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**A NETWORK PLAN
FOR FEDERAL NWT
WATER QUANTITY STATIONS**

**Inland Waters Directorate
Western and Northern Region**

**Direction générale des eaux intérieures
Région de l'ouest et du nord**



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NWT GREEN PLAN/ARCTIC ENVIRONMENTAL STRATEGY

**A NETWORK PLAN
FOR FEDERAL NWT
WATER QUANTITY STATIONS**

A Green Plan/Arctic Environmental Strategy
Initiative

by

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PREFACE

This document defines target sites for a federal GP/AES network of water quantity stations, based on Environment Canada's mandate, northern environmental issues, and network gaps. Planning of this network (and a companion GP/AES water quality network) has required greater integration of planning and operational activities than ever before, because of the need for broader monitoring of the environment.

The authors would like to acknowledge the contributions of the individuals and agencies who have provided valuable input on perceived needs for NWT water quantity and related data. In particular, these include Brian Latham of Indian & Northern Affairs Canada (INAC), Steven Harbicht of Fisheries & Oceans Canada, Dr. H. K. Woo of the Department of Geography, McMaster University, as well as others referenced in the document.

Planning of the new network also reflects the experience from more than 30 years of Environment Canada NWT water quantity network operations. Operations/Water Survey of Canada manager Scott McDonald, and field supervisors Derek Curtis, Moe Hansen, Murray Jones, Dale Ross and Pat Wood provided much practical advice on network operations and expansion during a period of financial restraint. Their insight and experience are crucial to the success of integrated northern environmental effects monitoring programs of the future.

Successful implementation of the program depends on adequate program resources, close coordination with our major partner, INAC, and the ingenuity of NWT Programs operations staff to locate, install, and efficiently operate new stations.

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BACKGROUND

Environment Canada (EC) unveiled the Green Plan in December 1990, as a \$3 billion long term national program to clean up and protect Canada's environment. Expenditures are targeted for a number of "Action Plans" to address various impacts of human activities on Canada's physical environment.

The northern component of the Green Plan - the Arctic Environmental Strategy (GP/AES) - was announced by Indian and Northern Affairs Canada (INAC) in June, 1991. The objective of the GP/AES is to monitor the effects of human activities and development on northern ecosystems, and to provide baseline data in anticipation of development in pristine areas. Expenditures of \$100 million on the study of Arctic contaminants, waste management, water, and environment/economic integration are planned. Approximately \$25 million of these funds have been allocated to INAC and EC for the expansion of water resource data collection and related programs.

GP/AES NETWORK

The Arctic Environmental Strategy (INAC, 1991) and Treasury Board documents proposed the installation of 70 new water quantity stations in Canada's north, with about 45 stations in the NWT. Assessment of GP/AES resources against program costs has revealed that funding is only adequate for approximately 30 stations. This is due to high costs of operating in remote mainland areas, and extremely expensive operations in the Arctic Islands. The current network planning strategy is therefore to reduce the original list of NWT sites¹ to about 45, with a shorter list of 30 sites likely to be installed.

¹ List provided in "NWT Arctic Environmental Strategy Hydrometric Plan, 1991".

INAC has been allocated 60% of the GP/AES resources (18-27 sites) and EC 40% (12-18 sites). Sharing of costs for sites of mutual interest will allow each agency to maximize the number of new stations while minimizing costs. As operator of a number of northern data networks, IWD-NWT Programs proposes to implement a GP/AES network to compliment the existing network through cooperative efforts with other agencies. This will lead to an integrated network of water quantity, water quality, sediment, meteorology, and snow course stations for the Northwest Territories.

Agencies being approached on this include:

- current partners:
 - INAC (water quantity and quality network agreements);
 - the Atmospheric Environment Service (IWD/NWT agreement on remote meteorologic stations);
 - Canadian Parks Service of EC;
 - Canadian Wildlife Service of EC;
 - Fisheries and Oceans Canada;
 - Energy Mines and Resources Canada;
 - the National Hydrology and National Water Research Institutes of EC; and
- new cooperative arrangements with universities, and other agencies.

