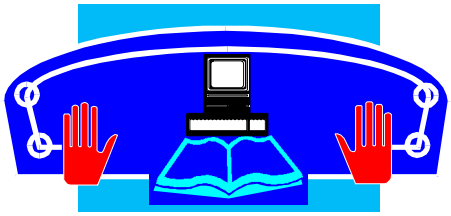

Choosing A Capital - A Supplementary Report Of The Nunavut Implementation Commission

Date of Report: 1995

Author: Nunavut Implementation Commission

Catalogue Number: 10-1-13

Choosing a Capital: "

A Supplementary Report of the Nunavut Implementation Commission

ISBN 1-8%548-024

June 30,1995

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Nunavut Hivumukpalianikhaagut Katimayit
Nunavut Implementation Commission
Commission d'etablissement du Nunavut

June 30, 1995

The Hon. Ron Irwin,
Minister,
Department of Indian Affairs and
Northern Development,
Ottawa, Ontario

The Hon. Nellie Cournoyea,
Government Leader,
Government of the Northwest Territories,
Yellowknife, NWT

Mr. Jose Kusugak,
President,
Nunavut Tunngavik Incorporated,
Iqaluit, NWT

Dear Mr. Irwin, Ms. Cournoyea, and Mr. Kusugak,

On behalf of the Nunavut Implementation Commission (NIC), I am writing to you further to my letter of May 24, 1995. You will recall that the Commission letter of that date was written in association with the public release of the NIC report entitled "Footprints in New Snow". In its letter, the Commission undertook to supply you with a supplementary report offering

> "... further analysis and advice with respect to the comparative advantages of Cambridge Bay, Iqaluit and Rankin Inlet as capital of Nunavut based on a detailed examination of objective factors, particularly, set up and operational costs, and compatibility with overall decentralization of government operations. The Commission will submit this report to the three parties by June 30, 1995."

The supplementary report accompanying this letter of transmittal, entitled "Choosing a Capital", is in fulfillment of the Commission's undertaking to you in this respect.

While you and your officials will, no doubt, wish to review the contents of the report in depth, the Commission would like to emphasize two things about the report in particular.

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The first thing to *be emphasized is that the Commission went about developing the report with a view to identifying and evaluating relevant, objective, and quantifiable comparisons among the three design models for the organization of the Nunavut Government* set *out in* ***'Footprints in New Snow".***

The second thing to be emphasized is the overall results of the analysis provided by the report; these are set out in the concluding words of the report:

"Overall ***Results***

It is possible to tabulate the conclusions ***discussed above in the following way:***

Factor	Best ***Model***
Decentralization	***Iqaluit Model***
Demographic and ***Related*** Social ***Impacts***	***Iqaluit Model***
Costs	***Iqaluit Model****
Infrastructure Considerations	***Equal results***
Geographic Position	***Equal results***
Regional Support	***Equal results*** **
Climate	***Equal results*** .

* One ***time costs associated with Iqaluit*** are ***somewhat lower than for Cambridge Bay and Rankin Inlet. Operating costs for Cambridge Bay are somewhat higher than for the other two communities.***

** An equal level **of** regional support for ***each of the three potential capital*** locations is, ***due to -the larger population*** of ***the Baffin*** *region, likely* to ***translate into a higher level of popular result for Iqaluit on a Nunavut-wide basis.***

Considering all the factors, it is apparent that ***the*** three *design* ***models, with their*** alternate capital ***locations, are equal in more respects than not. It is also apparent*** that, ***insofar as*** differences do emerge, ***the factors of*** *decentralization, demographic and related* social ***impacts, and costs, give Iqaluit the best overall results. "***

On the basis of these overall results, the Commission has concluded that, while the Iqaluit Model emerges as best in several important respects, many factors place Cambridge, Iqaluit and Rankin Inlet on an equivalent footing. Accordingly, the choice of capital should be properly understood as fundamentally a matter of political choice, not technical merit. The Nunavut Act acknowledges this reality, and reserves the choice of capital to the federal Cabinet.

Commissioners would welcome meeting with you, at your earliest convenience, to discuss the report and other issues relevant to the creation of the Nunavut Government.

I look forward to hearing from you.

Sincerely,

John Amagoalik,
Chairperson

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APPENDICES

PART I : INTRODUCTION

Under section 58 of the **Nunavut** Act, the mandate of the Commission is to advise on

> "58. . . (d) the process for determining the location of the seat of government of Nunavut. . . ."

In pursuit of that mandate, the Nunavut Implementation Commission (the NIC) made a number of recommendations with respect to selection of a capital in its comprehensive report, "Footprints in New Snow" (Recommendations #9-1 to #9-6). These recommendations can be summarized as follows:

- each of the regions in Nunavut should be equipped with facilities allowing the Nunavut Legislative Assembly to sit in each region on a regular basis;
- selection of the capital for Nunavut should be made in the context of overall efforts to create a highly decentralized **Nunavut** government;
- selection of the capital should be based on a number of objective factors;
- selection of the capital should be confined to Cambridge Bay, **Iqaluit** or Rankin Inlet;
- the federal Cabinet, exercising its statutory discretion under the **Nunavut** Act, should select the capital at its first opportunity of reviewing Nunavut issues; and,
- no plebiscite should be held in Nunavut to guide the selection of capital.

