	249 00	G	24	QR	M	CA	DUFFINS CREEK AT PICKERING		11
02HC030	204 00	G	23	QR	SD	CA	ETOBICOKE CREEK BELOW Q E W MISC SED		12
02HD012	232 00	G	24	QR	SD	CA	GANARASKA RIVER ABOVE DALE MISC SED		13
02GB001	5210 00	G	11	QR		CA	GRAND RIVER AT BRANTFORD		14
02HC013	88 10	G	23	QR	SD	CA	HIGHLAND CREEK NEAR WEST HILL MISC SED		15
02HC003	800 00	G	23	QR	M	CA	HUMBER RIVER AT WESTON		16
02GC002	329 00	G	12	QR	SD	CA	KETTLE CREEK AT ST THOMAS MISC SED		17
02BA003	1320 00	G	61	QR	S	CA	LITTLE PIC RIVER NEAR COLOWELL MISC SED		18
02HC028	77 70	G	23	QR		CA	LITTLE ROUGE CRK NR LOCUST HILL		19
02EA011	2850 00	G	45	QR		CA	MAGNETAWAN RIVER NEAR BRITT		20
02BD003	1930 00	G	61	QR	M	CA	MAGPIE RIVER NEAR MICHIPICOTEN		21
02FE002	1630 00	G	33	QR	D	CA	MAITLAND RIVER BELOW WINGHAM		22
02GB010	171 00	G	11	QR	S	CA	MCKENZIE CREEK NEAR CALEDONIA		23
02CC008	9300 00	G	44	QR	S	CA	MISSISSAGI RIVER AT MISSISSAGI CHUTE MISC SED		24
02HL001	2620 00	G	24	QR	SD	CA	MOIRA RIVER NEAR FOXBORO MISC SED		25
02EB011	0 00	G	13	QR		CA	MOON RIVER AT HIGHWAY NO 69		26
02EB012	0 00	G	13	QR		CA	MUSKOKA RIVER AT HIGHWAY NO 69		27
02GC022	181 00	G	12	QR	S	CA	NANTICOKE CREEK AT NANTICOKE MISC SED		28
02HM007	694 00	G	51	QR	S M	CA	NAPANEE RIVER AT CAMDEN EAST MISC SED		29
02AB008	187 00	G	62	QR	D	CA	NEEBING RIVER NEAR THUNDER BAY		30
02ED003	1180 00	G	13	QR	S M	CA	NOTTAWASAGA RIVER NEAR BAXTER SED OPEN WAT		31
02HB005	95 60	G	14	QR	D	CA	OAKVILLE CREEK AT MILTON		32
02BB003	4270 00	G	61	QR	S	CA	PIC RIVER NEAR MARATHON MISC SED		33
02AA001	1550 00	G	60	QR		CA	PIGEON RIVER AT MIDDLE FALLS	ENGLISH	34
02HC022	186 00	G	23	QR	M	CA	ROUGE RIVER NEAR MARGHAM		35
02HM003	891 00	G	24	QR	S	CA	SALMON RIVER NEAR SHANNONVILLE MISC SED		36
02FA001	927 00	G	33	QR		CA	SAUBLE RIVER AT SAUBLE FALLS		37
02PC001	3960 00	G	33	QR	D	CA	SAUGEEN RIVER NEAR PORT ELGIN		38
02CD001	1350 00	G	42	QR		CA	SERPENT RIVER AT HIGHWAY NO 17		39
02MC009	0 00	G	53	QR		CA	S RAISIN R DIVERSION AT LONG SAULT (JUN-SEP)		40
02HB007	169 00	G	14	QR	M	CA	SPENCER CREEK AT DUNDAS		41
02CA003	0 00	G	44	HR		CA	ST MARYS RIVER NEAR GARDEN RIVER		42
02PB007	181 00	G	13	QR	SD	CA	SYDENHAM RIVER NEAR OWEN SOUND MISC SED		43
02GE003	4300 00	G	32	QR	M	CA	THAMES RIVER AT THAMESVILLE		44
02HA006	293 00	G	12	QR	S	CA	TWENTY MILE CREEK AT BALLS FALLS MISC SED		45
02DB005	3130 00	G	45	QR		CA	WANAPITEI RIVER NEAR WANUP		46
02HA007	230 00	G	12	QR	D	CA	WELLAND RIVER BELOW CAISTOR CORNERS		47
02BC004	4170 00	G	61	QR	N L	CA	WHITE RIVER BELOW WHITE LAKE		48
02HM004	112 00	G	51	QR		CA	WILTON CREEK NEAR NAPANEE		49
02AC001	736 00	G	60	QR		CA	WOLF RIVER AT HIGHWAY NO 17		50

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

FEDERAL 3 INTERNATIONAL WATERS OPERATED BY FEDERAL (WSC)

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 =	1
	CONVENTIONAL	- WATER LEVEL =	1
		- DISCHARGE =	48
	SUB-TOTAL	- WATER LEVEL =	1
		- DISCHARGE =	49
	TOTAL	=	50

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

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

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
04ME003	27500 00	G	43	QR	NS L	DA	ABITIBI RIVER AT ONAKAWANA MISC SED		1
04HA001	118000 00	G	41	QR	N L	DA	ALBANY RIVER NEAR HAT ISLAND		2
04FB001	24200 00	G	61	QR	N L	DA	ATTAWAPISKAT RIVER BELOW ATTAWAPISKAT LAKE		3
04FC001	36000 00	G	41	QR	NS L	DA	ATTAWAPISKAT R BELOW MUKETEI R MISC SED		4
04CE001	0 00	G	61	HM	N	DA	BIG TROUT LAKE AT TROUT LAKE		5
04GB005	1170 00	G	62	QR	N L	DA	BRIGHTSAND RIVER AT MOBERLY LAKE		6
02DD015	106 00	G	43	QR		DA	COMMANDA CREEK AT COMMANDA		7
04EA001	10400 00	G	41	QR	N L	DA	EKWAN RIVER BELOW NORTH WASHAGAMI RIVER		8
04CE002	4350 00	G	61	QR	N L	DA	PAWN RIVER BELOW BIG TROUT LAKE		9
04KA002	133 00	G	43	QR		DA	HALFWAY CREEK AT MOOSONEE		10
04JG001	26200 00	G	41	QR	N L	DA	KENOGAMI RIVER NEAR MAMMAMATTAWA		11
04KA001	4250 00	G	43	QR	N L	DA	KWATABOAHGAN RIVER NEAR THE MOUTH		12
04JF001	5360 00	G	41	QR	N L	DA	LITTLE CURRENT RIVER AT PERCY LAKE		13
04LG004	60100 00	G	43	QR	NS L	DA	MOOSE RIVER ABOVE MOOSE RIVER MISC SED		14
04GF001	1890 00	G	41	QR	N L	DA	MUSWABIK RIVER AT OUTLET OF MUSWABIK LAKE		15
04MF001	6680 00	G	43	QR	N L	DA	NORTH FRENCH RIVER NEAR THE MOUTH		16
04JD005	2020 00	G	41	QR		DA	PAGWACHUAN RIVER AT HIGHWAY NO 11		17
04CC001	94300 00	G	61	QR	N L	DA	SEVERN RIVER AT LIMESTONE RAPIDS		18
04DC002	4710 00	G	41	QR	N L	DA	SHAMATTAWA RIVER AT OUTLET OF SHAMATTAWA LAKE		19
04DC001	50000 00	G	61	QR	NS L	DA	WINISK R BELOW ASHEWEIG R TRIB MISC SED		20

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 =	1
		- DISCHARGE =	16
	CONVENTIONAL	- WATER LEVEL =	0
		- DISCHARGE =	3
	SUB-TOTAL	- WATER LEVEL =	1
		- DISCHARGE =	19
	TOTAL	=	20

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FIBAL)

MAY 2 1988

FEDERAL/PROVINCIAL 1 OPERATED BY FEDERAL (WSC) OMOE

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02GC018	287 00	G	12	QR	SD	FAD	CATFISH CREEK NEAR SPARTA MISC SED		1
02AB006	6470 00	G	62	QR	D	FAD	KAMINISTIQUIA RIVER AT KAMINISTIQUIA		2
02ED005	295 00	G	13	QR	S	FAD	MAD RIVER NEAR GLENCAIRN MISC SED		3
02CA002	108 00	G	44	QR		FAD	ROOT RIVER AT SAULT STE MARIE MISC SED		4
02GH002	125 00	G	32	QR	S	FAD	RUSCOM RIVER NEAR RUSCOM STATION MISC SED		5

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 =	5
	SUB-TOTAL	- WATER LEVEL =	0
		- DISCHARGE =	5
	TOTAL	=	5

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

FEDERAL/PROVINCIAL 1 OPERATED BY FEDERAL (WSC) OMNR

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02HC027	58 00	G	23	QR	D	FAE	BLACK CREEK NEAR WESTON		1
02GB007	360 00	G	11	QR	S	FAE	FAIRCHILD CREEK NEAR BRANTFORD MISC SED		2
02DD010	13900 00	G	45	QR	DM	FAE	FRENCH RIVER AT DRY PINE BAY		3
02GC008	134 00	G	12	QR		FAE	LYNN RIVER AT SIMCOE		4
02HD008	95 80	G	24	QR	D	FAE	OSHAWA CREEK AT OSHAWA		5
02FE009	376 00	G	33	QR	SD	FAE	SOUTH MAITLAND R AT SUMMERHILL (MAR-MAY)		6
02GG003	1160 00	G	32	QR	SD	FAE	SYDENHAM RIVER AT FLORENCE (SED FEB-MAY)		7

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 =	7
	SUB-TOTAL	- WATER LEVEL =	0
		- DISCHARGE =	7
	TOTAL	=	7

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

FEDERAL/PROVINCIAL 1 OPERATED BY FEDERAL (WSC) OMOE/OMNR

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02HC033	70 60	G	23	QR	D	FAP	MIMICO CREEK AT ISLINGTON		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

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

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

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02KC009	2380 00	G	52	QR		GAC	BONNECHERE RIVER NEAR CASTLEFORD		1
02KD004	5800 00	G	52	QR	M	GAC	MADAWASKA RIVER AT PALMER RAPIDS		2
04LM001	22900 00	G	43	QR	N L	GAC	MISSINAIBI R BELOW WABOOSE R		3
02KD002	837 00	G	52	QR		GAC	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	=	0
GUELPH	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
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

FEDERAL/PROVINCIAL 2 OPERATED BY FEDERAL (WSC) OMOE

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02ED007	177 00	G	13	QR		GAD	COLDWATER RIVER AT COLDWATER		1
02HB004	199 00	G	14	QR		GAD	EAST OAKVILLE CREEK NEAR OMAGH		2

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 =	2
	SUB-TOTAL	- WATER LEVEL =	0
		- DISCHARGE =	2
	TOTAL	=	2

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

FEDERAL/PROVINCIAL 2 OPERATED BY FEDERAL (WSC) OMNR

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02FF007	466 00	G	31	QR	S	GAE	BAYFIELD RIVER NEAR VARNA MISC SED		1
02FB009	572 00	G	13	QR	SD	GAE	BEAVER RIVER NEAR CLARKSBURG MISC SED		2
02FB010	293 00	G	13	QR	SD	GAE	BIGHEAD RIVER NEAR MEAFORD MISC SED		3
02AB021	492 00	G	60	QR		GAE	CURRENT RIVER AT STEPSTONE		4
02LA007	559 00	G	51	QR	D	GAE	JOCK RIVER NEAR RICHMOND		5
02DD006	0 00	G	45	HR	DM	GAE	LAKE NIPISSING AT NORTH BAY		6
02EA005	321 00	G	41	QR	M	GAE	NORTH MAGNETAWAN RIVER NEAR BURKS FALLS		7

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 =	1
		- DISCHARGE =	6
	SUB-TOTAL	- WATER LEVEL =	1
		- DISCHARGE =	6
	TOTAL	=	7

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

FEDERAL/PROVINCIAL 2 OPERATED BY PROVINCE (ONTARIO HYDRO)

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
04MD002	2870 00	G	82	QM	L	GBC	FREDERICK HOUSE RIVER AT F H LAKE DAM		1
02JD011	1370 00	G	82	QM		GBC	LADY EVELYN RIVER AT LADY EVELYN LAKE DAM		2
02KD007	2720 00	G	82	QM		GBC	MADAWASKA RIVER AT BARK LAKE DAM		3
02DC008	2360 00	G	82	QM		GBC	TEMAGAMI RIVER AT RED CEDAR LAKE DAM		4
04MB003	238 00	G	82	QM		GBC	WATABEAG RIVER AT WATABEAG LAKE DAM		5
02JD012	1780 00	G	82	QM		GBC	WEST MONTREAL RIVER AT MISTINIKON 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

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

FEDERAL/PROVINCIAL 3 OPERATED BY FEDERAL (WSC) OMOE

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
04DB001	7950 00	G	61	QR	N L	HAD	ASHEWEIG RIVER AT STRAIGHT LAKE		1
04GA002	5390 00	G	62	QR	N L	HAD	CAT RIVER BELOW WESLEYAN LAKE		2
04GB004	11200 00	G	61	QR	N	HAD	OGOKI RIVER ABOVE WHITECLAY LAKE		3
04FA001	9010 00	G	62	QR		HAD	OTOSKWIN RIVER BELOW BADESDAWA LAKE		4
04FA003	4900 00	G	61	QR	N L	HAD	PINEIMUTA RIVER AT EYES LAKE		5
04DA001	5960 00	G	62	QR	N L	HAD	PIPESTONE RIVER AT KARL LAKE		6
04CA003	619 00	G	62	QR	N L	HAD	ROSEBERRY R ABOVE ROSEBERRY LAKES		7
04CD002	4270 00	G	62	QR	N L	HAD	SACHIGO RIVER BELOW OUTLET OF SACHIGO LAKE		8
04CA002	36500 00	G	62	QR	N L	HAD	SEVERN RIVER AT OUTLET OF MUSKRAT DAM LAKE		9
04CB001	10800 00	G	62	QR	N L	HAD	WINDIGO RIVER ABOVE MUSKRAT DAM LAKE		10