Prior to GP/AES, the NWT water quantity (hydrometric) network consisted of 109 stations distributed across the NWT, with only three in the Arctic Islands. Operated with funding assistance from INAC, this network provided wide ranging access to remote parts of the territories by IWD field staff. As the primary NWT water resources network, it provides other programs with a logistics base for access to remote areas.

FEDERAL GP/AES INTERESTS

As defined in the Canada Water Act, the Environment Canada mandate for collection of water resources data focuses on the characterization of water quantity and quality conditions for water bodies of national importance. For the Northwest

Territories as in other regions of Canada, this has been interpreted to include an interest in major rivers and their larger tributaries, major flows to the oceans, trans-boundary rivers, and other sites required to support federal programs and research.

Additions to the federal NWT hydrometric network are based on a review of past 5-year NWT hydrometric network expansion plans (1974-1979, 1979-1983, 1984-1989), recent NWT network evaluations, GP/AES priorities, and current northern environmental issues (see list of references).

The review has suggested that additional stations are required to address the following gaps in the federal network:

- a) stations to complete a transect from west to east along the Arctic coast, required to characterize flow of coastal basins to the ocean;
- b) stations to complete a transect from south to north along the coast of Hudson Bay to Boothia Peninsula, required to characterize flows of coastal basins to the ocean and characterize the hydrology of the region;
- c) stations on major rivers in the Arctic Islands, required to characterize regional hydrology and support other federal programs, such as climate change and arctic contaminants studies; and
- d) stations elsewhere on the NWT mainland, required to address network gaps in regional/national hydrology.

Stations meeting these criteria are listed in Table 1 and displayed in Figure 1, along with the existing NWT hydrometric network stations. Rationales are provided in Appendix A.