In response to its report, "Footprints in New Snow" , the NIC received some early indications from the Government of Canada, the Government of the Northwest Territories (the GNWT) , and Nunavut Tunngavik Incorporated (NTI) that they would welcome further advice from the NIC on the matter of Nunavut's capital. These early indications were followed up by a letter on May 4, 1995, from Mr. Ken Wyman, Associate Director, Northern Affairs Program, Department of Indian Affairs and Northern Development (DIAND) , to Mr. Simon Awa, Executive Director of NIC. Mr. Wyman's letter, written on behalf of the Government of Canada, the GNWT and NTI ("the parties") , made the following point:

" In narrowing options for the selection of the capital of Nunavut, the Commission recommends criteria to be used in the selection process. The parties feel it is important for the Commission to provide additional clarification on the criteria and some relevant weighting to aid in the process of analysis. "

The NIC responded to this letter in correspondence to the three parties dated May 24, 1995. In its letter of that date, the NIC undertook to complete two supplementary reports in support of the comprehensive report, "Footprints in New Snow" . In relation to the matter of Nunavut's capital, the NIC committed itself to prepare a supplementary report that would offer

"... further analysis and advice with respect to the comparative advantages of Cambridge Bay, Iqaluit and Rankin Inlet as capital of Nunavut based on a detailed examination of objective factors, particularly, set up and operational costs, and compatibility with overall decentralization of government operations. The Commission will submit this report to the three parties by June 30, 1995."

This supplementary report is in fulfillment of the Commission's undertaking as set out in its letter of May 24, 1995. The correspondence of May 4 and May 24, 1995, is attached as Appendix 1.

PART II: FACTORS

Section 1. Identification of Factors

In Recommendation #9-3 of its comprehensive report, 'Footprints in New Snow", the NIC advised as follows:

"9.3 The NIC recommends that the selection of capital for Nunavut be based on the following factors:

1. existing infrastructure, services and amenities;

2. potential for additional infrastructure, services and amenities;

3. existing and potential transportation links within Nunavut and outside Nunavut;

4. cost of living in the community;

5. position/accessibility within the overall circumpolar region;

6. attitude of the population of the community, taking into account its social, cultural and economic priorities;

7. the extent of regional support; and

8. climate. "

Application of these factors, particularly the first four, resulted in Recommendation #9-4 of "Footprints in New Snow", namely, the recommendation that the selection of the capital be confined to Cambridge Bay, Iqaluit or Rankin Inlet.

Application of the factors listed in Recommendation #9-4 of the "Footprints in New Snow" report has been key to reducing the number of suitable candidate communities to a workable number and has allowed the NIC to concentrate on three distinct models of organizational design for the Nunavut Government: one based on Cambridge Bay as capital; one based on Iqaluit as capital; and, one based on Rankin Inlet as capital. Application of the factors has been less helpful in allowing the NIC to develop meaningful, quantifiable comparisons as to the relative advantages and disadvantages associated with the Cambridge Bay, Iqaluit and Rankin Inlet Models.

Development of meaningful, quantifiable comparisons as to the relative advantages and disadvantages of the three models has required the NIC to look at two considerations which, while not

explicitly set out in Recommendation #9-4 of "Footprints in New Snow", run right through that report. As indicated in the NIC'S letter to the Government of Canada, the GNWT and NTI dated May 24, 1995, these considerations are

* compatibility with overall decentralization of government operations, and

* set up and operational costs of the Nunavut Government.

Accordingly, in developing this supplementary report, the NIC has devoted a great deal of attention to these two considerations, as well as attempted to offer some comments on factors previously identified in Recommendation #9-4 of the "Footprints in New Snow" report.

Section 2. Decentralization

Subsection (i). Introduction

There are a number of compelling reasons to adopt a decentralized approach to the design of the Nunavut Government. They include the following:

* to make government as close to the public as possible;
* to distribute public sector employment opportunities and other economic benefits as widely as possible;
* to recognize regional and community identities and allegiances within Nunavut;
* to acknowledge variations in the severity of unemployment and other economic problems among communities in Nunavut;
* to minimize adverse social impacts that might accompany excessive growth in any particular community; and,
* to encourage a healthy and visible private sector dimension to regional and community economies.

These reasons favour a high degree of decentralization. Other factors impose practical limits on how far decentralization can be taken. Among such limiting factors are the following:

- the need to maintain organizational coherence (the Nunavut Government cannot function coherently if "atomized" into an infinite number of tiny parts) ;
- the need to realize economies of scale in the setting up and operation of the Nunavut Government;
- the need to acknowledge significant variations in construction and living costs; and,
- the reality that certain major facilities serving a large proportion of the Nunavut population are already *in* place (e.g. the Baffin Correctional Centre) .

For both organizational and financial reasons, these limiting factors have to be built into any effort to bring about a decentralized public administration in Nunavut.

As identified in "Footprints in New Snow" , there are a number of techniques that can be employed, individually and in combination, to bring about a greater degree of decentralization. These include:

* the location of some headquarters functions of the Government in communities throughout the regions;

* the location of various semi-autonomous boards, agencies, commissions and corporations in communities throughout the regions;

* the location of some territorial and regional facilities, both existing and as required in future years, in communities throughout the regions;

* the establishment of both regional offices and auxiliary regional offices in each administrative region of Nunavut;

* the further decentralization of some headquarters positions to regional offices and auxiliary regional offices; and,

* the stipulation that the community that is selected to be the capital should not continue to be-a regional centre as well; regional offices currently located in that community should move out to other communities in that region.