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 =	9
	CONVENTIONAL	- WATER LEVEL =	0
		- DISCHARGE =	1
	SUB-TOTAL	- WATER LEVEL =	0
		- DISCHARGE =	10
	TOTAL	=	10

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

PROVINCIAL 1 OPERATED BY FEDERAL (WSC) ONTARIO HYDRO

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
04GD001	32400 00	G	41	QR	N L	IAC	ALBANY RIVER ABOVE NOTTIK ISLAND		1
04LD001	11900 00	G	41	QR	D	IAC	GROUNDHOG RIVER AT FAUQUIER		2
02JD009	4300 00	G	43	QR		IAC	MONTREAL RIVER AT MOUNTAIN CHUTES		3
04JC002	2410 00	G	41	QR		IAC	NAGAGAMI RIVER AT HIGHWAY NO 11		4
02KC005	0 00	G	52	HR		IAC	OTTAWA RIVER NEAR WESTMEATH		5
02AB009	2800 00	G	62	QR		IAC	SHEBANDOWAN 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
GUELPH	REMOTE	- WATER LEVEL =	0
		- DISCHARGE =	1
	CONVENTIONAL	- WATER LEVEL =	1
		- DISCHARGE =	4
	SUB-TOTAL	- WATER LEVEL =	1
		- DISCHARGE =	5
	TOTAL	=	6

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
 SCHEDULE A
 FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

PROVINCIAL 1 OPERATED BY FEDERAL (WSC) OMOE

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02GA030	49 70	G	11	QR		IAD	ALDER CREEK NEAR NEW DUNDEE		1
02GD018	144 00	G	31	QR	D	IAD	AVON RIVER BELOW STRATFORD		2
02FC017	50 10	G	33	QR		IAD	BEATTY SAUGEEN RIVER NEAR HOLSTEIN		3
02EC011	282 00	G	22	QR		IAD	BEAVERTON RIVER NEAR BEAVERTON		4
02HB024	18 90	G	14	QR		IAD	BLACK CREEK BELOW ACTON		5
02EC008	274 00	G	22	QR		IAD	BLACK RIVER AT BALDWIN		6
02AD010	650 00	G	60	QR		IAD	BLACKWATER RIVER AT BEARDMORE		7
02HF004	21 80	G	22	QR		IAD	BOB CREEK NEAR MINDEN		8
02BB004	201 00	G	61	QR		IAD	CEDAR CREEK NEAR HEMLO		9
02HM005	155 00	G	51	QR		IAD	COLLINS CREEK NEAR KINGSTON		10
02DB007	59 00	G	45	QR		IAD	CONISTON CREEK ABOVE WANAPITEI RIVER		11
02LB012	76 70	G	53	QR		IAD	E BR SC R NR ST ISIDORE DE PRESCOTT MARI-DECI		12
02HD014	58 50	G	24	QM		IAD	FAREWELL CREEK AT OSHAWA		13
02AE001	616 00	G	60	QR	S	IAD	GRAVEL RIVER NEAR CAVERS MISC SED		14
02HD013	41 60	G	24	QR		IAD	HARMONY CREEK AT OSHAWA		15
02EC009	181 00	G	22	QR	M	IAD	HOLLAND RIVER AT HOLLAND LANDING		16
02CF012	207 00	G	42	QR		IAD	JUNCTION CREEK BELOW KELLEY LAKE		17
04FA002	1540 00	G	62	QR		IAD	KAWINOGANS RIVER NEAR PICKLE CROW		18
02LA006	409 00	G	53	QR	SD	IAD	KEMPTVILLE CREEK NEAR KEMPTVILLE MISC SED		19
02DC007	4 58	G	42	QR		IAD	LITTLE NORDIC CREEK AT ELLIOT LAKE		20
02HM006	150 00	G	51	QR		IAD	MILLHAVEN CREEK NEAR MILLHAVEN		21
02CF013	40 60	G	45	QR		IAD	MOOSE CREEK AT LEVACK		22
02GD022	29 10	G	31	QR		IAD	NISSOURI CREEK NEAR EMBRO		23
02HJ003	282 00	G	22	QR		IAD	OUSE RIVER NEAR WESTWOOD		24
02FD001	154 00	G	33	QR	S	IAD	PINE RIVER AT LURGAN MISC SED		25
04MD004	401 00	G	43	QR		IAD	PORCUPINE RIVER AT HOYLE		26
02HC039	38 30	G	24	QR		IAD	REESOR CREEK ABOVE GREEN RIVER		27
02CD002	109 00	G	42	QR		IAD	SERPENT RIVER AT OUTLET OF DUNLOP LAKE		28
02CD004	567 00	G	42	QR		IAD	SERPENT RIVER BELOW PECORS LAKE		29
02CD006	157 00	G	42	QR		IAD	SERPENT RIVER ABOVE QUIRKE LAKE		30
02CD003	319 00	G	42	QR		IAD	SERPENT RIVER BELOW QUIRKE LAKE		31
02FA002	50 50	G	33	QR		IAD	STOKES RIVER NEAR FERNDALE		32
02CF011	704 00	G	45	QR	D	IAD	VERMILION RIVER NEAR VAL CARON		33
02DD012	741 00	G	45	QR		IAD	VEUVE RIVER NEAR VERNER		34
02LB018	99 50	G	53	QR		IAD	W BR SC R NR ST ISIDORE DE PRESCOTT MARI-JUNI		35
02ED012	118 00	G	13	QR		IAD	WYE RIVER NEAR WYEVALE		36

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

PROVINCIAL 1 OPERATED BY FEDERAL (WSC) OMOE

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 =	36
	SUB-TOTAL	- WATER LEVEL =	0
	- DISCHARGE =	36	
	TOTAL	=	36

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
 SCHEDULE A
 FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

PROVINCIAL 1 OPERATED BY FEDERAL (WSC) OMNR

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02JE019	1130 00	G	43	QR		IAE	AMABLE DU FOND R AT SAMUEL DE CHAMPLAIN P P		1
02HB021	9 14	G	11	QR	D	IAE	ANCASTER CREEK AT ANCASTER		2
02LB008	440 00	G	53	QR		IAE	BEAR BROOK NEAR BOURGET		3
02MC026	124 00	G	53	QR	D	IAE	BEAUDETTE RIVIERE NEAR GLEN NEVIS		4
02HK006	541 00	G	22	QR	D	IAE	BEAVER CREEK NEAR MARMORA		5
02GC006	363 00	G	12	QR		IAE	BIG CREEK NEAR DELHI		6
02BF004	51 50	G	44	QR		IAE	BIG CARP RIVER NEAR SAULT STE MARIE		7
02GC017	93 20	G	12	QR		IAE	BIG OTTER CREEK ABOVE OTTERTVILLE		8
02GC010	342 00	G	12	QR	M	IAE	BIG OTTER CREEK AT TILLSONBURG		9
02HL003	401 00	G	52	QR	D	IAE	BLACK RIVER NEAR ACTINOLITE		10
02HE001	13 90	G	24	QR		IAE	BLOOMFIELD CREEK AT BLOOMFIELD		11
02GA031	44 50	G	13	QR		IAE	BLUE SPRINGS CREEK NEAR EDEN MILLS		12
02FE014	77 70	G	33	QR	D	IAE	BLYTH BROOK BELOW BLYTH		13
02HD006	82 90	G	24	QR	D	IAE	BOWMANVILLE CREEK AT BOWMANVILLE		14
02HB022	117 00	G	14	QR		IAE	BRONTE CREEK AT CARLISLE		15
02HK009	82 30	G	22	QR	D	IAE	BURNLEY CREEK ABOVE WARKWORTH		16
02GA023	118 00	G	11	QR		IAE	CANAGAGIGUE CREEK NEAR ELMIRA		17
02GH003	159 00	G	32	QR		IAE	CANARD RIVER NEAR LUKERVILLE		18
02KF011	269 00	G	52	QR	D	IAE	CARP RIVER NEAR KINBURN		19
02FC011	163 00	G	33	QR		IAE	CARRICK CREEK NEAR CARLSRUHE		20
02LB006	433 00	G	53	QR		IAE	CASTOR RIVER AT RUSSELL		21
02GC030	120 00	G	12	QR	M	IAE	CATFISH CREEK AT ALYMER		22
02GD011	93 20	G	31	QR	D	IAE	CEDAR CREEK AT WOODSTOCK		23
02DD014	37 30	G	42	QR	D	IAE	CHIPPENAW CREEK AT NORTH BAY		24
02KF013	280 00	G	52	QR	D	IAE	CLYDE RIVER AT GORDON RAPIDS		25
02KF010	614 00	G	52	QR	D	IAE	CLYDE RIVER NEAR LANARK		26
02HC023	62 20	G	23	QR		IAE	COLD CREEK NEAR BOLTON		27
02HK007	159 00	G	22	QR	D	IAE	COLD CREEK AT ORLAND		28
02GA039	272 00	G	11	QR	S	IAE	CONESTOGO RIVER ABOVE DRAYTON MISC SED		29
02GA028	578 00	G	11	QR		IAE	CONESTOGO RIVER AT GLEN ALLAN		30
02HE002	114 00	G	24	QR		IAE	CONSECON CREEK AT ALLISONVILLE		31
02HB019	59 50	G	14	QR	D	IAE	CREDIT RIVER ALTON BRANCH ABOVE ALTON		32
02HB018	402 00	G	14	QR	D	IAE	CREDIT RIVER AT BOSTON MILLS		33
02HB001	205 00	G	14	QR	D	IAE	CREDIT RIVER NEAR CATARACT		34
02HB020	32 30	G	14	QR	D	IAE	CREDIT RIVER ERIN BRANCH ABOVE ERIN		35
02HB013	62 20	G	14	QR	D	IAE	CREDIT RIVER NEAR ORANGEVILLE		36
02HB008	127 00	G	14	QR	D	IAE	CREDIT RIVER WEST BRANCH AT NORVAL		37
02HK005	456 00	G	52	QR	D	IAE	CROWE RIVER NEAR GLEN ALDA		38
02MC028	85 40	G	53	QR	D	IAE	DELISLE RIVIERE NEAR ALEXANDRIA		39
02HM002	189 00	G	51	QR		IAE	DEPOT CREEK AT BELLROCK		40
02GE005	146 00	G	31	QM		IAE	DINGMAN CREEK BELOW LAMBETH		41
02HC005	88 10	G	23	QR	M	IAE	DON RIVER AT YORK MILLS		42
02HC019	93 50	G	24	QR	D	IAE	DUFFINS CREEK ABOVE PICKERING		43
02EB013	593 00	G	41	QR	D	IAE	EAST RIVER NEAR HUNTSVILLE		44
02HC032	94 80	G	23	QR		IAE	EAST HUMBER RIVER AT KING CREEK		45
02HC009	197 00	G	23	QR	M	IAE	EAST HUMBER RIVER NEAR PINE GROVE		46
02GA029	236 00	G	13	QR		IAE	ERAMOSIA RIVER ABOVE GUELPH		47
02HC017	63 20	G	23	QR		IAE	ETOBICOKE CREEK AT BRAMPTON		48
02KF014	277 00	G	52	QR		IAE	FALL RIVER NEAR FALLBROOK		49
02GD010	150 00	G	31	QR		IAE	FISH CREEK NEAR PROSPECT HILL		50

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
 SCHEDULE A
 FISCAL YEAR 1988/1989 (FEDERAL)