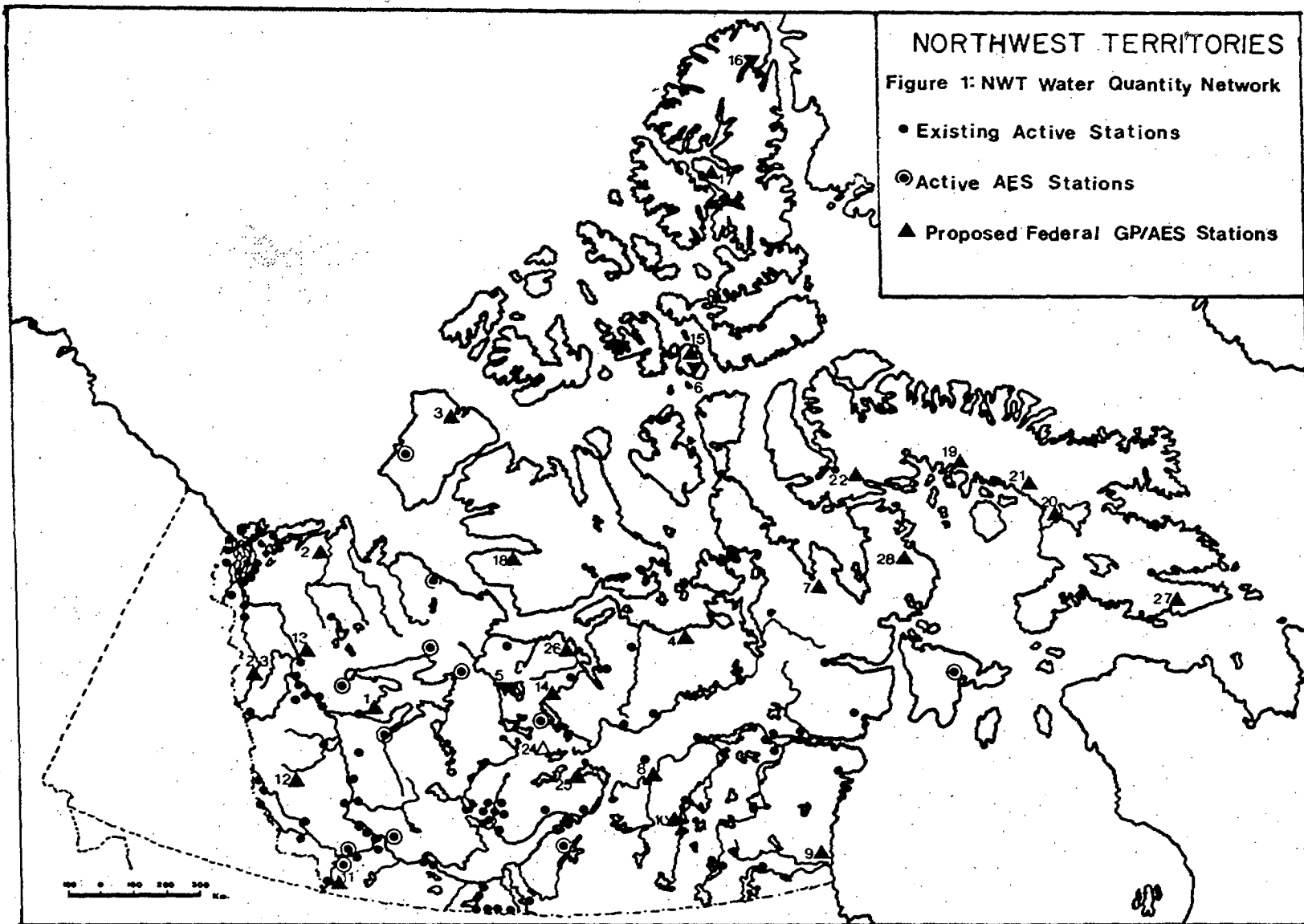


Table 1: Proposed sites of interest to IWD/EC.

The list of stations is prioritized into three (3) groups. The first group includes stations for which EC has a primary interest. The reconnaissance and installation of the remaining stations is dependent on the degree of cost-sharing from EC partners and other cooperating agencies. The numbers identifying the sites refer to site locations on Figure 1.

FIRST PRIORITY

1. Great Bear Lake near Fort Franklin
2. Horton R or Hornaday R near the mouth
3. Thomsen R or Bernard R (Banks Island)
4. Perry R or Armark R near the mouth
5. Takijug Lake Outlet/ Fairy Lakes
6. Allen River near Mouth (Cornwallis Is)
7. Kellett River or Arrowsmith River
8. Upper Thelon River (Keewatin)
9. Maguse River near Arviat (South Keewatin)
10. Upper Dubawnt River (Boyd Lake)
11. Petitot River near the mouth
12. Upper Keele River above Twitya R

SECOND PRIORITY

13. Hare Indian R or Bluefish R
14. Burnside R at Contwoyto Lake at Outlet
15. Crooked Lake at Outlet (Cornwallis Is)
16. Hazen Lake Outlet (Ellesmere Is)
17. Slidre River near Eureka (Ellesmere Is)
18. Kujjua, Kagloryuak or Nanook R (Victoria Is)
19. Isortaq R or MacDonald R (mid-Baffin Is)
20. Nettilling Lake Outlet/Koudjuak River (mid-Baffin Is)
21. Dewar Lake watershed (mid-Baffin Is)
22. Gifford River Basin (north Baffin Is)

THIRD PRIORITY

23. Upper Arctic Red River
24. Coppermine River below Desteffany Lake
25. Upper Lockhart River
26. Hood River near the mouth
27. Soper River (south Baffin Is)
28. Ajuquatalik River near Roche Bay