In Chapter 5 of "Footprints in New Snow" , the NIC used these techniques to flesh out three models for the organization of the Nunavut Government based on the possibility of the capital being situated in Cambridge Bay, Iqaluit or Rankin Inlet. Each of these decentralized models is "regionalized" , insofar as each contemplates a re-ordering of the current regional operations of the territorial government as well as the placement of departmental headquarters in the capital of Nunavut. The possibilities for re-ordering current regional operations in the future is influenced to a considerable extent by the current degree of concentration of employment positions in regional centres; in this regard, the Baffin Region stands out from the other two regions with respect to its heavy concentration of existing employment positions in the regional centre of Iqaluit.

Subsection (ii) . Comparisons

In "Footprints in New Snow", the NIC provided some comparisons concerning various features and impacts of the three design models. Most of these comparisons were illustrated through a series of bar charts set out in Appendix 14 of that report. While these comparisons were illustrated in Appendix 14, the NIC did not make explicit extrapolations from Appendix 14 about which of the three design models would best serve specific decentralization objectives. For the purpose of providing as many meaningful, quantifiable comparisons as possible concerning the decentralization advantages and disadvantages of the three models, the NIC has carried out the following:

* an analysis of the comparisons that flow from the information set out in Appendix 14 (paragraphs (a) to (1) below) ; and,

* a presentation of additional decentralization comparisons among the three models which, while not set out in Appendix 14, provide useful insight into the comparative advantages and disadvantages of the three models (paragraph (m) below) .

It should be noted that the comparisons set out in the following subsection do not take into account population increases in the private sector that would result from the creation of new Nunavut Government jobs. Price Waterhouse Management Consultants estimated a multiplier of 0.4 to be reasonable in calculating the number of additional federal government and private sector jobs resulting from new Nunavut Government jobs. There is *no* reason to suppose that factoring in this multiplier would change the comparative decentralization advantages and disadvantages of the three candidate communities for capital.

Appendix 14 of "Footprints in New Snow" is appended to this supplementary report as **Appendix 2.**

(a) Net Change in **Number** of Territorial Government FTEs
(page A-14.4)

Background

In 1991, the Baffin Region population was 53% (11,385) of the population of Nunavut, the Keewatin 27% (5,834), and the Kitikmeot 20% (4,325). A proportional regional distribution of FTEs would result in the Baffin Region getting 318, the Keewatin Region 162, and the Kitikmeot Region 120.

Cambridge Bay as Capital

If Cambridge Bay were to be chosen as the capital, there would be an increase of 404 FTEs in the Kitikmeot Region, of which 255 would be located in Cambridge Bay. FTEs in Coppermine would increase by 97 and in Gjoa Haven by 52.

The effect of this model upon the Keewatin Region would be a gain of 41 FTEs. In the case of the current regional centre, Rankin Inlet, it would mean a loss of 3 FTEs. Baker Lake would gain 17 FTEs and Arviat 27.

The effect of this model upon the Baffin Region would be a gain of 155 FTEs. In the case of the current regional centre, Iqaluit, it would mean an increase of 2.5 FTEs. Cape Dorset would gain 8, Igloolik 66.5, Pangnirtung 41, and Pond Inlet 37 FTEs.

Iqaluit as Capital

If Iqaluit were to be chosen **as** the capital, there would be an increase of 416.5 FTEs in the Baffin Region, of which 99 would b-e located in Iqaluit. FTEs in Cape Dorset would increase by 67, Igloolik by 93.5, Pangnirtung by 80, and Pond Inlet by 77.

The effect of this model upon the Kitikmeot Region would be a gain of 67 FTEs. In the case of the current regional centre, Cambridge Bay, there would be an increase of 29 FTEs. Coppermine would gain 33 FTEs and Gjoa Haven 5.

The effect of this model upon the Keewatin Region would be a gain of 116.5 FTEs. In the case of the current regional centre, Rankin Inlet, it would mean an increase of 33.5 FTEs. Baker Lake would gain 28 FTEs and Arviat 55.

Rankin **Inlet as Capital**

If Rankin Inlet were to be chosen as the capital, there would be an increase of 391 FTEs in the Keewatin Region, of which 216 would be located in Rankin Inlet. FTEs in Baker Lake would

increase by 99 and Arviat by 76.

The effect of this model upon the Kitikmeot Region would be a gain of 51 FTEs. In the case of the current regional centre, Cambridge Bay, it would mean an increase of 15 FTEs. Coppermine would gain 36 FTEs. Unlike in the Cambridge Bay and Iqaluit Models, Gjoa Haven would not gain any FTEs.

The effect of this model upon the Baffin Region would be a gain of 158 FTEs. In the case of the current regional centre, Iqaluit, it would mean an increase of 2.5 FTEs. Igloolik would gain 61.5 FTEs, Pangnirtung 41, and Pond Inlet 53. Unlike in the Cambridge Bay and Iqaluit Models, Cape Dorset would not gain any FTEs .

Discussion

If Cambridge Bay were chosen as the capital, there would be an increase of 404 FTEs in the Kitikmeot Region, 155 FTEs in the Baffin Region, and 41 FTEs in the Keewatin Region. The current regional centre of Iqaluit would gain 2.5 FTEs, while the regional centre of Rankin Inlet would lose 3 FTEs.

If Iqaluit were chosen as the capital, there would be an increase of 416.5 FTEs in the Baffin Region, 67 FTEs in the Kitikmeot Region, and 116.5 in the Keewatin Region. The current regional centres of Cambridge Bay and Rankin Inlet would gain 29 and 33.5 FTEs, respectively.