MAY 2 1988

PROVINCIAL 1 OPERATED BY FEDERAL (WSC) OMNR

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02HD003	67 30	G	24	QR	D	IAE	GANARASKA RIVER NEAR OSACA		51
02GA003	3520 00	G	11	QR		IAE	GRAND RIVER AT GALT		52
02GA014	694 00	G	11	QR	L	IAE	GRAND RIVER NEAR MARSVILLE		53
02GA016	800 00	G	11	QR		IAE	GRAND RIVER BELOW SHAND DAM		54
02GA034	1170 00	G	11	QR		IAE	GRAND RIVER AT WEST MONTROSE		55
02HB012	82 60	G	23	QR		IAE	GRINDSTONE CREEK NEAR ALDERSHOT		56
02GB006	150 00	G	12	QR		IAE	HORNER CREEK NEAR PRINCETON		57
02HC025	303 00	G	23	QR	S M	IAE	HUMBER RIVER AT ELDER MILLS SED OPEN WAT		58
02HC047	117 00	G	23	QR		IAE	HUMBER RIVER NEAR PALGRAVE		59
02KF012	203 00	G	52	QR	D	IAE	INDIAN RIVER NEAR BLAKENEY		60
02HJ001	110 00	G	22	QR	D	IAE	JACKSON CREEK AT PETERBOROUGH		61
02CF005	89 10	G	42	QR	D	IAE	JUNCTION CREEK AT SUDBURY		62
02GB009	91 90	G	12	QR		IAE	KENNY CREEK NEAR BURFORD		63
02GC029	135 00	G	12	QR	D	IAE	KETTLE CREEK ABOVE ST THOMAS		64
02JC010	256 00	G	43	QR	N L	IAE	LARDER RIVER ABOVE RAVEN LAKE		65
02GA024	59 60	G	11	QR		IAE	LAUREL CREEK AT WATERLOO		66
02DD013	70 40	G	42	QR		IAE	LA VASE RIVER AT NORTH BAY		67
02GH011	50 50	G	32	QR		IAE	LITTLE RIVER AT WINDSOR		68
02HC029	130 00	G	23	QR	D	IAE	LITTLE DON RIVER AT DON MILLS		69
02FE007	326 00	G	33	QR	D	IAE	LITTLE MAITLAND RIVER AT BLUEVALE		70
02GC015	104 00	G	12	QR	S M	IAE	LITTLE OTTER CRK NR STRAFFORDVILLE MISC SED		71
02FD002	54 90	G	33	QR	DM	IAE	LUCKNOW RIVER AT LUCKNOW		72
02GA033	64 70	G	13	QR		IAE	LUTTERAL CREEK NEAR OUSTIC		73
02MB006	0 00	G	51	QR	S	IAE	LYN CREEK NEAR LYN MISC SED		74
02HC018	106 00	G	24	QR	SD	IAE	LYNDE CREEK NEAR WHITBY MISC SED		75
02FE011	112 00	G	33	QR	DT	IAE	MAITLAND RIVER NEAR HARRISTON		76
02FE005	528 00	G	33	QR	DM	IAE	MAITLAND RIVER ABOVE WINGHAM		77
02HG001	189 00	G	22	QR	D	IAE	MARIPOSA BROOK NEAR LITTLE BRITAIN		78
04LA002	5540 00	G	43	QR		IAE	MATTAGAMI RIVER NEAR TIMPINS		79
02JE020	909 00	G	43	QR		IAE	MATTANA RIVER BELOW BOUILLON LAKE		80
02GE007	202 00	G	32	QR	SDM	IAE	MCGREGOR CREEK NEAR CHATHAM (SED MAR-MAY)		81
02AB020	90 00	G	62	QR	D	IAE	MCINTYRE RIVER ABOVE THUNDER BAY		82
02AB019	46 40	G	62	QR	D	IAE	MCVICAR CREEK AT THUNDER BAY		83
02GD008	200 00	G	31	QR	D	IAE	MEDWAY RIVER AT LONDON		84
02FE008	647 00	G	33	QR	D	IAE	MIDDLE MAITLAND RIVER NR BELGRAVE		85
02FE013	416 00	G	31	QR	D	IAE	MIDDLE MAITLAND RIVER ABOVE ETHEL		86
02FE003	77 70	G	31	QR	DM	IAE	MIDDLE MAITLAND RIVER NEAR LISTOWEL		87
02GD004	306 00	G	31	QR	D	IAE	MIDDLE THAMES RIVER AT THAMESFORD		88
02KF001	2620 00	G	51	QR	D	IAE	MISSISSIPPI RIVER AT FERGUSONS FALLS		89
02KF016	0 00	G	22	QR		IAE	MISSISSIPPI RIVER BELOW MARBLE LAKE		90
02HL005	308 00	G	22	QR	D	IAE	MOIRA RIVER NEAR DELOORO		91
02GA010	1030 00	G	11	QR	S	IAE	NITH RIVER NEAR CANNING MISC SED		92
02GA018	552 00	G	11	QR		IAE	NITH RIVER AT NEW HAMBURG		93
02GA038	326 00	G	11	QR		IAE	NITH RIVER ABOVE NITHBURG		94
02CF009	21 50	G	42	QR	D	IAE	NOLIN CREEK AT SUDBURY		95
02EB004	1390 00	G	13	QR	D	IAE	NORTH BRANCH MUSKOKA RIVER AT PORT SYDNEY		96
02FC018	216 00	G	33	QR		IAE	NORTH SAUGEEN RIVER ABOVE CHESLEY		97
02GD003	1450 00	G	31	QR		IAE	NORTH THAMES RIVER BELOW PANSHAWE DAM		98
02GD014	319 00	G	31	QR	D	IAE	NORTH THAMES RIVER NEAR MITCHELL		99
02GD005	1080 00	G	31	QR	D	IAE	NORTH THAMES RIVER AT ST MARYS		100

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
 SCHEDULE A
 FISCAL YEAR 1988/1989 (FIDAL)

MAY 2 1988

PROVINCIAL 1 OPERATED BY FEDERAL (WSC) OMNR

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02GD015	1340 00	G	31	QR	SD	IAE	NORTH THAMES RIVER NEAR THORNDALE MISC SED		101
02HD004	42 70	G	24	QR		IAE	NORTH WEST GANARASKA RIVER NEAR OSACA		102
02CF010	1570 00	G	45	QR		IAE	ONAPING RIVER NEAR LEVACK		103
02EB014	601 00	G	13	QR	D	IAE	OXTONGUE RIVER NEAR DWIGHT		104
02PF008	110 00	G	32	QR	S M	IAE	PARKHILL CRK AB PARKHILL RESERVOIR MISC SED		105
02HL006	205 00	G	52	QR	D	IAE	PARKS CREEK NEAR LATTA		106
02GC012	51 30	G	12	QR	M	IAE	PATTERSON CREEK NEAR SIMCOE		107
02MC027	129 00	G	53	QR	D	IAE	RAISIN RIVER AT BLACK RIVER FEB 15-MAY 15		108
02MC001	404 00	G	53	QR	SD	IAE	RAISIN RIVER NEAR WILLIAMSTOWN MISC SED		109
02HK008	86 70	G	24	QR	D	IAE	RAWDON CREEK NEAR WEST HUNTINGDON		110
02HA014	60 90	G	23	QR	S M	IAE	REDHILL CREEK AT HAMILTON MISC SED		111
02FC016	329 00	G	33	QR	DM	IAE	SAUGEEN RIVER ABOVE DURHAM		112
02FC002	2150 00	G	33	QR	DM	IAE	SAUGEEN RIVER NEAR WALKERTON		113
02GA037	25 10	G	11	QR		IAE	SCHNEIDER CREEK AT KITCHENER		114
02EC010	42 90	G	23	QR		IAE	SCHOMBERG RIVER NEAR SCHOMBERG		115
02HD010	64 70	G	24	QR		IAE	SHELTER VALLEY BROOK NEAR GRAFTON		116
02HL004	712 00	G	52	QR	D	IAE	SKOOTAMATTA RIVER NEAR ACTINOLITE		117
02DD009	316 00	G	43	QR		IAE	SOUTH RIVER AT SOUTH RIVER		118
02EB008	1390 00	G	13	QM		IAE	SOUTH BRANCH MUSKOKA RIVER AT BAYSVILLE		119
02LB020	189 00	G	53	QR		IAE	SOUTH CASTOR RIVER AT KENMORE		120
02LB013	2410 00	G	53	QR	M	IAE	SOUTH NATION R AT CASSELMAN		121
02LB009	1050 00	G	51	QR		IAE	SOUTH NATION RIVER AT CHESTERVILLE (MAR-MAY)		122
02LB007	246 00	G	51	QR		IAE	SOUTH NATION RIVER AT SPENCERVILLE		123
02FF004	41 40	G	32	QR	M	IAE	SOUTH PARKHILL CREEK NEAR PARKHILL		124
02MC030	25 80	G	53	QR	D	IAE	SOUTH RAISIN R NR CORNWALL (MAR-MAY)		125
02FC012	635 00	G	33	QR	D	IAE	SOUTH SAUGEEN RIVER NEAR HANOVER		126
02GA040	167 00	G	11	QR	S	IAE	SPEED RIVER NEAR ARMSTRONG MILLS MISC SED		127
02GA015	593 00	G	11	QR		IAE	SPEED RIVER BELOW GUELPH		128
02HB015	63 50	G	14	QR	M	IAE	SPENCER CREEK NEAR WESTOVER		129
02DC004	980 00	G	44	QR	L	IAE	STURGEON RIVER NEAR GLEN APTON		130
02GH001	14 20	G	32	QR		IAE	STURGEON CREEK NEAR LEAMINGTON		131
02DC012	1200 00	G	44	QR	N L	IAE	STURGEON RIVER AT UPPER GOOSE FALLS		132
02GG002	730 00	G	32	QR	D	IAE	SYDENHAM RIVER NEAR ALVINSTON		133
02GG005	172 00	G	32	QR	M	IAE	SYDENHAM RIVER AT STRATHROY		134
02GG008	2680 00	G	32	HR	D	IAE	SYDENHAM RIVER AT WALLACEBURG		135
02FC015	663 00	G	33	QR	D	IAE	TEESWATER RIVER NEAR PAISLEY		136
02GE002	3110 00	G	31	QR	DM	IAE	THAMES RIVER AT BYRON		137
02GE004	4610 00	G	32	HR	M	IAE	THAMES RIVER AT CHATHAM		138
02GE006	3760 00	G	32	QR	M	IAE	THAMES RIVER NEAR DUTTON		139
02GD001	1340 00	G	31	QR	D	IAE	THAMES RIVER NEAR EALING		140
02GD016	518 00	G	31	QR	DT	IAE	THAMES RIVER AT INGERSOLL		141
02GD021	149 00	G	31	QR	SD	IAE	THAMES RIVER AT INNERKIP MISC SED		142
02GD012	254 00	G	31	QR		IAE	THAMES RIVER AT WOODSTOCK		143
02GD019	36 00	G	31	QR		IAE	TROUT CREEK NEAR FAIRVIEW		144
02GD009	140 00	G	31	QR		IAE	TROUT CREEK NEAR ST MARYS		145
02GH004	29 60	G	32	QR	D	IAE	TURKEY CREEK AT WINDSOR		146
02HA020	168 00	G	12	QR	D	IAE	TWENTY MILE CREEK ABOVE SMITHVILLE		147
02GC021	68 40	G	12	QR		IAE	VENISON CREEK NEAR WALSINGHAM		148
02GD020	108 00	G	31	QR	D	IAE	WAUBUNO CREEK NEAR DORCHESTER		149
02HC038	52 00	G	24	QR	D	IAE	WEST DUFFINS CREEK ABOVE GREEN RIVER		150

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

PROVINCIAL I OPERATED BY FEDERAL (WSC) OMNR

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02HC031	148 00	G	23	QR	D	IAE	WEST HUMBER RIVER AT HIGHWAY NO 7		151
02AB017	210 00	G	62	QR	L	IAE	WHITEFISH RIVER AT NOLALU		152
02GB008	383 00	G	12	QR		IAE	WHITEMANS CREEK NEAR MOUNT VERNON		153
02CF007	243 00	G	45	QR	D	IAE	WHITSON RIVER AT CHELMSFORD		154
02CF008	155 00	G	45	QR	D	IAE	WHITSON RIVER AT VAL CARON		155
02ED009	94 80	G	13	QR		IAE	WILLOW CREEK ABOVE LITTLE LAKE		156
02ED010	127 00	G	13	QR		IAE	WILLOW CREEK AT MIDHURST		157
02HD009	82 60	G	24	QR	D	IAE	WILMOT CREEK NEAR NEWCASTLE		158
02GD013	38 80	G	31	QR		IAE	WYE CREEK NEAR THORNDALE		159

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 =	2
	CONVENTIONAL	- WATER LEVEL =	2
		- DISCHARGE =	155
	SUB-TOTAL	- WATER LEVEL =	2
		- DISCHARGE =	157
	TOTAL	=	159

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

PROVINCIAL 1 OPERATED BY FEDERAL (WSC) OMOE/OMNR

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02CG003	17 90	G	42	QR		IAF	BLUE JAY CREEK NEAR TENKUMMAH		1
02EA006	650 00	G	41	QR		IAF	MAGNETAWAN RIVER NEAR BURKS FALLS		2
02AB014	112 00	G	60	QR		IAF	NORTH CURRENT RIVER NEAR THUNDER BAY		3
02EC018	332 00	G	22	QR		IAF	PEPPERLAW BROOK NEAR UDORA		4
02BA002	1190 00	G	61	QR		IAF	STEEL RIVER NEAR TERRACE BAY		5

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 =	5
	SUB-TOTAL	- WATER LEVEL =	0
		- DISCHARGE =	5
	TOTAL		= 5

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

PROVINCIAL 1 OPERATED BY FEDERAL (WSC) ONTARIO HYDRO/OMNR

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02CB003	1440 00	G	42	QR	TL	IAG	AUBINADONG RIVER ABOVE SESABIC CREEK		1
02CC005	1960 00	G	42	QR	M	IAG	LITTLE WHITE RIVER NEAR BELLINGHAM		2
02CC010	1190 00	G	42	QR	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
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

PROVINCIAL 2 OPERATED BY FEDERAL (WSC) OMOE

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02FF009	113 00	G	31	QR	D	JAD	AUSABLE RIVER NEAR EXETER		1
02GA041	62 90	G	11	QR		JAD	GRAND RIVER NEAR DUNDALK		2
04LK001	1140 00	G	41	QR		JAD	MATTAWISHKWIA RIVER AT HEARST		3
02GD023	34 20	G	31	QR		JAD	THAMES RIVER NEAR TAVISTOCK		4

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 =	4
	SUB-TOTAL	- WATER LEVEL =	0
		- DISCHARGE =	4
	TOTAL	=	4

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

PROVINCIAL 2 OPERATED BY FEDERAL (WSC) OMNR

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02GC031	0 00	G	12	QR		JAE	DODD CREEK BELOW PAYNES MILLS		1
02KF015	26 50	G	51	QR	D	JAE	GRAHAM CREEK AT NEPEAN (APR 1-DEC 15)		2
02AD011	0 00	G		QM		JAE	NAMEWAMINIKAN RIVER AT LONG RAPIDS		3
02LB017	69 20	G	53	QR		JAE	NORTH BRANCH SOUTH NATION RIVER NEAR HECKSTON		4
02LB022	152 00	G	53	QR		JAE	PAYNE RIVER NEAR BERWICK		5
02FA004	301 00	G	33	QR		JAE	SAUBLE RIVER AT ALLENFORD		6
02FA005	0 00	G	33	HR		JAE	SAUBLE RIVER ABOVE TARA		7
02HB023	132 00	G	14	QR	D	JAE	SPENCER CREEK AT HWY NO 5		8