IMPLEMENTATION SCHEDULE

Progress on joint EC/INAC GP/AES hydrometric network expansion depends on available resources during each year of the program, the results of reconnaissance to locate suitable stream gauging sites, and the interests and priorities of partners and cooperating agencies. Considerable flexibility will be required in implementing the program due to financial constraints and the anticipated re-profiling of GP/AES resources. The following tentative schedule for NWT GP/AES network expansion has been developed jointly with INAC:

a) Year 1 (1991/92)

- down-sizing of the NWT network to eliminate pre-GP/AES financial problems;
- development of an "NWT Arctic Environmental Strategy Hydrometric Plan, 1991", covering a review of previous network expansion plans and evaluations;
- preparation of a list of 32 mainland sites identified for reconnaissance, six (6) discontinued sites to be reactivated, and four (4) new stations to be constructed in 1991/92; (see Tables 2 and 3 for details);
- implementation of 1991/92 workplan, refinement of station lists and preparation of a workplan for subsequent years of GP/AES programs; and
- development of priorities for a federal (IWD/EC) NWT GP/AES network.

Table 2: 1991 - 1992 EC/INAC GP/AES Reconnaissance Sites.

<p>Central Arctic</p> <ol style="list-style-type: none"> 1. Hood River² 2. Mara River above Burnside River² 3. Upper Ellice River² 4. Upper Lockhart River² 5. Coppermine River at Desteffany Lake² 6. Takijug L. outlet/ Fairy L. River¹ 7. Burnside River at Contwoyto Lake outlet² 8. Thonokied River² 9. Allen/Mecham River, Cornwallis Is. <p>Fort Smith</p> <ol style="list-style-type: none"> 10. Tethul River <p>Fort Simpson</p> <ol style="list-style-type: none"> 11. Petitot River 12. Broken Skull River 13. Tetcela River 14. Ram River 15. Upper Keele River 16. Mackenzie River near Dahadinni River¹ 	<p>Keewatin</p> <ol style="list-style-type: none"> 17. Arrowsmith River 18. Kugajuk River 19. Kellett River 20. Maguse River² 21. Unnamed Creek near Arviat 22. Ferguson River (Kaminak L. system)² 23. Northern Tributary to Aberdeen Lake¹ 24. Wilson River² 25. Thelon R. near Eyeberry L/Clarke R. 26. Clarke River above Thelon River <p>Inuvik/Norman Wells</p> <ol style="list-style-type: none"> 27. Jungle Ridge Creek 28. Great Bear Lake 29. Thomsen River, Banks Island 30. Bernard River, Banks Island¹ 31. Horton River¹ 32. Hornaday River¹
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1 Activities deferred to 1992/93.
 2 Winter reconnaissance completed in 1991/92.

Table 3: Status of GP/AES Network Implementation.

- a) New stations constructed in Year 1 (1991/92)
1. Mackenzie River at Strong Point, station # 10FB006 *
 2. Blackstone River at Highway 7, station # 10ED007 *
 3. Liard River at Lindberg Landing, station # 10ED008 *
 4. Contwoyto Lake at Lupin Mine, station # 10QC002.
- b) Stations Reactivated in Year 1 (1991/92)
5. Snowdrift River, station # 07QB002
 6. Johnny Hoe River, station # 10JB001
 7. Whitefish River, station # 10JD002.
 8. Kirchoffer River, station # 06PA001
 9. Sloan River, station # 10JE001
 10. Haldane River, station # 10JD001
- c) Stations to be reactivated in Year 2 (1992/93)
11. Big River above Egg River, station # 10TA001
 12. Inman River, station # 10OC001

* Priority federal sites

see Appendix A.3 for station rationales

b) Year 2 (1992/93)

- follow-up on 1991/92 activities with additional reconnaissance and installation of several mainland stations;
- reconnaissance of additional new mainland NWT sites for installation in 1993/94; and
- an initial assessment of Arctic Island operations, including investigation of Resolute/Iqaluit logistics and cooperative efforts with other agencies (i.e. National Water Research Institute, Energy Mines & Resources Canada, etc.).

c) Year 3 (1993/94)

- major reconnaissance effort and initial installations in the Arctic Islands; and
- follow-up reconnaissance and installation on mainland rivers.

d) Year 4 (1994/95)

- planned installation of most Arctic Island sites; and
- program review and planning for years 5 to 7

e) Years 5,6,7 (1995/96 to 1997/98)

- network operation and maintenance;
- data publication and distribution;
- data interpretation, synthesis, and reporting.