If Rankin Inlet were chosen as the capital, there would be an increase of 391 FTEs in the Keewatin Region, 51 FTEs in the Kitikmeot Region, and 158 in the Baffin Region. The current regional centres of Cambridge Bay and Iqaluit would gain 2.5 and 15 FTEs respectively. In this model, neither Gjoa Haven nor Cape Dorset would gain any FTEs.

Specific Comparisons

Examination of page A-14.4 reveals an obvious difference: the bar chart for the Iqaluit Model is much “flatter” than for the other two models. This would appear to indicate that the Iqaluit Model is more effective at avoiding a concentration of new FTEs in one community. A number of quantitative comparisons can be made to test this assessment.

Decentralization Comparison #1

Largest number of new **FTEs** in **a single community:**

Cambridge Bay Model	**252**	(CB)
Iqaluit Model	**99**	(Iq)
Rankin Inlet Model	**216**	(RI)

With an objective of minimizing the number of FTEs to **be located in any single community, the Iqaluit Model is best.**

Decentralization Comparison #2

Difference between regional centre gaining the **most FTEs and regional centre gaining the fewest (losing the** most) :

Cambridge Bay Model	**258**	(CB 255/RI -3)
Iqaluit Model	70	(Iq 99/CB 29)
Rankin Inlet Model	213.5	(RI 216/Iq 2.5)

With an objective of minimizing the gap in FTE **gains (losses)** among regional **centres,** the **Iqaluit** Model is best.

Decentralization Comparison #3

Difference between region gaining the most FTEs **and region gaining the fewest:**

Cambridge Bay Model	363	(Kt 404/Kw 41)
Iqaluit Model	349.5	(Bf 416.5/Kt 67)
Rankin Inlet	340	(Kw 391/Kt 51)

With an objective of minimizing the difference between the region gaining the most FTEs and the ***region*** gaining the fewest, the Rankin Inlet Model is best.

Decentralization Comparison #4

Number **of** FTEs located outside capital and (new) regional centres:

Cambridge Bay **Model**	**248.5**	(excl. CB, Coppermine, Iq, RI)
Iqaluit Model	345	(excl . CB, Iq, Igloolik, RI)
Rankin **Inlet Model**	**267.5**	(excl. CB, Iq, RI, Baker Lake)

With an objective of maximizing **FTEs outside the capital and regional centres,** the **Iqaluit** Model is best.

(b) **Percentage Increase in the Number of Territorial Government FTEs (page A-14.5)**

Cambridge Bay as Capital

If Cambridge Bay were to be chosen as the capital, there would be a 67.3% increase of FTEs in the Kitikmeot Region. A 116% increase would be experienced in the current regional centre of Cambridge Bay. Coppermine would experience a 62% increase and Gjoa Haven a 59% increase.

The effect of this model upon the Keewatin Region would be a 6.8% increase of FTEs. The current regional centre, Rankin Inlet, would have a 0.5% loss of FTEs. Baker Lake would experience an 11% increase and Arviat an 18% increase.

The effect of this model upon the Baffin region would be a 25.8% increase of FTEs. In the case of the current regional centre, Iqaluit, it would mean a 0.4% increase of FTEs. Cape Dorset would experience a 6% increase, Igloolik a 59% increase, Pangnirtung a 30% increase, and Pond Inlet a 30% increase.

Iqaluit as **Capital**

If Iqaluit were to be chosen as the capital, there would be a 69.4% increase of FTEs in the Baffin Region. A 12% increase would be experienced in the current regional centre of Iqaluit. Cape Dorset would experience a 54% increase, Igloolik an 82% increase, Pangnirtung a 59% increase, and Pond Inlet a 63% increase.

The effect of this model upon the Kitikmeot Region would be a 11.6% increase of FTEs. The current regional centre, Cambridge Bay, would have a 12% increase of FTEs. Coppermine would experience a 21% increase and Gjoa Haven a 6% increase.

The effect of this model upon the Keewatin Region would be a 19.4% increase of FTEs. The current regional centre, Rankin Inlet, would have a 10% increase of FTEs. Baker Lake would experience an 19% increase and Arviat a 37% increase.

Rankin Inlet as Capital

If Rankin Inlet were to be chosen as the capital, there would be a 65.5% increase of FTEs in the Keewatin Region. A 65% increase of FTEs would be experienced in the current regional centre of Rankin Inlet. Baker Lake would experience a 66% increase and Arviat a 52% increase.

The effect of this model upon the Kitikmeot region would be a 8.5% increase of FTEs. The current regional centre, Cambridge Bay, would have a 7% increase of FTEs. Coppermine would experience a 23% increase. Gjoa Haven, unlike in the Cambridge Bay and Iqaluit Models, would not experience any percentage increase.

The effect of this model upon the Baffin Region would be a 26.3% increase of FTEs. The current regional centre, Iqaluit, would have a 0.4% increase of FTEs. Igloolik would experience an 54% increase, Pangnirtung a 30% increase, and Pond Inlet a 44% increase of FTEs. Cape Dorset, unlike in the Cambridge Bay and Iqaluit Models, would not experience any percentage increase.

Discussion

If Cambridge Bay were chosen as the capital, there would be a 67.3% increase of FTEs in the Kitikmeot Region. A 116% increase of FTEs would be experienced in the current regional centre of Cambridge Bay. The Baffin Region would experience a 25.4% increase in FTEs, with the current regional centre of Iqaluit experiencing a 0.4% increase. The Keewatin Region would experience a 7.8% increase in FTEs, with the current regional centre of Rankin Inlet experiencing a 0.5% loss.