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 =	1
		- DISCHARGE =	7
	SUB-TOTAL	- WATER LEVEL =	1
		- DISCHARGE =	7
	TOTAL	=	8

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

PROVINCIAL 2 OPERATED BY FEDERAL (WSC) OMOE/OMNR

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02GG006	267 00	G	32	QR	D	JAF	BEAR CREEK NEAR PETROLIA		1
02ED014	195 00	G	84	QR	M	JAF	PINE RIVER NEAR EVERETT		2

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 =	2
	SUB-TOTAL	- WATER LEVEL =	0
		- DISCHARGE =	2
	TOTAL	=	2

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
 SCHEDULE A
 FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

FEDERAL 1 SEDIMENT PROGRAMS OPERATED BY FEDERAL (WSC)

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
04ME003	27500 00	G	43	QR	NS L	SAA	ABITIBI RIVER AT ONAKAWANA MISC SED		1
04FC001	36000 00	G	41	QR	NS L	SAA	ATTAWAPISKAT R BELOW MUKETEI R MISC SED		2
02FF002	865 00	G	32	QR	SD	SAA	AUSABLE RIVER NEAR SPRINGBANK SED OPEN WAT		3
02FF007	466 00	G	31	QR	S	SAA	BAYFIELD RIVER NEAR VARNA MISC SED		4
02GG009	533 00	G	32	QR	SD	SAA	BEAR CREEK BELOW BRIGDEN MISC SED		5
02FB009	572 00	G	14	QR	SD	SAA	BEAVER RIVER NEAR CLARKSBURG MISC SED		6
02FB010	293 00	G	14	QR	SD	SAA	BIGHEAD RIVER NEAR MEAFORD MISC SED		7
02GC026	676 00	G	12	QR	SD	SAA	BIG OTTER CREEK NEAR CALTON SED OPEN WAT		8
02BB002	1980 00	G	61	QR	S	SAA	BLACK RIVER NEAR MARATHON MISC SED		9
02GC018	287 00	G	12	QR	SD	SAA	CATFISH CREEK NEAR SPARTA MISC SED		10
02GA039	272 00	G	11	QR	S	SAA	CONESTOGO RIVER ABOVE DRAYTON MISC SED		11
02HB002	795 00	G	14	QR	SD	SAA	CREDIT RIVER AT ERINDALE SED OPEN WAT		12
02HC024	316 00	G	23	QR	SD	SAA	DON RIVER AT TODMORDEN MISC SED		13
02HC030	204 00	G	23	QR	SD	SAA	ETOBICOKE CREEK BELOW Q E W MISC SED		14
02GB007	360 00	G	11	QR	S	SAA	FAIRCHILD CREEK NEAR BRANTFORD MISC SED		15
02HD012	232 00	G	24	QR	SD	SAA	GANARASKA RIVER ABOVE DALE MISC SED		16
02BF002	1160 00	G	44	QR	S L	SAA	GOULAIS RIVER NEAR SEARCHMONT MISC SED		17
02AE001	616 00	G	60	QR	S	SAA	GRAVEL RIVER NEAR CAVERS MISC SED		18
02HC013	88 10	G	23	QR	SD	SAA	HIGHLAND CREEK NEAR WEST HILL MISC SED		19
02LA006	409 00	G	53	QR	SD	SAA	KEMPTVILLE CREEK NEAR KEMPTVILLE MISC SED		20
02GC002	329 00	G	12	QR	SD	SAA	KETTLE CREEK AT ST THOMAS MISC SED		21
02GC015	104 00	G	12	QR	S M	SAA	LITTLE OTTER CRK NR STRAFFORDVILLE MISC SED		22
02BA003	1320 00	G	61	QR	S	SAA	LITTLE PIC RIVER NEAR COLDWELL MISC SED		23
02MB006	0 00	G	51	QR	S	SAA	LYN CREEK NEAR LYN MISC SED		24
02HC018	106 00	G	24	QR	SD	SAA	LYNDE CREEK NEAR WHITBY MISC SED		25
02ED005	295 00	G	13	QR	S	SAA	MAD RIVER NEAR GLENCAIRN MISC SED		26
02GE007	202 00	G	32	QR	SDM	SAA	MCGREGOR CREEK NEAR CHATHAM (SED MAR-MAY)		27
02CC008	9300 00	G	44	QR	S	SAA	MISSISSAGI RIVER AT MISSISSAGI CHUTE MISC SED		28
02KF006	2900 00	G	51	QR	SD	SAA	MISSISSIPPI RIVER AT APPLETON MISC SED		29
02HL001	2620 00	G	24	QR	SD	SAA	MOIRA RIVER NEAR FOXBORO MISC SED		30
04LG004	60100 00	G	43	QR	NS L	SAA	MOOSE RIVER ABOVE MOOSE RIVER MISC SED		31
02GC022	181 00	G	12	QR	S	SAA	NANTICOKE CREEK AT NANTICOKE MISC SED		32
02HM007	694 00	G	51	QR	S M	SAA	NAPANEE RIVER AT CAMDEN EAST MISC SED		33
02GA010	1030 00	G	11	QR	S	SAA	NITH RIVER NEAR CANNING MISC SED		34
02GD015	1340 00	G	31	QR	SD	SAA	NORTH THAMES RIVER NEAR THORNDALE MISC SED		35
02ED003	1180 00	G	14	QR	S M	SAA	NOTTAWASAGA RIVER NEAR BAXTER SED OPEN WAT		36
02FF008	110 00	G	32	QR	S M	SAA	PARKHILL CRK AB PARKHILL RESERVOIR MISC SED		37
02BB003	4270 00	G	61	QR	S	SAA	PIC RIVER NEAR MARATHON MISC SED		38
02FD001	154 00	G	33	QR	S	SAA	PINE RIVER AT LURGAN MISC SED		39
02MC001	404 00	G	53	QR	SD	SAA	RAISIN RIVER NEAR WILLIAMSTOWN MISC SED		40
02HA014	60 90	G	23	QR	S M	SAA	REDHILL CREEK AT HAMILTON MISC SED		41
02GH002	125 00	G	32	QR	S	SAA	RUSCOM RIVER NEAR RUSCOM STATION MISC SED		42
02HM003	891 00	G	24	QR	S	SAA	SALMON RIVER NEAR SHANNONVILLE MISC SED		43
02FE009	376 00	G	33	QR	SD	SAA	SOUTH MAITLAND R AT SUMMERHILL (MAR-MAY)		44
02LB005	3810 00	G	53	QR	S M	SAA	S NATION R NR PLANTAGENET SPRINGS MISC SED		45
02GA040	167 00	G	11	QR	S	SAA	SPEED RIVER NEAR ARMSTRONG MILLS MISC SED		46
02GG003	1160 00	G	32	QR	SD	SAA	SYDENHAM RIVER AT FLORENCE (SED FEB-MAY)		47
02FB007	181 00	G	14	QR	SD	SAA	SYDENHAM RIVER NEAR OWEN SOUND MISC SED		48
02GD021	149 00	G	31	QR	SD	SAA	THAMES RIVER AT INNERKIP MISC SED		49
02HR004	12000 00	G	22	QR	S M	SAA	TRENT RIVER AT GLEN ROSS MISC SED		50

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

FEDERAL 1 SEDIMENT PROGRAMS OPERATED BY FEDERAL (WSC)

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02HA006	293 00	G	12	QR	S	SAA	TWENTY MILE CREEK AT BALLS FALLS MISC SED		51
04DC001	50000 00	G	62	QR	NS L	SAA	WINISK R BELOW ASHEWEIG R TRIBUTARY MISC S		52

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 =	4
	CONVENTIONAL	- WATER LEVEL =	0
		- DISCHARGE =	48
	SUB-TOTAL	- WATER LEVEL =	0
		- DISCHARGE =	52
	TOTAL	=	52

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

PROVINCIAL 2 SEDIMENT PROGRAMS OPERATED BY FEDERAL (WSC) OMNR

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02HC025	303 00	G	23	QR	S M	SJAE	HUMBER RIVER AT ELDER MILLS SED OPEN WAT		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

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
 SCHEDULE A
 FISCAL YEAR 1988/1989 (FIBAL)

MAY 2 1988

CONTRIBUTED DATA OPERATED BY FEDERAL (WSC) MEDS/CHS

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02GH008	0 00	G	32	HR		RAT	DETROIT RIVER AT AMHERSTBURG		1
02GH007	0 00	G	32	HR		RAT	DETROIT RIVER AT LASALLE		2
02GH009	0 00	G	32	HR	D	RAT	LAKE ERIE AT BAR POINT		3
02GF002	0 00	G	32	HR		RAT	LAKE ERIE AT ERIEAU		4
02GH010	0 00	G	32	HR		RAT	LAKE ERIE AT KINGSVILLE		5
02HA017	0 00	G	12	HR	DM	RAT	LAKE ERIE AT PORT COLBORNE		6
02GC028	0 00	G	12	HR	D	RAT	LAKE ERIE AT PORT DOVER		7
02GC027	0 00	G	12	HR	D	RAT	LAKE ERIE AT PORT STANLEY		8
02ED012	0 00	G	13	HR	D	RAT	LAKE HURON AT COLLINGWOOD		9
02FE012	0 00	G	33	HR	D	RAT	LAKE HURON AT GODERICH		10
02CG002	0 00	G	42	HR		RAT	LAKE HURON AT LITTLE CURRENT		11
02EA014	0 00	G	45	HR	D	RAT	LAKE HURON AT PARRY SOUND		12
02CA006	0 00	G	44	HR	D	RAT	LAKE HURON AT THESSALON		13
02FA003	0 00	G	33	HR		RAT	LAKE HURON AT TOBERMORY		14
02HB017	0 00	G	23	HR	D	RAT	LAKE ONTARIO AT BURLINGTON		15
02HD015	0 00	G	24	HR	D	RAT	LAKE ONTARIO AT COBOURG		16
02HM008	0 00	G	51	HR	D	RAT	LAKE ONTARIO AT KINGSTON		17
02HA018	0 00	G	12	HR	DM	RAT	LAKE ONTARIO AT PORT WELLER		18
02HC048	0 00	G	23	HR	D	RAT	LAKE ONTARIO AT TORONTO		19
02GH005	0 00	G	32	HR	DM	RAT	LAKE ST CLAIR AT BELLE RIVER		20
02GH006	0 00	G	32	HR		RAT	LAKE ST CLAIR AT TECUMSEH		21
02BF010	0 00	G	44	HR		RAT	LAKE SUPERIOR AT GROS CAP		22
02BD004	0 00	G	61	HR	D	RAT	LAKE SUPERIOR AT MICHIPOTEN HARBOUR		23
02BA004	0 00	G	60	HR		RAT	LAKE SUPERIOR AT ROSSPORT		24
02AB018	0 00	G	62	HR	DM	RAT	LAKE SUPERIOR AT THUNDER BAY		25
02GG010	0 00	G	32	HR		RAT	ST CLAIR RIVER AT POINT EDWARD		26
02GG011	0 00	G	32	HR		RAT	ST CLAIR RIVER AT PORT LAMBTON		27
02MB007	0 00	G	51	HR		RAT	ST LAWRENCE RIVER AT BROCKVILLE		28
02MC022	0 00	G	53	HR		RAT	ST LAWRENCE R BELOW CORNWALL CANAL		29
02MB008	0 00	G	51	HR		RAT	ST LAWRENCE R AT IROQUOIS ISLAND (AB)		30
02MB009	0 00	G	51	HR		RAT	ST LAWRENCE R AT IROQUOIS ISLAND (BE)		31
02MC023	0 00	G	53	HR	M	RAT	ST LAWRENCE R AT SUMMERSTOWN		32
02BF011	0 00	G	44	HR	M	RAT	ST MARYS R AT S S MARIE (ABOVE)		33
02CA005	0 00	G	44	HR	M	RAT	ST MARYS R AT S S MARIE (BELOW)		34

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 =	34
		- DISCHARGE =	0
	SUB-TOTAL	- WATER LEVEL =	34
	- DISCHARGE =	0	
	TOTAL	=	34

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
 SCHEDULE A
 FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

CONTRIBUTED DATA OPERATED BY PROVINCE (ONTARIO HYDRO)