SUMMARY

The federal NWT GP/AES network priorities outlined in this document are based on perceptions of current issues and concerns about the Arctic environment. Flexibility is required, however, in delivering the program so that new issues and concerns can be addressed. IWD-NWT Programs intends to take advantage of opportunities to integrate the water quantity network with other data collection networks in the NWT.

GP/AES stations proposed by IWD-NWT Programs reflect Environment Canada interests and communications with a variety of organizations. The delivery of an effective and results-oriented program through the GP/AES will require ongoing communication and cooperation.

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APPENDIX A

- A.1 Rationales for Sites of Particular Interest to EC
- A.2 Rationales for Other Sites of Interest to EC
- A.3 Rationales for Initial 1991/92 and 1992/93 GP/AES Stations

A.1 RATIONALES FOR SITES OF PARTICULAR INTEREST TO EC

1. Basin: 10JB Great Bear Lake near Fort Franklin
 - levels required at west end of the lake to compliment data from station 10JE002 at east end of this large lake
 - station to be operated for a minimum of five (5) years for lake level/basin run-off regional hydrology study.¹

2. Basin: 100A Horton River near the mouth (North of Great Bear Lake Basin, alternative is the Hornaday)
 - station required in this basin draining to the Arctic Ocean to fill a gap on an East/West transect of basins across the mainland NWT draining to the Arctic Ocean.²
 - extensively used by outfitters and canoeists
 - the Hornaday river is proposed as a Heritage River and the Bluenose Lake area may be reserved as a wildlife sanctuary or national park

3. Basin: 10TB Thomsen River (Banks Island)
 - station required to fill gap in the Arctic Island network (along with reactivated Big River site)
 - proposed as a Heritage River
 - CWS interested in snow-melt/degree day₃/run-off model to correlate with Snow goose productivity

4. Basin: 10RB Perry River (Bathurst Inlet)
 - station required to fill a network gap on an East/West transect on the mainland NWT²
 - approximately 5-10 years good data are needed for station correlation with the long term Burnside station
 - Armark River is an alternate

1 An EC initiative to be reviewed by 1996.

2 An EC initiative to assess the East to West variation in the hydrologic characteristics of coastal basins draining into the Arctic Ocean. Information will be useful for estimating inputs to the ocean from similar ungauged basins.

3 Contact K. McCormick Canadian Wildlife Service (CWS), Yellowknife, NWT.

5. Basin: 10PC Takijug Lake outlet/Fairy Lakes area
 - station recommended in EC's "Overview Study of the Coppermine River Basin"⁴
 - station required to monitor major flow contributions during the winter to the Coppermine River
 - winter reconnaissance of the area has identified a site which has open water year round

6. Basin: 10VC Allen River near Mouth (Cornwallis Island)
 - reactivate station operated from 1970-85 to fill Arctic Island network gap
 - station should run concurrently with Crooked Lake at Outlet (see # 15) to determine if a correlation between two stations at different locations on the same island can be achieved¹

7. Basin: 10SC Kellett River (North Keewatin)
 - major basin drainage to the Arctic Ocean
 - station required to fill gap on both East/West² and North/South transects for the mainland NWT⁵
 - river has a major Char run important to the nearby community of Pelly Bay
 - ice jams may block the river during spring break-up
 - Arrowsmith River is an alternate site

8. Basin: 06JB Upper Thelon River (Keewatin)
 - station required to fill a gap in the regional mainland hydrometric network
 - the Thelon River is a designated Heritage River
 - station would be located near the upstream end of the Thelon Game Sanctuary
 - potential highway development in the area
 - the site may be suitable for long term SOE Reporting due to game sanctuary location (no local disturbance permitted)⁶

⁴ Wedel, J.H., Olding, B.J. and Palmer, M.; 1988
An Overview Study of the Coppermine River Basin. Inland Waters Directorate, Conservation and Protection, Environment Canada, Yellowknife, NWT. 75 pp.