If Iqaluit were chosen as the capital, there would be a 69.4% increase in FTEs in the Baffin Region. A 12% increase would be experienced in the current regional centre of Iqaluit. The Kitikmeot Region would experience an increase of 11.6% in FTEs, with the current regional centre of Cambridge Bay experiencing-a 12% increase. The Keewatin Region would experience a 19.4% increase in FTEs, with the current regional centre of Rankin Inlet experiencing a 10% increase.

If Rankin Inlet were chosen as the capital, there would be a 65.5% increase in FTEs in the Keewatin Region. A 65% increase in FTEs would be experienced in the current regional centre of Rankin Inlet. The Baffin Region would experience a 26.3% increase of FTEs, with a 0.4% increase being experienced in the current regional centre of Iqaluit. The Kitikmeot Region would experience a 8.5% increase in FTEs, with a 7% increase being experienced in the current regional centre of Cambridge Bay. In this model, neither Gjoa Haven nor Cape Dorset would experience any percentage increase in FTEs.

Specific Comparisons

Examination of page A-14.5 suggests wider swings in percentage increases in territorial government FTEs with respect to the Cambridge Bay Model than with respect to the other two models. Closer analysis reveals the following quantitative comparisons.

Decentralization Comparison #5

Largest percentage increase in the number of FTEs for any single community:

Cambridge Bay Model	**116%**	(CB)
Iqaluit Model	**82%**	(Igloolik)
Rankin Inlet Model	66%	(Baker Lake)

With an objective of minimizing the largest increase in the number of FTEs for any single community, the Rankin Inlet Model is best.

Decentralization Comparison #6

Spread in percentage increases in FTEs among three existing regional centres (Cambridge Bay, Iqaluit, Rankin Inlet) :

Cambridge Bay Model	116%
Iqaluit Model	2%
Rankin Inlet Model	65%

With an objective of minimizing the spread in percentage increases **in FTEs** among the three existing regional **centres,** the **Iqaluit** Model is best.

Decentralization Comparison #7

Average percentage increase in FTEs in the capital and regional **centres:**

Cambridge Bay Model	**44%**	(CB,Iq, RI, Coppermine)
Iqaluit Model	29%	(CB, Iq, RI, Igloolik)
Rankin Inlet Model	34%	(CB, Iq, RI, Baker Lake)

With an objective of minimizing the average percentage increase in the capital and regional **centres,** the **Iqaluit** Model is best.

(c) Estimated Population Growth (page A-14.6)

Underlying Assumptions

The addition of 600 FTEs in Nunavut would result in an influx of 1,031 additional people (see pp. A-11.1, A-12.1 and A-13.1).

The percentage of FTEs recruited from the community in which positions are located is assumed to be 25%, regardless of the choice of capital. Twenty five percent of the new FTEs would come from other communities within Nunavut, and the remaining 50% would come from outside Nunavut (see p. A-17.3) .

Calculation of the population influx to Nunavut is based on initial recruitment figures and the following facts and assumptions (see pp. A-17.3 and A-17.4):

* the average household size (including married and single persons) for Nunavut Government headquarters FTEs is based on the 1991 Census of Canada; household size is assumed to be 4.2 for Nunavut hires and 2.7 for non-Nunavut hires (Canadian average) ;

* the 6288 current GNWT employees include 549 known couples;

* it is assumed that 0.4 additional private sector and federal government jobs will be created for every new Nunavut Government position;

* the demographic impacts for private sector and federal government staff would be the same as for the Nunavut Government staff; the extent to which people in these positions have spouses also employed with the Nunavut Government has not been taken into account;

* spouses of the Nunavut Government who fill *new* jobs in the federal and private sectors are assumed to be included in local hire percentages; and,

* the impact of the influx in population (due to new headquarters and other positions) on the number of headquarters FTEs is assumed to be non-consequential.

Cambridge Bay as Model

If Cambridge Bay were to be chosen as the capital, the overall population would grow by 1080 people, of whom 682 would be located in the current regional centre of Cambridge Bay. The populations of Coppermine and Gjoa Haven would increase by 259 and 139 people, respectively.

The effect of this model upon the Baffin Region would be to increase the population by 415 people, of whom 7 would reside in the current regional centre of Iqaluit. Cape Dorset would grow by 21 people, Igloolik by 178 people, Pangnirtung by 110 people, and Pond Inlet by 99 people.

The effect of this model upon the Keewatin Region would be to increase its population by 117 people; no increase in the population of the current regional centre of Rankin Inlet is expected (there would be a loss of 3 FTEs). The populations of Baker Lake and Arviat would increase by 45 and 72 people, respectively.

Iqaluit as Capital

If Iqaluit were to be chosen as the capital, the population in the Baffin Region would increase by 1114 people, of whom 265 would be located in the current regional centre of Iqaluit. Cape Dorset would grow by 179 people, Igloolik by 250 people, Pangnirtung by 214 people and Pond Inlet by 206 people.

The effects of this model upon the Kitikmeot Region would be to increase the population by 179 people, of whom 78 would reside in the current regional centre of Cambridge Bay. The populations of Coppermine and Gjoa Haven would increase by 88 and 13 people respectively.

The effect of this model upon the Keewatin Region would be to increase the population by 312 people, of whom 90 people would reside in the current regional centre of Rankin Inlet. The populations of Baker Lake and Arviat would grow by 75 and 147 people respectively.

Rankin Inlet as Capital

If Rankin Inlet were to be chosen as the capital, the population in the Keewatin Region would increase by 1045 people, of whom 577 would be located in the current regional centre of Rankin Inlet. The populations of Baker Lake and Arviat would grow by 265 and 203 people, respectively.