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
04ME002	22900 00	G	80	QP		RBC	ABITIBI RIVER AT ABITIBI CANYON		1
04ME004	23400 00	G	80	QP		RBC	ABITIBI RIVER AT OTTER RAPIDS		2
04MD003	2540 00	G	82	HM		RBC	FREDERICK HOUSE RIVER AT NIGHTHAWK LAKE		3
02AB012	174 00	G	83	QM		RBC	GREENWATER CREEK AT OUTLET OF GREENWATER LAKE		4
02AB004	3760 00	G	83	QP		RBC	KAMINISTIQUIA RIVER AT OUTLET OF DOG LAKE		5
02AB010	6710 00	G	83	QP		RBC	KAMINISTIQUIA RIVER AT KAKABEKA FALLS P H		6
02AB013	526 00	G	83	QM		RBC	KASHABOWIE RIVER AT OUTLET OF KASHABOWIE LAKE		7
04JD002	4270 00	G	82	QM		RBC	KENOGAMI RIVER AT KENOGAMI DAM		8
02AD007	0 00	G	82	HR	M	RBC	LAKE NIPIGON AT MACDIARMID		9
04GA001	0 00	G	83	QR	N	RBC	LAKE ST JOSEPH OUTFLOW TO ALBANY RIVER		10
04GA004	0 00	G	83	HR	N	RBC	LAKE ST JOSEPH ABOVE RAT RAPIDS DAM		11
04JD003	0 00	G	81	QR		RBC	LONG LAKE DIVERSION TO LAKE SUPERIOR		12
04JD001	0 00	G	82	HM		RBC	LONG LAKE AT LONGLAC		13
02KE005	8160 00	G	81	QP		RBC	MADAWASKA RIVER AT STEWARTVILLE		14
02JE021	749 00	G	82	QM	L	RBC	MATABITCHUAN RIVER AT RABBIT LAKE DAM		15
04LG003	34700 00	G	80	QP		RBC	MATTAGAMI RIVER AT LITTLE LONG RAPIDS		16
02CB001	4040 00	G	83	QP		RBC	MISSISSAGI RIVER BELOW AUBREY FALLS		17
02CC007	6840 00	G	83	QP		RBC	MISSISSAGI RIVER AT RAYNER GENERATING STATION		18
02CC009	9010 00	G	83	QP		RBC	MISSISSAGI RIVER AT RED ROCK FALLS		19
02CB002	2150 00	G	82	HM	L	RBC	MISSISSAGI RIVER AT ROCKY ISLAND LAKE		20
04GB003	0 00	G	81	HR		RBC	MOJIKIT LAKE RESERVOIR AT MOJIKIT LAKE		21
02JD010	6600 00	G	80	QP		RBC	MONTREAL RIVER AT LOWER NOTCH GENERATING STA		22
02AD008	24600 00	G	81	QP		RBC	NIPIGON RIVER AT PINE PORTAGE		23
02AD009	0 00	G	81	QR		RBC	OGOKI RIVER DIVERSION TO LAKE NIPIGON		24
04GB001	13600 00	G	82	QR		RBC	OGOKI RIVER AT WABOOSE FALLS DAM		25
02KC012	0 00	G	81	HR		RBC	OTTAWA RIVER AT ARMPRIOR		26
02KF009	89600 00	G	81	QP		RBC	OTTAWA RIVER AT CHATS FALLS		27
02KA002	57500 00	G	81	QP		RBC	OTTAWA RIVER AT DES JOACHIMS		28
02JE012	47900 00	G	81	QP		RBC	OTTAWA RIVER AT LA CAVE RAPIDS		29
02KC013	0 00	G	82	HR	M	RBC	OTTAWA RIVER AT PEMBROKE		30
02AB011	0 00	G	83	QM		RBC	SHEBANDOWAN RIVER AT OUTLET OF SHEBANDOWAN L		31
02DC003	6660 00	G	80	QP		RBC	STURGEON RIVER AT CRYSTAL FALLS		32
02DC007	1360 00	G	82	QM		RBC	TEMAGAMI RIVER AT CROSS LAKE DAM		33
02DC010	0 00	G	82	HM		RBC	TEMAGAMI LAKE AT TEMAGAMI		34
02HK802	9090 00	G	22	QP		RBC	TRENT RIVER AT HEALEY FALLS (P P CONTR 82)		35
04GB002	0 00	G	83	HR		RBC	WABOOSE LAKE RESERVOIR AT WABOOSE DAM		36
02DA002	0 00	G	82	HM		RBC	WANAPITEI LAKE AT BOWLANDS BAY		37

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

CONTRIBUTED DATA OPERATED BY PROVINCE (ONTARIO HYDRO)

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 =	1
		- DISCHARGE =	1
	CONVENTIONAL	- WATER LEVEL =	10
		- DISCHARGE =	25
	SUB-TOTAL	- WATER LEVEL =	11
		- DISCHARGE =	26
TOTAL		=	37

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

CONTRIBUTED DATA OPERATED BY PROVINCE (OMNR)

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02ED100	86 00	G	84	QR		RBE	BEETON CREEK NEAR TOTTENHAM		1
02ED102	211 00	G	84	QR		RBE	BOYNE RIVER AT EARL ROWE PARK		2

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 =	2
	SUB-TOTAL	- WATER LEVEL =	0
		- DISCHARGE =	2
	TOTAL	=	2

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

CONTRIBUTED DATA OPERATED BY PRIVATE AGENCY

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
04MC001	13300 00	G	90	QP		RDP	ABITIBI RIVER AT IROQUOIS FALLS		1
04MC002	9950 00	G	90	QP		RDP	ABITIBI RIVER AT TWIN FALLS		2
04LF001	6760 00	G	96	QP		RDP	KAPUSKASING RIVER AT KAPUSKASING		3
04LB001	10000 00	G	90	QP		RDP	MATTAGAMI RIVER AT SMOOTH ROCK FALLS	ENGLISH	4
02BD002	5130 00	G	97	QP		RDP	MICHIPICOTEN RIVER AT HIGH FALLS	ENGLISH	5
02BE002	2880 00	G	97	QP		RDP	MONTREAL RIVER NEAR MONTREAL RIVER HARBOUR	ENGLISH	6
02EC003	5850 00	G	13	QP		RDP	SEVERN RIVER AT SWIFT RAPIDS(CONTR 95)	ENGLISH	7
02CE001	11400 00	G	93	QP		RDP	SPANISH RIVER AT ESPANOLA	ENGLISH	8
02CE004	6800 00	G	98	QP		RDP	SPANISH RIVER AT HIGH FALLS	ENGLISH	9
02CF004	4190 00	G	98	QP		RDP	VERMILION RIVER AT LORNE FALLS	ENGLISH	10

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 =	10
	SUB-TOTAL	- WATER LEVEL =	0
		- DISCHARGE =	10
	TOTAL	=	10

CANADA/ONTARIO COST-SHARING AGREEMENT ACTIVE STATION LIST
SCHEDULE A
FISCAL YEAR 1988/1989 (FINAL)

MAY 2 1988

CONTRIBUTED DATA OPERATED BY FEDERAL (OTHER)

DATA IS FROM GUELPH STATIONS ONLY

STA NO	DR AREA	DIST	RESP	GAUGE	DATA	FUND CD	STATION NAME	UNITS	NO
02GG012	579000 00	G	78	Q		REO	LAKE HURON OUTFLOW TO ST CLAIR RIVER		1
02DD021	0 00	G	45	HM		REO	LAKE NIPISSING AT FRENCH R OUTLET (CONTR 72)		2
02GH012	596000 00	G	78	Q		REO	LAKE ST CLAIR OUTFLOW TO DETROIT RIVER		3
02HA003	686000 00	G	78	QP		REO	NIAGARA RIVER AT QUEENSTON	ENGLISH	4
02MC002	780000 00	G	77	QP		REO	ST LAWRENCE RIVER AT CORNWALL	ENGLISH	5
02CA001	210000 00	G	76	QP		REO	ST MARYS RIVER AT SAULT STE MARIE		6
02EC016	0 00	G	13	QM		REO	TRENT CANAL LOCK 42 NEAR WASHAGO (CONTR 75)		7
02HA019	0 00	G	73	QM		REO	WELLAND CANAL DIVERSION FROM LAKE ERIE		8

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 =	1
		- DISCHARGE =	7
	SUB-TOTAL	- WATER LEVEL =	1
		- DISCHARGE =	7
	TOTAL	=	8

APPENDIX B

SCHEDULE 'D'

ANNUAL PAYMENT FOR

1988/1989

SCHEDULE D 1988/89

April 12 1988

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 1988/89 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 MNR)	\$ 43 560	\$ NIL	\$ 43 560
b) Specialized Equipment (operation of 4 DCPs 1 100% OH funded 2 cost shared with MNR and 1 cost shared with FED)	\$ 1 200	\$ NIL	\$ 1 200
		ANNUAL PAYMENT	<u>\$ 44,760</u>

B) ANNUAL PAYMENT for 1988/89 to be paid to Ontario Hydro by Water Survey of Canada

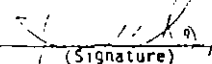
	<u>OPERATION</u>	<u>CONSTRUCTION</u>	<u>TOTAL</u>
Streamflow and water level (6 stations cost shared with OH)	\$ 7 340	\$ NIL	\$ 7 340
		ANNUAL PAYMENT	<u>\$ 7,340</u>

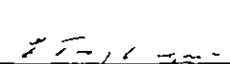
C) ANNUAL PAYMENT for 1988/89 to be paid to Receiver General of Canada by Ontario Ministry of the Environment

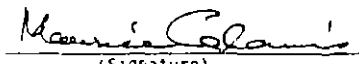
	<u>OPERATION</u>	<u>CONSTRUCTION</u>	<u>TOTAL</u>
a) Streamflow and water level installations (39 stations operated by and 17 stations cost shared with Water Survey of Canada and 7 stations cost shared with MNR or (As a result FED/PROV station cost shared with MNR)	\$225 740	\$ 24 000	\$249 740
b) Specialized Equipment (Installation and operation of 11 new DCPs 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)	\$ 2 600	\$ 15 800	\$ 18 400
		ANNUAL PAYMENT	<u>\$268,140</u>

D) ANNUAL PAYMENT for 1988/89 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 (166 stations operated by and 14 stations cost shared with Water Survey of Canada and 7 stations cost shared with MOE and 3 stations cost shared with OH and 1 FED/PROV station cost shared with MOE)	\$692 960	\$ 80 000	\$772 960
b) Sediment installations (one station operated by Water Survey of Canada)	\$ 4 600	\$ NIL	\$ 4 600
c) Specialized Equipment (operation of 7 DCPs 2 cost shared with OH)	\$ 6 000	\$ NIL	\$ 6 000
		ANNUAL PAYMENT	<u>\$783,560</u>


 (Signature)
 Director of Water Resources Branch
 Ministry of Environment


 (Signature)
 Regional Director
 Inland Waters Directorate


 (Signature)
 Director of Conservation Authorities
 and Water Management Branch
 Ministry of Natural Resources

APPENDIX C

CHANGES TO NETWORK AND SCHEDULE 'A'

TABLE C 1 - Changes in Gauging Network, April 2, 1988 to April 1, 1989

TABLE C 2 - Changes between Schedule 'A' 1988/1989 and Schedule 'A' 1989/1990

TABLE C 1
CHANGES IN GAUGING NETWORK - APRIL 2 1988 TO APRIL 1 1989
(Ontario Region Only)

A HYDROMETRIC STATIONS ADDED (WRB Operated)

1	02MB010	BUELLS CREEK AT BROCKVILLE	QR	P2-MNR	NOV 88
2	02ED019	COPELAND CR NEAR PENETANGUISHENE	QR	FP1-MOE	JUN 88
3	02HB025	CREDIT RIVER AT NORVAL	QR	P2-MNR	OCT 88
4	02AB021	CURRENT RIVER AT STEPSTONE	QR	FP2-MNR	FEB 89
5	02ED017	HOG CR NEAR VICTORIA HARBOUR	QR	FP1-MOE	JUN 88
6	02ED015	MAD RIVER BELOW AVENING	QR	FP1-MOE	JUN 88
7	02FE015	MAITLAND RIVER AT BENMILLER	QR	P1-MNR	DEC 88
8	02BD005	MAGPIE RIVER AT ESNAGI LAKE	HR	P2-MNR	OCT 88
9	02ED021	MATCHEDASH BAY ABOVE HWY #69	HR	P2-MNR	AUG 88
10	02ED020	MATCHEDASH BAY BELOW HWY #69	HR	P2-MNR	AUG 88
11	02GA042	MOOREFIELD CREEK NR ROTHSA Y (NOV 1-MAR 1)	QR	P2-MOE	APR 89
12	02ED022	NORTH RIVER NEAR COLDWATER	HR	P2-MNR	AUG 88
13	02ED023	NORTH RIVER NEAR LOVERING (MISC)	HM	P2-MNR	AUG 88
14	02ED024	NORTH RIVER AT THE FALLS	QR	P2-MNR	AUG 88
15	02HA024	OSWEGO CREEK AT CANBORO	QR	P2-MNR	SEP 88
16	02HJ002	OTONABEE RIVER AT LAKEFIELD (REACTIV)	QR	FED-1	APR 89
17	02HA023	REDHILL CREEK AT ALBION FALLS	QR	P2-MNR	OCT 88
18	02HA022	STONE Y CREEK AT STONEY CREEK	QR	P2-MNR	OCT 88
19	02ED018	STURGEON R AT STURGEON BAY	QR	FP1-MOE	JUN 88
20	02BF013	TRIB TO NORBERG CREEK AT TURKEY LAKE	QR	FED-1	JAN 89
21	02ED016	TRIB TO WYE RIVER BELOW ELMVALE	QR	FP1-MOE	JUN 88
22	02HA021	WELLAND RIVER NEAR BINBROOK	HR	P2-MNR	SEP 88
23	02HA025	WELLAND RIVER AT THE WELLAND CANAL	HR	P2-MNR	APR 89
24	02HM009	W BR LITTLE CATARAQUI CRK AT KINGSTON	QR	P2-MNR	DEC 88
25	02HC038	W DUFFINS CR ABOVE GREEN RIVER (REACT)	QR	P1-MNR	MAY 88
26	02BA005	WHITESAND R AB SCHREIBER AT MINOVA MINE	QR	P1-MOE	FEB 89

S W E E P STATIONS

27	02GH013	FIFTH CONCESSION DRAIN NEAR ESSEX (TEST)	QR	FED-1	JAN 89
28	02GH014	SECOND CONCESSION DRAIN NEAR ESSEX (CTRL)	QR	FED-1	JAN 89
29	02GC032	HOLTBY DRAIN AT CONCESSION #7 (KETTLE CTRL)	QR	FED-1	JUL 88
30	02GC033	MADTER DRAIN AT CONCESSION #7 (KETTLE TEST)	QR	FED-1	JUL 88
31	02GD025	GORING DRAIN AT CONCESSION #13 (PITT TEST)	QR	FED-1	SEP 88
32	02GD024	WEBBER DRAIN AT HWY #59 (PITTOCK CTRL)	QR	FED-1	SEP 88

B HYDROMETRIC STATIONS DISCONTINUED (WRB Operated)