⁵ An EC initiative to assess the North to South variation in the hydrologic characteristics of coastal basins draining into the Hudson Bay. Information will be useful for estimating inputs to the ocean from similar ungauged basins.

⁶ Suggested by the State of the Environment Reporting Organization (SOE) of Environment Canada At a workshop held in Yellowknife, NWT, February 6-7, 1992.

9. Basin: 06NA Maguse River near Arviat (South Keewatin)
- mid-size basin draining into Hudson Bay required to fill a gap in the North/South mainland transect draining coastal basins
 - CWS interest in data to complement waterfowl nesting studies³
 - proposed coastal highway to Churchill would cross the basin
 - alternate is the Wilson River
10. Basin: 06KB Upper Dubawnt River (Boyd Lake area)
- station required to fill a gap in the regional mainland hydrometric network
 - station would be located near the upstream end of the Thelon Game Sanctuary
 - potential highway development in the area
 - the site may be suitable for long term SOE Reporting due to game sanctuary location (no local disturbance permitted)⁶
11. Basin: 10DA Petitot River near the Mouth
- station required to cover NWT transboundary river (NWT/BC) interests
 - major lowland tributary contributing sediment to Liard River
 - hydrocarbon production and a pipeline are in the basin
 - potential water quality and sediment sampling site due to development within the basin
12. Basin: 10HA Upper Keele River above Twitya River
- headwaters station suggested to fill gap in Mackenzie Mountain basin (previous reconnaissance has failed to identify suitable gauging sites near the basin's mouth)
 - relocation of the mothballed Twitya River gauge is proposed
 - a combined water quantity/meteorology site was proposed by the MRBC for identical reasons to upper Arctic Red River (see # 23)
 - data would assist IWD's Mackenzie River forecast by providing flow (and meteorological) data

A.2 RATIONALES FOR OTHER SITES OF INTEREST TO EC

13. Basin: 10LD Hare Indian River or Bluefish River (north Mackenzie Basin)
- station proposed on large east bank Mackenzie River tributary to fill a gap in the regional network
 - pipelines from the Mackenzie Delta to southern markets and extensions of the Mackenzie highway to link with the Dempster highway are future development scenarios which could affect the basin
 - the Bluefish River, a tributary to the Hare Indian River, is an alternate
14. Basin: 10QC Burnside River at Outlet of Contwoyto Lake
- station suggested to address unique hydrology of a split drainage basin (i.e. Burnside and Back River systems)
 - winter reconnaissance suggests year round open water conditions that may solve problems of questionable winter record currently obtained on the Burnside River near the Mouth
15. Basin: 10VC Crooked Lake at Outlet (Cornwallis Island)
- station required to support NWRI study of hydrology and contaminants in a small Arctic Island basin
 - station to operate for a minimum of 5 years
16. Basin: 10VK Hazen Lake Outlet (Ellesmere Island)
- station proposed to monitor levels and outflow (Ruggles River) of the most northerly lake in the world
 - Canadian Parks Service interested in joint data collection program⁸
17. Basin: 10VG Slidre River near Eureka (Ellesmere Island)
- station proposed as a major global climate change research site for EMR, Atmospheric Environment Service, and universities for next 5 years or more
 - cooperative programs with other agencies, plus long term Eureka weather records are useful to IWD interests (streamflow data extension, etc.)

⁷ Contact D. Gregor National Water Research Institute, Burlington, ON.

⁸ Contact B. Thorpe, Canadian Parks Service (CPS), Pangnirtung, NWT.