The effects of this model upon the Kitikmeot Region would be to increase the population by 136 people, of whom 40 would reside in the current regional centre of Cambridge Bay. The population of Coppermine would increase by 96 people. No population growth would be experienced in Gjoa Haven.

The effect of this model upon the Baffin Region would be to increase the population by 423 people, of whom 7 people would reside in the current regional centre of Iqaluit. Igloolik

would grow by 164 people, Pangnirtung by 110 people and Pond Inlet by 142 people. No population growth would be experienced in Cape Dorset.

Discussion

If Cambridge Bay were chosen as the capital, the population in the Kitikmeot Region would grow by 1080 people, the population of the Baffin Region by 415, and the population of the Keewatin Region by 117. Of the regional totals, the current regional centres of Cambridge Bay and Iqaluit would increase by 682 and 7 people, respectively, while Rankin Inlet would experience no population increase (3 FTE loss) .

If Iqaluit were chosen as the capital, the population of the Baffin region would increase by 1114 people, the population of the Kitikmeot Region by 179 people, and the population of the Keewatin Region by 312 people. Of the regional totals, the current regional centres of Iqaluit, Cambridge Bay and Rankin Inlet would increase by 265, 179 and 90 people, respectively.

If Rankin Inlet were chosen as the capital, the population in the Keewatin Region would increase by 1045 people, the population of the Kitikmeot Region by 136, and the population of the Baffin Region by 423 people. Of the regional totals, the current regional centres of Rankin Inlet, Cambridge Bay and Iqaluit would grow by 577, 40 and 7 people, respectively. In this model, neither Gjoa Haven nor Cape Dorset would experience any increase in population.

Specific Comparisons

Examination of page A-14.6 reveals a much flatter bar chart for Iqaluit than for the other two candidate communities for capital. More detailed examination provides the following quantitative results:

Decentralization Comparison #8

Largest population growth in a single community:

Cambridge Bay Model	682	(CB)
Iqaluit Model	265	(Iq)
Rankin Inlet	577	(RI)

With an objective of avoiding excessive growth in a single community, the **Iqaluit** Model is best.

Decentralization Comparison #9

Difference between the regional centre gaining the most population and the regional centre gaining the least:

Cambridge Bay Model	**685**	(CB 682/RI -3)
Iqaluit Model	177	(Iq 265/CB 78)
Rankin Inlet Model	570	(RI 577/Iq 7)

With an objective of minimizing the **differences in population increases among** the **regional centres, the Iqaluit Model is best.**

Decentralization Comparison **#lo**

Difference between the region gaining the most population and the region gaining the least:

Cambridge Bay Model	963	(Kt 1080/Kw 117)
Iqaluit Model	935	(Bf 1114/Kt 179)
Rankin Inlet Model	909	(Kw 1045/Kt 136)

With an objective **of** minimizing the difference between the region gaining the most population **and the region gaining** the **least, the Rankin Inlet Model is best.**

Decentralization Comparison #11

Population growth outside the capital and (new) regional centres:

Cambridge **Bay Model**	664 (excl. CB, Coppermine, Iq, RI)
Iqaluit Model	922 (excl. CB, Iq, Igloolik, RI)
Rankin Inlet Model	722 (excl. CB, Iq, RI, Baker Lake)

With an objective **of** maximizing population growth outside the capital and (new) regional **centres,** the **Iqaluit Model is best.**

(d) Estimated Population Growth Expressed in Percentage Terms (page A-14.7)

Cambridge Bay

If Cambridge Bay were chosen as the capital, the Kitikmeot Region population would grow by 22%, with 48% growth being experienced in the current regional centre of Cambridge Bay. Coppermine and Gjoa Haven would experience 20% and 14% population increases, respectively.

The effect of this model upon the Baffin Region would be 3% population growth, with the current regional centre of Iqaluit experiencing 0.4% growth. Cape Dorset would grow by 2%, Igloolik by 15%, Pangnirtung by 8% and Pond Inlet by 8%.

The effect of this model upon the Keewatin Region would be population growth of 2%, with the current regional centre of Rankin Inlet experiencing no growth (loss of 3 FTEs) . Baker Lake and Arviat would grow by 3% and 4%, respectively.

Iqaluit

If Iqaluit were chosen as the capital, the Baffin Region population would grow by 8%, with 6% growth being experienced by the current regional centre of Iqaluit. Cape Dorset would grow by 15%, Igloolik by 21%, Pangnirtung by 15% and Pond Inlet by 17%.

The effect of this model upon the Kitikmeot Region would be 4% population growth, with the current regional centre of Cambridge Bay experiencing 5% growth. Coppermine and Gjoa Haven would grow by 7% and 1%, respectively.

The effect of this model upon the Keewatin Region would be population growth of 4%, with the current regional centre of Rankin Inlet experiencing 4% growth. Baker Lake and Arviat would grow by 5% and 9%, respectively.

Rankin Inlet

If Rankin Inlet were chosen as the capital, the Keewatin Region population would grow by 14%, with 26% growth being experienced by the current regional centre of Rankin Inlet. Baker Lake and Arviat would grow by 18% and 12%, respectively.

The effect of this model upon the Kitikmeot Region would be 3% population growth, with the current regional centre of Cambridge Bay experiencing 3% growth. Coppermine would grow by 7%,

while Gjoa Haven would experience no population growth.