1	02AB015	CURRENT RIVER NEAR STEPSTONE	QR	FP2-MNR	SEP 88
2	02CD007	LITTLE NORDIC CRK AT ELLIOT LAKE	QR	P1-MOE	MAR 89
3	02ED005	MAD RIVER AT GLENCAIRN (NOT OPERATED IN 88)	QR	FP1-MOE	MAY 88
4	02AD011	NAMAWAMINIKAN RIVER AT LONG RAPIDS	QM	P2-MNR	NOV 88
5	02LA018	RIDEAU RIVER AT MERRICKVILLE (SEAS)	HR	FED-1	DEC 88
6	02EC014	SEVERN RIVER ABOVE WASDELL FALLS	HR	FED-1	MAR 89
7	02HC026	WEST DUFFINS CREEK AT GREEN RIVER	QR	P1-MNR	MAY 88

C CHANGES IN FUNDING AND/OR CLASSIFICATION OF HYDROMETRIC STATIONS (WRB Operated)

1	02GG006	BEAR CREEK NEAR PETROLIA	QR	FROM P2-MOE/MNR TO P1-MOE/MNR	JUN 88
---	---------	--------------------------	----	----------------------------------	--------

D OTHER CHANGES IN THE HYDROMETRIC NETWORK

-- NIL --

E SEDIMENT STATIONS ADDED

1	02FB001	BATCHAWANA RIVER NEAR BATCHAWANA	(MISC)	FED-1-SED	APR 89
2	02AC002	BLACK STURGEON RIVER AT HWY 17	(MISC)	FED-1-SED	APR 89
3	02MB010	BUELLS CREEK AT BROCKVILLE	(MISC)	FED-1-SED	APR 89
4	02GH003	CANARD RIVER NEAR LUKERVILLE	(MISC)	FED-1-SED	APR 89
5	02ED019	COPELAND CR NR PENETANGUISHENE	(MISC)	FED-1-SED	APR 89
6	02HB025	CREDIT RIVER AT NORVAL	(MISC)	FED-1-SED	APR 89
7	02HC006	DUFFINS CREEK AT PICKERING	(MISC)	FED-1-SED	APR 89

TABLE C 1 (continued)
 CHANGES IN GAUGING NETWORK - APRIL 2 1988 TO APRIL 1 1989
 (Ontario Region Only)

8	02DD010 FRENCH RIVER AT DRY PINE BAY	(MISC)	FED-1-SED	APR 89
9	02GA014 GRAND RIVER NEAR MARSVILLE	(MISC)	FED-1-SED	APR 89
10	02ED017 HOG CREEK NEAR VICTORIA HARBOUR	(MISC)	FED-1-SED	APR 89
11	02EC009 HOLLAND R NEAR HOLLAND LANDING	(MISC)	FED-1-SED	APR 89
12	02HC028 LITTLE ROUGE R NR LOCUST HILL	(MISC)	FED-1-SED	APR 89
13	02ED015 MAD RIVER BELOW AVENING	(MISC)	FED-1-SED	MAY 88
14	02BD003 MAGPIE RIVER NEAR MICHIPICOTEN	(MISC)	FED-1-SED	APR 89
15	02GB010 MCKENZIE CREEK NEAR CALEDONIA	(MISC)	FED-1-SED	APR 89
16	02AB008 NEEBING RIVER NEAR THUNDER BAY	(MISC)	FED-1-SED	APR 89
17	02AA001 PIGEON RIVER AT MIDDLE FALLS	(MISC)	FED-1-SED	APR 89
18	02HA023 REDHILL CREEK AT A/BION FALLS	(MISC)	FED-1-SED	APR 89
19	02HC022 ROUGE RIVER NEAR MARKHAM	(MISC)	FED-1-SED	APR 89
20	02CA002 ROOT RIVER AT SAULT STE MARIE	(MISC)	FED-1-SED	APR 89
21	02HB023 SPENCER CREEK AT HWY 5	(MISC)	FED-1-SED	APR 89
22	02BA002 STEEL RIVER NEAR TERRACE BAY	(MISC)	FED-1-SED	APR 89
23	02FA002 STOKES RIVER NEAR FERNDALE	(MISC)	FED-1-SED	APR 89
24	02HA022 STONEY CREEK AT STONEY CREEK	(MISC)	FED-1-SED	APR 89
25	02ED018 STURGEON RIVER AT STURGEON BAY	(MISC)	FED-1-SED	APR 89
26	02HM009 W BR LIT CATARAQUI CR AT KINGSTON	(MISC)	FED-1-SED	APR 88
27	02BA005 WHITESAND R AB SCHREIBER AT MINOVA MINE	(MISC)	FED-1-SED	APR 89
28	02ED013 WYE RIVER NEAR WYEVALE	(MISC)	FED-1-SED	APR 89
F	<u>SEDIMENT STATIONS DISCONTINUED</u>			
1	02ED005 MAD RIVER NEAR GLENCAIRN	(MISC)	FED-1-SED	MAY 88
G	<u>CHANGES TO FUNDING AND/OR CLASSIFICATION OF SEDIMENT STATIONS</u>			
-- NIL --				
H	<u>OTHER CHANGES IN THE SEDIMENT NETWORK</u>			
1	02HC024 DON RIVER AT TODMORDEN		FED-1-SED	APR 89
	-converted from full time to miscellaneous			
2	02GE007 MCGREGOR CREEK NEAR CHATHAM		FED-1-SED	APR 89
	-converted from freshet only to open water seasonal			
3	02FE009 SOUTH MAITLAND RIVER AT SUMMERHILL		FED-1-SED	APR 89
	-converted from freshet only to miscellaneous			
4	02GG003 SYDENHAM RIVER AT FLORENCE		FED-1-SED	APR 89
	-converted from freshet only to open water seasonal			
I	<u>CONTRIBUTED STATIONS (HYDROMETRIC) ADDED</u>			
	02KC016 OTTAWA RIVER AT SANDPOINT	HR	ONT HYD	OCT 88
J	<u>CONTRIBUTED STATIONS (HYDROMETRIC) DISCONTINUED</u>			
	02KC012 OTTAWA RIVER AT ARNPRIOR	HR	ONT HYD	OCT 88
K	<u>CHANGES IN CONTRIBUTOR CLASSIFICATION</u>			
-- NIL --				

TABLE C 2
CHANGES BETWEEN SCHEDULE A - 1988/1989 AND SCHEDULE A - 1989/1990
(Ontario Region Only)

FEDERAL CATEGORIES - HYDROMETRIC

A FEDERAL 1 Net Change = +6

1	02HJ002	OTONABEE RIVER AT LAKEFIELD	QR	REACTIV	APR 89
2	02BF013	TRIB TO NORBERG CREEK AT TURKEY LAKE	QR	NEW	JAN 89
3	02LA018	RIDEAU RIVER AT MERRICKVILLE (SEAS)	HR	DISC	DEC 88
4	02EC014	SEVERN RIVER AB WASDELL FALLS	HR	DISC	MAR 89

S W E E P STATIONS

5	02GH013	FIFTH CONCESSION DRAIN NEAR ESSEX (TEST)	QR	NEW	JAN 89
6	02GH014	SECOND CONCESSION DRAIN NEAR ESSEX (CTRL)	QR	NEW	JAN 89
7	02GC032	HOLTBY DRAIN AT CONCESSION #7 (KETTLE CTRL)	QR	NEW	JUL 88
8	02GC033	MADTER DRAIN AT CONCESSION #7 (KETTLE TEST)	QR	NEW	JUL 88
9	02GD025	GORING DRAIN AT CONCESSION #13 (PITT TEST)	QR	NEW	SEP 88
10	02GD024	WEBBER DRAIN AT HWY #59 (PITTOCK CTRL)	QR	NEW	SEP 88

B OTHER FEDERAL CATEGORIES Net Change = 0

-- NIL --

FEDERAL-PROVINCIAL CATEGORIES - HYDROMETRIC

A FEDERAL-PROVINCIAL 1 - OMOE Net Change = +4

1	02ED019	COPELAND CR NEAR PENETANGUISHENE	QR	NEW	JUN 88
2	02ED017	HOG CR NEAR VICTORIA HARBOUR	QR	NEW	JUN 88
3	02ED005	MAD RIVER AT GLENCAIRN (not operated in 88)	QR	DISC	MAY 88
4	02ED015	MAD RIVER BELOW AVENING (replaces 02ED005)	QR	NEW	JUN 88
5	02ED018	STURGEON R AT STURGEON BAY	QR	NEW	JUN 88
6	02ED016	TRIB TO WYE RIVER BELOW ELMVALE	QR	NEW	JUN 88

B FEDERAL-PROVINCIAL 2 - OMNR Net Change = 0

1	02AB021	CURRENT RIVER AT STEPSTONE	QR	NEW	FEB 89
2	02AB015	CURRENT RIVER NEAR STEPSTONE	QR	DISC	SEP 88

C OTHER FEDERAL-PROVINCIAL CATEGORIES Net Change = 0

PROVINCIAL CATEGORIES - HYDROMETRIC

A PROVINCIAL 1 - OMOE Net Change = 0

1	02BA005	WHITESAND R AB SCHREIBER AT MINOVA MINE	QR	NEW	FEB 89
2	02CD007	LITTLE NORDIC CRK AT ELLIOT LAKE	QR	DISC	MAR 89

B PROVINCIAL 1 - OMNR Net Change = +1

1	02FE015	MAITLAND RIVER AT BENMILLER	QR	NEW	DEC 88
2	02HC038	W DUFFINS CR AB GREEN RIV (replaces 02HC026)	QR	REACTIV	MAY 88
3	02HC026	WEST DUFFINS CREEK AT GREEN RIVER	QR	DISC	MAY 88

TABLE C 2 (continued)
CHANGES BETWEEN SCHEDULE A - 1988/1989 AND SCHEDULE A - 1989/1990
(Ontario Region Only)

C	<u>PROVINCIAL 1 - OMOE/OMNR</u>	Net Change = +1			
1	02GG006 BEAR CREEK NEAR PETROLIA		QR	FROM P2-MOE/MNR	JUN 88
D	<u>OTHER PROVINCIAL 1 CATAGORIES</u>	Net Change = 0			
	-- NIL --				
E	<u>PROVINCIAL 2 - OMOE</u>	Net Change = +1			
1	02GA042 MOOREFIELD CREEK NR ROTHSAY (NOV 1-MAR1)		QR	NEW	APR 89
F	<u>PROVINCIAL 2 - OMNR</u>	Net Change = +13			
1	02MB010 BUELLS CREEK AT BROCKVILLE		QR	NEW	NOV 88
2	02HB025 CREDIT RIVER AT NORVAL		QR	NEW	OCT 88
3	02BD005 MAGPIE RIVER AT ESNAGI LAKE		HR	NEW	OCT 88
4	02ED021 MATCHEDASH BAY ABOVE HWY #69		HR	NEW	AUG 88
5	02ED020 MATCHEDASH BAY BELOW HWY #69		HR	NEW	AUG 88
6	02AD011 NAMEWAMINIKAN RIVER AT LONG RAPIDS		QM	DISC	NOV 88
7	02ED022 NORTH RIVER NEAR COLDWATER		HR	NEW	AUG 88
8	02ED023 NORTH RIVER NEAR LOVERING (MISC)		HM	NEW	AUG 88
9	02ED024 NORTH RIVER AT THE FALLS		QR	NEW	AUG 88
10	02HA024 OSWEGO CREEK AT CANBORO		QR	NEW	SEP 88
11	02HA023 REDHILL CREEK AT ALBION FALLS		QR	NEW	OCT 88
1	02HA022 STONEY CREEK AT STONEY CREEK		QR	NEW	OCT 88
13	02HA021 WELLAND RIVER NEAR BINBROOK		HR	NEW	SEP 88
14	02HA025 WELLAND RIVER AT THE WELLAND CANAL		HR	NEW	APR 89
15	02HM009 W BR LITTLE CATARAQUI CRK AT KINGSTON		QR	NEW	DEC 88
G	<u>PROVINCIAL 2 - OMOE/OMNR</u>	Net Change = -1			
1	02GG006 BEAR CREEK NEAR PETROLIA		QR	TO P1-MOE/MNR	JUN 88
H	<u>OTHER PROVINCIAL 2 CATAGORIES</u>	Net Change = 0			
	-- NIL --				

SEDIMENT DATA CATEGORIES

A	<u>FEDERAL 1 - SEDIMENT</u>	Net Change = +27			
1	02FB001 BATCHAWANA RIVER NEAR BATCHAWANA		(MISC)	NEW	APR 89
2	02AC002 BLACK STURGEON RIVER AT HWY 17		(MISC)	NEW	APR 89
3	02MB010 BUELLS CREEK AT BROCKVILLE		(MISC)	NEW	APR 89
4	02GH003 CANARD RIVER NEAR LUKERVILLE		(MISC)	NEW	APR 89
5	02ED019 COPELAND CR NR PENETANGUISHENE		(MISC)	NEW	APR 89
6	02HB025 CREDIT RIVER AT NORVAL		(MISC)	NEW	APR 89
7	02HC024 DON RIVER AT TODMORDEN		(MISC)	FROM CONT	APR 89

TABLE C 2 (continued)
CHANGES BETWEEN SCHEDULE A - 1988/1989 AND SCHEDULE A - 1989/1990
(Ontario Region Only)