18. Basin: 10T- Kujjua, Kagloryuak or Nanook River (Victoria Island)
- station(s) required to fill network gap for large river(s) draining the second largest Arctic Island
 - reconnaissance to identify possible gauging sites should not be restricted to only these rivers
19. Basin: 10UM Isortaq River or MacDonald River (Baffin Is)
- station proposed to address absence of regional hydrology network stations draining central Baffin Island to Foxe Basin
 - headwaters drain the Barnes Ice Cap
 - cooperative efforts with university researchers or other government agencies are of interest for logistic and financial reasons
20. Basin: 10UL Nettilling Lake at Outlet/Koukdjuak River (Baffin Is)
- major Baffin Island basin with the largest lakes in Arctic Islands (Nettilling, Amadjuak)
 - station required to fill Arctic Island network gap on southern Baffin Island
 - CWS interested in this site for waterfowl nesting³
 - AES interested in filling a gap in their network³
 - alternate is the Amadjuak Lake at outlet
21. Basin: 10UM Dewar Lakes Watershed (Baffin Is)
- possible alternative basin to MacDonald River on central Baffin Island
 - availability of facilities at Dewar Lakes DEW line site and long term weather records of use for possible extension of flow records
 - cooperative effort with university researchers and other government agencies is of interest for logistics and financial reasons
22. Basin: 10UN Gifford River (Baffin Is)
- station proposed to address gap in regional hydrology network on northern Baffin Island
 - cooperative efforts with other government agencies and universities are of interest for logistics and financial reasons

⁹ Contact L. Richard, Scientific Services, Atmospheric Environment Services (AES), Montreal Quebec.

23. Basin: 10LA Upper Arctic Red River

- station suggested to fill a gap in network of Mackenzie Mountain stations identified by the MRBC¹⁰ (headwater tributaries of major mountain rivers)
- the station would also provide advance warning of major floods for use in the IWD-NWT Programs Mackenzie River navigation forecast
- the need for a meteorological station was also identified to provide transects of meteorologic data through the mountains from Yukon to the NWT

24. Basin: 10PA Coppermine River below Desteffany Lake

- station recommended in EC's "Overview Study of the Coppermine River Basin" for purpose of basin planning⁴
- station could be operated concurrently with proposed station for the Upper Lockhart River for several years to develop a correlation between the two sites
- if the Upper Lockhart River station is installed and reconnaissance is completed for the Coppermine River below Desteffany Lake, data could be transposed between sites with some confidence

25. Basin: 07RB Upper Lockhart River at outlet to Mackay Lake

- station suggested to fill a gap in regional hydrology network (eastern Great Slave drainage basin)
- station could be operated concurrently with proposed station Coppermine River below Desteffany Lake for several years to develop a correlation between the two sites
- if the Coppermine River below Desteffany Lake is installed and a reconnaissance is completed for the Upper Lockhart River, data could be transposed between sites with some confidence

26. Basin: 10QB Hood River near the mouth

- station suggested for basin on East/West NWT mainland transect draining into the Bathurst Inlet and the Arctic Ocean, between the Tree and Burnside Rivers (both gauged)
- short term operation (5-10 years) of a station is proposed to establish correlations with long term stations

¹⁰ Mackenzie River Basin Committee, 1981. Hydrometeorologic Network Design - Supplement No. 4. Report under the 1978-81 Federal-Provincial Study Agreement respecting the water and related resources of the Mackenzie River Basin, Inland Waters Directorate, Environment Canada, Regina, 101 pp.

27. Basin: 10UJ Soper River near Lake Harbour (Baffin Is)

- station proposed for mid-size basin draining south end of Baffin Island into Hudson Strait
- recently nominated a Heritage River
- potential basin for cooperative efforts with Canadian Parks Service, GNWT Tourism, etc.