The effect of this model upon the Baffin Region would be population growth of 3%, with the current regional centre of Iqaluit experiencing 0.4% growth. Igloolik would grow by 14%, Pangnirtung by 8%, and Pond Inlet by 12%, while Cape Dorset would experience no population growth.

A-14.7 Discussion

If Cambridge Bay were chosen as the capital, the population in the Kitikmeot Region would grow by 22%, the population of the Baffin Region by 3%, and the population of the Keewatin Region by 2%. Of the regional totals, the current regional centre of Cambridge Bay would grow by 48%, a little growth would be experienced in Iqaluit (0.4%), and Rankin Inlet would register a small loss (-0.5%).

If Iqaluit were chosen as the capital, the population of the Baffin Region would increase by 8%, the population of the Kitikmeot Region by 4%, and the population of the Keewatin Region by 4%. Of the regional totals, the populations of the current regional centres of Iqaluit, Cambridge Bay and Rankin Inlet would increase by 6%, 5% and 4%, respectively.

If Rankin Inlet were chosen as the capital, the population in the Keewatin Region would increase by 14%, the population of the Kitikmeot Region by 3%, and the population of the Baffin Region by 3%. Of the regional totals, the current regional centres of Rankin Inlet, Cambridge Bay and Iqaluit would grow by 26%, 3%, and 0.4%, respectively. In this model, neither Gjoa Haven nor Cape Dorset would experience an increase in population.

Specific Comparisons

Examination of the bar charts shows the flattest results for the Iqaluit Model, followed by the Rankin Inlet Model, and then the Cambridge Bay Model. Closer examination permits the following quantitative comparisons:

Decentralization Comparison #12

Largest percentage population increase in a single community:

Cambridge Bay Model	**48%**	(Cambridge Bay)
Iqaluit Model	21%	(Igloolik)
Rankin Inlet Model	26%	(Rankin Inlet)

With an objective of minimizing the percentage population increase in a single **community,** the **Iqaluit** Model is best.

Decentralization Comparison #13

Average percentage increase in the population growth of the capital and regional centres:

Cambridge Bay Model	**14.5%**	(CB, Coppermine, Iq, RI)
Iqaluit Model	9.0%	(CB, Iq, Igloolik, RI)
Rankin **Inlet Model**	**12. 0%**	(CB, Iq, RI, Baker Lake)

With the objective **of minimizing average percentage increase in** the **population growth of the capital and regional centres, the Iqaluit Model is best.**

(e) **Percentage Population Growth by Region (page A-14.8)**

Cambridge Bay

If Cambridge Bay were chosen as the capital, the population in the Kitikmeot Region would increase by 22%, the population of the **Baffin** Region by 3%, and the population of the Keewatin Region by 2%.

Iqaluit

If Iqaluit were chosen as the capital, the population of the **Baffin** Region would increase by 8%, the population of the Kitikmeot Region by 4%, and the population of the Keewatin Region by 4%.

Rankin Inlet

If Rankin Inlet were chosen as the capital, the population in the Keewatin Region would increase by 14%, the population of the Kitikmeot Region by 3%, and the population of the Baffin Region by 3%.

Specific Comparisons

Decentralization Comparison #14

Largest percentage increase in population by region:

Cambridge Bay Model	**22%**	(Kt)
Iqaluit Model	**8%**	(Bf)
Rankin Inlet Model	14%	(**Kw**)

With an objective of minimizing the percentage population increase in any single region, the **Iqaluit** Model is best.

Decentralization Comparison #15

Percentage difference between the region with the largest increase in population and the region gaining the least:

Cambridge Bay Model	20%	(Kt 22%/Kw 2%)
Iqaluit Model	4%	(Bf 8%/Kt and Kw 4%)
Rankin Inlet Model	11%	(Kw 14%/Bf and Kt 3%)

With **an** objective of minimizing the percentage difference between the region with the **largest increase in population and the region gaining the least, the Iqaluit Model is best.**

(f) **1999 Population per Nunavut Government Employee, by Region (page A-14.8)**

Cambridge Bay as Capital

If Cambridge Bay were chosen as capital, there would be 7.7 people per Nunavut Government employee in the Kitikmeot Region, 10.4 in the Baffin Region, and 11.6 in the Keewatin Region.

Iqaluit as Capital

If Iqaluit were chosen as capital, there would be 11.5 people per Nunavut Government employee in the Kitikmeot Region, 9.1 in the Baffin Region, and 10.6 in the Keewatin Region.

Rankin Inlet as Capital

If Rankin Inlet were chosen as capital, there would be 11.8 people per Nunavut Government employee in the Kitikmeot Region, 10.3 in the Baffin Region, and 8.4 in the Keewatin Region.

Specific Comparisons

Initial examination of these bar charts does not reveal any obvious differences. Closer examination permits the following quantitative comparisons:

Decentralization Comparison #16

Smallest ratio of regional population to Nunavut Government employees:

Cambridge Bay **Model**	**7.7**	(Kt)
Iqaluit Model	**9.1**	(Bf)
Rankin Inlet **Model**	**8.4**	(Kw)

With the objective of maximizing the ratio of regional population to **Nunavut** Government employees, the **Iqaluit** Model is best.

Decentralization Comparison #17

Difference between the region with the smallest ratio of regional population to Nunavut Government employees and the region with the largest:

Cambridge Bay Model	**3.9**	(Kw 11.6/Kt **7.7**)
Iqaluit Model	**2.4**	(Kt 11.5/Bf 9.1)
Rankin Inlet Model	3.4	(Kt 11.8/Kw **8.4**)

With an objective of minimizing the differences among regions in the ratio of regional populations to Nunavut Government employees, the Iqaluit Model is best.