8	02HC006	DUFFINS CREEK AT PICKERING	(MISC)	NEW	APR 89
9	02DD010	FRENCH RIVER AT DRY PINE BAY	(MISC)	NEW	APR 89
10	02GA014	GRAND RIVER NEAR MARSVILLE	(MISC)	NEW	APR 89
11	02ED017	HOG CREEK NEAR VICTORIA HARBOUR	(MISC)	NEW	APR 89
12	02EC009	HOLLAND R NEAR HOLLAND LANDING	(MISC)	NEW	APR 89
13	02HC028	LITTLE ROUGE R NR LOCUST HILL	(MISC)	NEW	APR 89
14	02ED015	MAD RIVER BELOW AVENING	(MISC)	NEW	MAY 88
15	02ED005	MAD RIVER NEAR GLENCAIRN	(MISC)	DISC	MAY 88
16	02BD003	MAGPIE RIVER NEAR MICHIPICOTEN	(MISC)	NEW	APR 89
17	02GE007	MCGREGOR CREEK NEAR CHATHAM	(SEAS)	FROM FRESH	APR 89
18	02GB010	MCKENZIE CREEK NEAR CALEDONIA	(MISC)	NEW	APR 89
19	02AB008	NEEBING RIVER NEAR THUNDER BAY	(MISC)	NEW	APR 89
20	02AA001	PIGEON RIVER AT MIDDLE FALLS	(MISC)	NEW	APR 89
21	02HA023	REDHILL CREEK AT ALBION FALLS	(MISC)	NEW	APR 89
22	02HC022	ROUGE RIVER NEAR MARKHAM	(MISC)	NEW	APR 89
23	02CA002	ROOT RIVER AT SAULT STE MARIE	(MISC)	NEW	APR 89
24	02FE009	SOUTH MAITLAND R AT SUMMERHILL	(MISC)	FROM FRESH	APR 89
25	02HB023	SPENCER CREEK AT HWY 5	(MISC)	NEW	APR 89
26	02BA002	STEEL RIVER NEAR TERRACE BAY	(MISC)	NEW	APR 89
27	02FA002	STOKES RIVER NEAR FERNDALE	(MISC)	NEW	APR 89
28	02HA022	STONEY CREEK AT STONEY CREEK	(MISC)	NEW	APR 89
29	02ED018	STURGEON RIVER AT STURGEON BAY	(MISC)	NEW	APR 89
30	02GG003	SYDENHAM RIVER AT FLORENCE	(SEAS)	FROM FRESH	APR 89
31	02HM009	W BR LIT CATARAQUI CR AT KINGSTON	(MISC)	NEW	APR 89
32	02BA005	WHITESAND R AB SCHREIBER AT MINOVA MINE	(MISC)	NEW	APR 89
33	02ED013	WYE RIVER NEAR WYEVALE	(MISC)	NEW	APR 89

B PROVINCIAL 2 - SEDIMENT - OMNR Net Change = 0

-- NIL --

CONTRIBUTED DATA CATEGORIES

A OPERATED BY PROVINCE (Ont Hyd) Net Change = 0

02KC016	OTTAWA RIVER AT SANDPOINT	HR	NEW	OCT 88
02KC012	OTTAWA RIVER AT ARNPRIOR	HR	DISC	OCT 88

B OTHER CONTRIBUTED DATA CATEGORIES Net Change = 0

-- Nil --

APPENDIX D

DERIVATION OF ACTUAL COSTS 1988/1989

- TABLE D 1 - Salaries and Operating & Maintenance (O&M) Costs for Hydro-metric Network Operated by WRB, Ontario Region, 1988/1989
- TABLE D 2 - Derivation of Actual Operating Costs for Stations Operated by WRB, Ontario Region, By Funding Classification, April 1, 1988 - March 31, 1989
- TABLE D 3 - Summary of Shareable Operating Costs by for Hydrometric Stations Operated by WRB, Ontario Region, 1988/1989
- TABLE D 4 - Actual Expenditures - Sediment Program, 1988/1989
- TABLE D 5 - Summary of Construction Program Costs, 1988/1989

TABLE D 1
SALARIES AND OPERATING & MAINTENANCE (O&M) COSTS FOR
HYDROMETRIC NETWORK OPERATED BY WRB, ONTARIO REGION
1988/1989

Salaries

Hydrometric Supervisors	\$213,685
Hydrometric Technicians	583,902
Other - Students, part-time, field help, construction (minor maintenance) etc	191,624
	<u>\$989,211</u>
Less Salary for Sediment Network	<u>- 36,100</u>
Net Salaries for Hydrometric Network	<u>\$953,111</u>

Operating & Maintenance (O&M)

	<u>Common</u>	<u>Conventional</u>	<u>Remote</u>
Transportation & Communications	\$137,047		
Professional & Special Services	13,531	\$ 13,815	
Rentals	15,287		\$132,696
Purchased Repairs & Upkeep	56,695		
Utilities, Materials & Supplies	54,952	105,553	18,433
EDP Shareable Costs ¹	22,341		
Repair & Replacement Costs for ² Current Meters	6,881		
Vehicle Depreciation	53,167		
Equipment Depreciation	<u>11,174</u>	<u> </u>	<u> </u>
TOTAL	\$371,075	\$119,368	\$151,129

NOTE 1 Based on 1987/88 costs plus 3 51% (Government Price Index) (Ceiling costs as per National Coordinating Committee Meeting - February 6, 1985) Pages 71 and 72 of Compendium Report

2 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 1988 TO MARCH 31 1989

Classification	# Flow Stations Operated		# W/L Stations Operated		Equivalent Station Years of Record (Fiscal) ⁿ		Total Cost	
	Remote	Conventional	Remote	Conventional	Remote	Conventional	Remote	Conventional
Federal 1-4	17	96 ^a	1 ^b	15 ^c	17 20	97 00	\$146 974	\$ 380 725
Fed-Prov 1 (MOE)	0	9 ^d	0	0	0	7 75	0	30 419
Fed-Prov 1 (MNR)	0	7	0	0	0	7 00	0	27 475
Fed-Prov 1 (MOE/MNR)	0	1 ^e	0	0	0	0 33	0	1 295
Fed-Prov 2 (OH)	1	3	0	0	1 00	3 00	8 545	11 775
Fed-Prov 2 (MOE)	0	2	0	0	0	2 00	0	7 850
Fed-Prov 2 (MNR)	0	6 ^f	0	1	0	5 58	0	21 901
Fed-Prov 3 (MOE)	9	1	0	0	9 00	1 00	76 905	3 925
Prov 1 (OH)	1	4	0	1	1 00	4 50	8 545	17 662
Prov 1 (MOE)	0	37 ^g	0	0	0	35 00	0	137 375
Prov 1 (MNR)	2	154 ^h	0	2	2 00	152 08	17 090	596 914
Prov 1 (MOE/MNR)	0	6 ⁱ	0	0	0	5 75	0	22 569
Prov 1 (OH/MNR)	0	3	0	0	0	3 00	0	11 775
Prov 2 (MOE)	0	4	0	0 ^l	0	4 00	0	15 700
Prov 2 (MNR)	0	14 ^j	1 ^k	5 ^l	20	10 86	1 709	42 625
Prov 2 (MOE/MNR)	0	2 ^m	0	0	0	1 25	0	4 906
TOTALS	30	349	2	24	30 40	340 10	\$259 768	\$1 334 891

NOTES

- a Includes 85 @12 months 3 @8 months 1 @7 months 2 @6 months 3 @3 months 2 @2 months
- b Includes 1 @5 months
- c Includes 14 @12 months 1 @8 months
- d Includes 4 @12 months 5 @9 months
- e Includes 1 @4 months
- f Includes 5 @12 months 1 @1 month
- g Includes 34 @12 months 1 @8 months 1 @3 months 1 @1 month
- h Includes 149 @12 months 1 @10 months 1 @8 months 2 @3 months 1 @1 month
- i Includes 5 @12 months 1 @9 months
- j Includes 5 @12 months 1 @8 months 2 @7 months 1 @6 months 4 @5 months 1 @3 months
- k Includes 1 @5 months
- l Includes 1 @12 months 3 @7 months 1 @6 months
- m Includes 1 @12 months 1 @3 months
- n Weighting factors used in calculating equivalent station years of record
 1 00 for 12 months flow record
 0 50 for 12 months water level record
 for less than 12 months divide months of data by 12 and multiply by appropriate weighting factor

$$\text{Conv Unit Cost} = \text{Salary} + \text{O\&M(Common)} + \text{O\&M(Conv)} = \frac{\$953\ 111}{370\ 50} + \frac{\$371\ 075}{370\ 50} + \frac{\$119\ 368}{340\ 10} = \$2\ 572 + \$1\ 002 + \$351 = \$3\ 925$$

$$\text{Remote Unit Cost} = \text{Salary} + \text{O\&M(Common)} + \text{O\&M(Remote)} = \frac{\$953\ 111}{370\ 50} + \frac{\$371\ 075}{370\ 50} + \frac{\$151\ 129}{30\ 40} = \$2\ 572 + \$1\ 002 + \$4\ 971 = \$8\ 545$$

**TABLE D 3
SUMMARY OF SHAREABLE OPERATING COSTS FOR HYDROMETRIC
STATIONS OPERATED BY WRB, ONTARIO REGION, 1988/1989**

<u>Ministry of Natural Resources</u>		<u>MNR</u>	<u>Equiv</u>	<u>Stat-Yrs</u>	<u>Unit</u>	<u>MNR</u>
		<u>Share</u>	<u>Total</u>	<u>MNR Share</u>	<u>Cost</u>	<u>Cost</u>
Conventional	Prov 1 (MNR)	100%	152 08	152 08	3,925	\$596,914
	Prov 1 (MOE/MNR)	50%	5 75	2 87	3,925	11,265
	Prov 1 (OH/MNR)	50%	3 00	1 50	3,925	5,887
	Prov 2 (MNR)	100%	10 86	10 86	3,925	42,625
	Prov 2 (MOE/MNR)	50%	1 25	0 62	3,925	2,433
	Fed/Prov 1 (MNR)	50%	7 00	3 50	3,925	13,737
	Fed/Prov 1 (MOE/MNR)	25%	0 33	0 08	3,925	314
	Fed/Prov 2 (MNR)	50%	5 58	2 79	3,925	10,951
Remote	Prov 1 (MNR)	100%	2 00	2 00	8,545	17,090
	Prov 2 (MNR)	100%	0 20	0 20	8,545	1,709
MNR TOTAL				176 50		\$702,925
<u>Ministry of the Environment</u>		<u>MOE</u>	<u>Equiv</u>	<u>Stat-Yrs</u>	<u>Unit</u>	<u>MOE</u>
		<u>Share</u>	<u>Total</u>	<u>MOE Share</u>	<u>Cost</u>	<u>Cost</u>
Conventional	Prov 1 (MOE)	100%	35 00	35 00	3,925	\$137,375
	Prov 1 (MOE/MNR)	50%	5 75	2 87	3,925	11,265
	Prov 2 (MOE)	100%	4 00	4 00	3,925	15,700
	Prov 2 (MOE/MNR)	50%	1 25	0 62	3,925	2,433
	Fed/Prov 1 (MOE)	50%	7 75	3 87	3,925	15,190
	Fed/Prov 1 (MOE/MNR)	25%	0 33	0 08	3,925	314
	Fed/Prov 2 (MOE)	50%	2 00	1 00	3,925	3,925
	Fed/Prov 3 (MOE)	50%	1 00	0 50	3,925	1,962
Remote	Fed/Prov 3 (MOE)	50%	9 00	4 50	8,545	38,452
MOE TOTAL				52 44		\$226,616
<u>Ontario Hydro</u>		<u>OH</u>	<u>Equiv</u>	<u>Stat-Yrs</u>	<u>Unit</u>	<u>OH</u>
		<u>Share</u>	<u>Total</u>	<u>OH Share</u>	<u>Cost</u>	<u>Cost</u>
Conventional	Prov 1 (OH)	100%	4 50	4 50	3,925	\$ 17,662
	Prov 1 (OH/MNR)	50%	3 00	1 50	3,925	5,887
	Fed/Prov 2 (OH)	50%	3 00	1 50	3,925	5,887
Remote	Prov 1 (OH)	100%	1 00	1 00	8,545	8,545
	Fed/Prov 2 (OH)	50%	1 00	0 50	8,545	4,272
OH TOTAL				9 00		\$ 42,253
PROVINCIAL TOTAL				237 94		\$971,794
<u>Federal</u>		<u>FED</u>	<u>Equiv</u>	<u>Stat-Yrs</u>	<u>Unit</u>	<u>FED</u>
		<u>Share</u>	<u>Total</u>	<u>FED Share</u>	<u>Cost</u>	<u>Cost</u>
Conventional	Fed 1-4	100%	97 00	97 00	3,925	\$380,725
	Fed/Prov 1 (MOE)	50%	7 75	3 87	3,925	15,190
	Fed/Prov 1 (MNR)	50%	7 00	3 50	3,925	13,737
	Fed/Prov 1 (MOE/MNR)	50%	0 33	0 16	3,925	628
	Fed/Prov 2 (OH)	50%	3 00	1 50	3,925	5,887
	Fed/Prov 2 (MOE)	50%	2 00	1 00	3,925	3,925
	Fed/Prov 2 (MNR)	50%	5 58	2 79	3,925	10,951
	Fed/Prov 3 (MOE)	50%	1 00	0 50	3,925	1,962
Remote	Fed 1-4	100%	17 20	17 20	8,545	146,974
	Fed/Prov 2 (OH)	50%	1 00	0 50	8,545	4,272
	Fed/Prov 3 (MOE)	50%	9 00	4 50	8,545	38,452
FEDERAL TOTAL				132 52		\$622,703
TOTAL PROVINCIAL AND FEDERAL				370 46		\$1,594,497