28. Basin: 10SD Ajuquatalik River near Roche Bay

- station suggested as a mid-size basin draining Melville Peninsula into Foxe Basin, positioned at junction of East/West and North/South NWT mainland station transects
- initial reconnaissance carried out in early 1980's, due to potential for development of iron mine at the basin's mouth, on Roche Bay
- fills major gap in regional network, however access costs will be high due to its relative isolation from the mainland network

A.3 RATIONALES FOR INITIAL 1991/92 and 1992/93 GP/AES STATIONS

1. **Basin: 10FB006 Mackenzie River at Strong Point**
 - water levels and flows for the Mackenzie River above its confluence with the Liard are required for modelling of backwater effects on the Liard and Mackenzie rivers
 - data will contribute to proposed river hydraulic modelling to improve accuracy of published data and IWD's Mackenzie River navigation forecast
2. **Basin: 10ED007 Blackstone River at Highway #7**
 - station on small lowland muskeg basin similar to the Jean-Marie River required to replace the former Rabbit Creek station for regional hydrology and highway design evaluation
 - the need for more data should be re-evaluated in 5 years, following correlation with other area rivers
3. **Basin: 10ED008 Liard River at Lindberg Landing**
 - water levels/flows required on the Liard River upstream of the existing Liard River near the Mouth station (10ED002) to resolve stage-discharge curve problems (see #1 above) and to support the annual Fort Simpson spring flood watch and IWD navigation forecast
 - approximately 5 years of data should be sufficient
4. **Basin: 10QC002 Contwoyto Lake at Lupin Mine**
 - lake level monitoring station at Lupin Mine water supply pump house
 - it may be possible to relate lake levels to outflow from the north end of the lake to the Burnside River
 - data is also required to investigate potential for in-stream hydro power generation for the mine
 - if a stage-discharge curve can be developed for the lake outlet, station operation for 5 to 10 years may be warranted
5. **Basin: 07QB002 Snowdrift River at outlet of Siltaza Lake**
 - station reinstated from April/91 A-base network reduction to provide required regional hydrology information for the east arm of Great Slave Lake
6. **Basin: 10JB001 Johnny Hoe River above Lac Ste. Therese**
 - station reinstated from April/91 A-base network reduction to provide regional data for the Great Bear Lake watershed
 - the station should be operated for at least 5 years followed by a regional hydrology study of the Great Bear Lake basin

7. Basin: 10JD002 Whitefish River near the mouth
 - station reinstated from April/91 A-base network reduction to provide regional hydrology for the south-west side of Great Bear Lake
 - station supports waterfowl nesting habitat assessments by the Canadian Wildlife Service/EC
 - as for #6 above, continued operation should be assessed in 5 years, following regional hydrology analyses
8. Basin: 06PA001 Kirchoffer River near Coral Harbour
 - station reinstated from April/91 A-base network reductions (6th priority) to provide regional hydrology data for Arctic Island basins
 - community water supply and micro-hydro power potential for Coral Harbour
9. Basin: 10JE001 Sloan River near the mouth
 - station reinstated from April/91 A-base network reductions (7th priority) to provide regional hydrology data for the east north-east end of Great Bear Lake watershed
 - as for #'s 6 and 7 above, continued operation should be assessed in 5 years, following regional hydrology analyses
10. Basin: 10JD001 Haldane River near the mouth
 - station reinstated from April/91 A-base network reductions (8th priority) to provide regional hydrology data for the north side of the Great Bear Lake watershed
 - as for #'s 6, 7, and 9 above, continued operation should be assessed in 5 years, following regional hydrology analyses
11. Basin: 10TA001 Big River above Egg River
 - station reinstated from previous 1990 A-base network reductions to provide regional hydrology data for Arctic Island watersheds
 - the station was positioned at the end of the 1991 open water season, during a reconnaissance of the Bernard and Thomsen rivers, for reactivation in 1992
12. Basin: 10OC001 Inman River near the mouth
 - station reinstated from previous 1990 A-base network reduction to fill a gap in the regional hydrology network along an East/West transect of the Arctic Coast
 - reactivation of the station is planned for 1992

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