TABLE D 4
ACTUAL EXPENDITURES - SEDIMENT PROGRAM
1988/1989

<u>Total Ontario Region Program</u>	<u>Federal</u>	<u>Provincial</u>	<u>Total</u>
Continuous	3	1	4
Seasonal	2	0	2
Miscellaneous	47	0	47
Total	<u>52</u>	<u>1</u>	<u>53</u>
(Full Time Equivalents)	7	1	8
a <u>Salary</u>			
1) Sediment Network (50% EG-ESS-6)	\$15,180 62	\$ 2,168 66	\$17,349 28
2) Network Evaluation (50% EG-ESS-7)	\$18,750 68	--	\$18,750 68
Sub Total	\$33,931 30	\$ 2,168 66	\$36,099 96
b <u>Operation & Maintenance (O&M)</u>			
Transportation & Communications	\$ 2,295 62	\$ 11 38	\$ 2,307 00
Professional & Special Services	2,701 65	670 40	3,372 05
Purchase, Repair & Upkeep*	86 62	173 38	261 00
Utilities, Materials & Supplies	1,122 80	126 60	1,249 40
Publications	593 79	362 21	956 00
Capital Equipment Purchases	1 950 00	51 74	2 001 74
Professional- Service Contracts	15,000 00	-	15,000 00
Temporary Help Services	<u>1,305 00</u>	<u>-</u>	<u>\$ 1,305 00</u>
Subtotal	\$25,055 48	\$ 1,395 71	\$26,451 19
(* includes \$164 00 depreciation cost of sampler)			
c <u>Laboratory Costs (Provincial Station)</u>			
<u>Humber River at Elder Mills</u>	<u>Cost/Sample</u>	<u># Samples</u>	<u>Total Cost</u>
Bottom Withdrawal	\$53 92	1	\$ 53 92
Filtration	17 38	65	1,129 70
Dissolved Solids	2 80	12	33 60
Total Provincial Laboratory Costs)	<u>\$ 1,217 22</u>

TABLE D 4 (continued)

d Laboratory Costs (Federal Stations)

<u>Ausable River near Springbank</u>	<u>Cost/Sample</u>	<u># Samples</u>	<u>Total Cost</u>
Filtration	\$17 38	64	\$ 1,112 32
Dissolved Solids	2 80	10	28 00
Total Cost			<u>\$ 1,140 32</u>
<u>Big Otter Creek near Calton</u>			
Filtration	\$17 38	34	\$ 590 92
Dissolved Solids	2 80	8	22 40
Total Cost			<u>\$ 613 32</u>
<u>Credit River at Erindale</u>			
Filtration	17 38	109	\$ 1,894 42
Dissolved Solids	2 80	15	42 00
Total Cost			<u>\$ 1,936 42</u>
<u>Don River at Todmorden</u>			
Filtration	17 38	11	\$ 191 18
Dissolved Solids	2 80	9	25 20
Total Cost			<u>\$ 216 38</u>
<u>Nottawasaga River at Baxter</u>			
Bottom Withdrawal	53 92	1	\$ 53 92
Filtration	17 38	41	712 58
Dissolved Solids	2 80	8	22 40
Total Cost			<u>\$ 788 90</u>
<u>Miscellaneous Sub Offices</u>			
Filtration	\$17 38	53	\$ 921 14
Dissolved Solids	2 80	52	145 60
Total Cost			<u>\$ 1,066 74</u>
<u>Miscellaneous Regional</u>			
Bottom Withdrawal	53 92	12	\$ 647 04
Filtration	17 38	87	1,512 06
Dissolved Solids	2 80	88	246 40
Total Cost			<u>\$ 2,405 50</u>
Total Federal Laboratory Costs			<u>\$ 8,167 58</u>

TABLE D 4 (continued)

e Laboratory Costs (Projects)

Goderich Harbour Study

Sieve Analysis	20 97	27	\$ 566 19
			<u>\$ 566 19</u>

Total Project Laboratory Costs			<u>\$ 566 19</u>
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f Summary of Provincial Sediment Costs

Salary	\$ 2,168 66
O&M	1,395 71
Laboratory	1,217 22
	<u>\$ 4,781 59</u>

g Summary of Federal Sediment Costs

Salary	\$33,931 30
O&M	25,055 48
Laboratory	8,733 77
	<u>\$67,720 55</u>

h Total Sediment Program Costs (Provincial and Federal)

Salary	\$36,099 96
O&M	26,451 19
Laboratory	9,950 99
	<u>\$72,502 14</u>

TABLE D 5
SUMMARY OF CONSTRUCTION PROGRAM COSTS
1988/1989

Direct Cost to Agencies

	No of Projects			Federal			Provincial			Totals			
	F	F/P	P	Salaries	O&M	Capital	Salaries	O&M	Capital	Salaries	O&M	Capital	Total
New Stations	7	4	15	16 902 77	-	55 795 00	28 349 19	-	74 075 84	45 251 96	-	129 870 84	175 122 80
Relocations	3	2	-	4 167 87	-	16 585 89	1 349 89	-	7 632 24	5 517 76	-	24 217 62	29 735 38
Upgrading	1	-	3	952 72	-	1 479 91	2 088 15	-	6 721 28	3 040 87	-	8 201 19	11 242 06
Major Maintenance	1	1	2	604 75	-	6 026 85	1 436 53	-	6 127 75	2 041 28	-	12 154 60	14 195 88
TOTAL	11	7	20	22 628 11	-	79 887 14	33 223 76	-	94 557 11	55 851 87	-	174 444 25	230 296 12

NOTE Above costs include 1) Field investigations
2) Only expenditures incurred by WRB

Other Costs

	Totals			
	Salaries	O&M	Capital	Total
Minor Maintenance (included in station unit cost)	34 589 93	24 641 78	43 789 81	103 022 52
Field Investigations	313 39	132 15	-	445 54
Instrumentation (Basic Recorder)	-	-	77 515 20	77 515 20
Tides and Water Level Stations	375 54	1 096 70	-	1 472 24
TOTAL				(other costs)
	35 278 86	25 871 63	121 305 01	182 455 50
TOTAL CONSTRUCTION PROGRAM COST	91 130 73	25 871 63	295 749 26	412 751 62

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 1988/1989
- TABLE E 2 - Water Quantity Surveys Comparative Gauging Station Data,
April 1, 1975 to April 1, 1988
- TABLE E 3 - Water Quantity Surveys Detailed Gauging Station Data, 1988/89
- TABLE E 4 - Water Quantity Surveys Total Program Costs and Shareable
Costs for 1988/1989
- TABLE E 5 - Water Quantity Surveys Summary of Schedule 'D'/'F', 1988/1989
- TABLE E 6 - Water Quantity Surveys Comparison - Scheduled and Actual
Costs for 1988/1989

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 1988/1989⁵

Number of Stations ^{1 3 4}			Changes During ²		Station Designation April 1 1988			
April 1 1987	April 1 1988	Change	April 2 1988 to April 1 1989 Added	Discontinued	Federal	Federal/Provincial	Provincial	Contributed
474	479	+5	32	7	123 (52)	42 (0)	223 (1)	91 (0)

TABLE E 2
WATER QUANTITY SURVEYS
COMPARATIVE GAUGING STATION DATA APRIL 1 1975 TO APRIL 1 1988

Federal Stations			Federal/Provincial Stations ³			Provincial Stations			Total Stations		
Apr 1/75	Apr 1/88	Chg	Apr 1/75	Apr 1/88	Chg	Apr 1/75	Apr 1/88	Chg	Apr 1/75	Apr 1/88	Chg
142	123 ⁴	-19	48	42	-6	152	223	+71	342	388	+46

TABLE E 3
WATER QUANTITY SURVEYS
DETAILED GAUGING STATION DATA 1988/1989⁵

F-1	F-2	F-3	TOTAL F	F/P-1	F/P-2	F/P-3	TOTAL F/P	P-1	P-2	TOTAL P	Contributed	Total-All
53 ⁴ (52)	0	50	123 (51)	13	19	10	42 (0)	209 (0)	14 (1)	223 (1)	91 (0)	479 (53)

NOTES

- 1 Includes contributed data stations
- 2 Stations operated by Water Resources Branch
- 3 Includes 6 stations operated by OH for Federal use
- 4 Includes 8 stations operated in Quebec for DPW
- 5 Numbers in parentheses indicate sediment stations

TABLE E 4
WATER QUANTITY SURVEYS
TOTAL PROGRAM COSTS AND SHAREABLE COSTS FOR 1988/1989
(X \$1 000)

Total Program Costs					Shareable Costs						
<u>P/Years</u>	<u>Salaries</u>	<u>Operating</u>	<u>Capital</u>	<u>Total</u>	<u>P/Years</u>	<u>Salaries</u>	<u>Operating</u>	<u>Construction</u>	<u>Total</u>	<u>F Share</u>	<u>P Share</u>
49 5	1 807 3	916 7	422 3	3 146 3	30 2	1 062 9	684 7	267 8 ¹	2 015 4	886 1	1 128 3

TABLE E 5
WATER QUANTITY SURVEYS
SUMMARY OF SCHEDULES D / F - 1988/1989
(Dollars)

<u>Streamflow and Water Level</u>		<u>Sediment</u>		<u>Total</u>
<u>Operation</u>	<u>Construction</u>	<u>Operation</u>	<u>Construction</u>	
979 400	119 800	4 600	0	1 103 800

TABLE E 6
WATER QUANTITY SURVEYS
COMPARISON - SCHEDULED AND ACTUAL COSTS FOR 1988/1989
(Dollars)

<u>Salary and Operations</u>		<u>Construction</u>		<u>Total</u>		<u>Sch D/F</u>	<u>Annual</u>	<u>Received</u>
<u>Sch D/F</u>	<u>Actual Cost</u>	<u>Sch D/F</u>	<u>Actual Cost</u>	<u>Sch D/F</u>	<u>Actual Cost</u>	<u>Actual</u>	<u>Payment</u>	<u>Minus</u>
							<u>Received</u>	<u>Actual</u>
984,000	989 457	119 800	147 136	1 103 800	1 136 593	- 32 793	1 137 155	+ 562

NOTES

- 1 Includes 77 5K for recorders
- 2 Includes 7 340 paid by WRB to OH for operation of 6 stations (included in Schedule D)

APPENDIX F

NATIONAL REPORT TABLES FOR THE PROVINCE OF ONTARIO

- TABLE F 1 - Water Quantity Surveys Gauging Station Data for 1988/1989
- TABLE F 2 - Water Quantity Surveys Comparative Gauging Station Data,
April 1, 1975 to April 1, 1988
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- TABLE F 6 - Water Quantity Surveys Comparison - Scheduled and Actual
Costs for 1988/1989

REGION 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 1988/1989⁵

Number of Stations ^{1 3 4}			Changes During ²		Station Designation April 1 1988			
April 1 1987	April 1 1988	Change	April 2 1988 to April 1 1989 Added	Discontinued	Federal	Federal/Provincial	Provincial	Contributed
556	561	+5	32	7	170 ⁴ (52)	42 (0)	223 (1)	126 (0)

TABLE F 2
WATER QUANTITY SURVEYS
COMPARATIVE GAUGING STATION DATA APRIL 1 1975 TO APRIL 1 1988

Federal Stations			Federal/Provincial Stations ³			Provincial Stations			Total Stations		
Apr 1/75	Apr 1/88	Chg	Apr 1/75	Apr 1/88	Chg	Apr 1/75	Apr 1/88	Chg	Apr 1/75	Apr 1/88	Chg
202	170 ⁴	-32	57	42	-15	155	223	+68	414	435	+21

TABLE F 3
WATER QUANTITY SURVEYS
DETAILED GAUGING STATION DATA 1988/1989⁵

F-1	F-2	F-3	TOTAL F	F/P-1	F/P-2	F/P-3	TOTAL F/P	P-1	P-2	TOTAL P	Contributed	Total-All
71 ⁴ (52)	1	75	170 (52)	13	19	10	42 (0)	209	14 (1)	223 (1)	126 (0)	561 (53)

NOTES

- 1 Includes contributed data stations
- 2 Stations operated by Water Resources Branch
- 3 Includes 6 stations operated by OH for Federal use
- 4 Includes 8 stations operated in Quebec for DPW
- 5 Numbers in parentheses indicate sediment stations

TABLE F 4
WATER QUANTITY SURVEYS
TOTAL PROGRAM COSTS AND SHAREABLE COSTS FOR 1988/1989
(X \$1 000)

<u>P/Years</u>	<u>Total Program Costs</u>				<u>P/Years</u>	<u>Shareable Costs</u>					
	<u>Salaries</u>	<u>Operating</u>	<u>Capital</u>	<u>Total</u>		<u>Salaries</u>	<u>Operating</u>	<u>Construction</u>	<u>Total</u>	<u>F Share</u>	<u>P Share</u>
52 6	1 909 5	982 1	453 4	3 345 0	34 3	1 161 4	754 8	310 3 ¹	2 226 5	1 097 2	1 129 3

TABLE F 5
WATER QUANTITY SURVEYS
SUMMARY OF SCHEDULES D / F - 1988/1989
(Dollars)

<u>Streamflow and Water Level</u>		<u>Sediment</u>		<u>Total</u>
<u>Operation</u>	<u>Construction</u>	<u>Operation</u>	<u>Construction</u>	
979 400	119 800	4 600	0	1 103 800

TABLE F 6
WATER QUANTITY SURVEYS
COMPARISON - SCHEDULED AND ACTUAL COSTS FOR 1988/1989
(Dollars)

<u>Salary and Operations</u>		<u>Construction</u>		<u>Total</u>		<u>Sch D/F</u>	<u>Annual</u>	<u>Received</u>
<u>Sch D/F</u>	<u>Actual Cost</u>	<u>Sch D/F</u>	<u>Actual Cost</u>	<u>Sch D/F</u>	<u>Actual Cost</u> ²			
						<u>Actual</u>	<u>Received</u>	<u>Actual</u>
984,000	989 457	119 800	147 136	1 103 800	1 136 593	- 32 793	1 137 155	+ 562

NOTES

- 1 Includes 108 6K for recorders and other instrumentation
- 2 Includes 7 340 paid by WRB to OH for operation of 6 stations (included in Schedule D)