(g) **Percentage Estimated Population Growth by Regional Centre (page A-14.9)**

Cambridge Bay as Capital

Cambridge Bay, if chosen as the capital, would experience 49% growth in population, while the current regional centres of Iqaluit (2.5 FTE gain) and Rankin Inlet (3 FTE loss) would experience little population change.

Iqaluit as Capital

Iqaluit, if chosen as the capital, would experience 6% growth in population, while the current regional centres of Cambridge Bay and Rankin Inlet would each experience 6% growth in population.

Rankin Inlet as Capital

Rankin Inlet, if chosen as capital, would experience 27% growth in population, while the current regional centres of Cambridge Bay and Iqaluit would experience 3% and 2% growth in population, respectively.

Specific Comparisons

Graphic differences are apparent in the relevant bar chart. The bar chart for the Iqaluit Model is markedly flatter than for the other two models. The following quantitative comparison can be made:

Decentralization Comparison #18

Percentage difference **between the regional** centre gaining the most population and regional **centre** gaining the least:

Cambridge Bay Model	**49%**	**(CB 49%/RI 0%)**
Iqaluit Model	**2%**	(Iq **and** CB 6%/RI 4%)
Rankin Inlet Model	25%	(RI 27%/Iq 2%)

With an objective of minimizing the percentage difference between the regional centre gaining the most population and the regional **centre** gaining the least, the **Iqaluit** Model is best.

(h) **1999 Population per Nunavut Government Employee, by Regional Centre (page A-14.9)**

Cambridge Bay as Capital

Cambridge Bay, if chosen as the capital, would have 4.8 people per Nunavut Government employee, **Iqaluit** 6.2, and Rankin Inlet 7.6.

Iqaluit as Capital

Iqaluit, if chosen as the capital, would have 5.8 people per Nunavut Government employee, Cambridge Bay 7.0, and Rankin Inlet 7.0.

Rankin Inlet **as Capital**

Rankin Inlet, if chosen as the capital, would have 5.5 people per Nunavut Government employee, Cambridge Bay 7.3, and Iqaluit 6.2.

Specific Comparisons

Initial review of the relevant bar chart provides no obvious message. The following quantitative comparisons are possible:

Decentralization Comparison #19

Smallest ratio of regional centre population to Nunavut Government employees:

Cambridge Bay Model	**4.8**	(CB)
Iqaluit Model	**5.8**	(Iq)
Rankin **Inlet Model**	**5.5**	(RI)

With an objective of maximizing the **ratio of regional centre population to Nunavut Government employees, the Iqaluit Model is best.**

Decentralization Comparison #20

Difference between the regional centre with the smallest ratio of population to Nunavut Government employees and the regional centre with the largest:

Cambridge **Bay Model**	**2.8**	(RI 7.6/CB 4.8)
Iqaluit Model	1.2	(RI and CB 7.0/Iq 5.8)
Rankin Inlet Model	1.8	(CB 7.3/RI 5.5)

With an objective of minimizing the difference between the regional centre with the smallest population ratio to Nunavut Government employees and the regional centre with the largest, the Iqaluit Model is best.

(i) Percentage Estimated Population Growth by 1999 Community Size (page A-14.10)

Underlying Assumption

It is assumed that small sized communities have less than 1000 people, medium sized communities have between 1001 and 2000 people, and large sized communities have more than 2000 people.

Cambridge Bay as Capital

If Cambridge Bay were chosen as capital, communities with less than 1000 people and communities with more than 2000 people would experience no population growth, while the medium sized communities would experience an average of 14% growth in population.

Iqaluit as Capital

If Iqaluit were chosen as capital, communities with less than 1000 people would experience no population growth, communities with 1001 to 2000 people would experience an average of 11% growth in population, and communities with more than 2000 people would experience an average of 5% growth in population.

Rankin Inlet as Capital

If Rankin Inlet were chosen as capital, communities with less than 1000 people would experience no population growth, communities with 1001 to 2000 people would experience an average of 9% growth in population, and communities with more than 2000 people would experience an average of 9% growth in population.

Specific Comparison

The most obvious difference among the three models in this bar chart is the concentration of all employment in medium sized communities in the Cambridge Bay Model; this is a function of Cambridge Bay being classified as a medium sized community. The following quantitative comparison can be made:

Decentralization Comparison #21

Growth in large sized communities (**Iqaluit** and **Rankin** Inlet) :

Cambridge Bay Model	0%
Iqaluit Model	**5%**
Rankin Inlet Model	9%

With an objective of minimizing population growth in large sized communities, the Cambridge Bay Model is best.

(j) **Population per Nunavut Government Employee by 1999 Community Size (page A-14.10)**

Underlying Assumption

In total, there would be 9.4 residents for every direct Nunavut Government position (see pp. A-11.1, A-12.1 and A-13.1) . Communities would be assumed to be small, medium or large based on population ranges identified above.

Cambridge Bay as Capital

If Cambridge Bay were chosen as capital, communities with less than 1000 people would have an average of 18.1 people per Nunavut Government employee, communities with 1001 to 2000 people would have an average of 9.8, and communities with more than 2000 people would have an average of 6.6.

Iqaluit as Capital

If Iqaluit were chosen as capital, communities with less than 1000 people would have an average of 18.1 people per Nunavut Government employee, communities with 1001 to 2000 people would have an average of 9.7, and communities with more than 2000 people would have an average of 6.1.

Rankin Inlet as Capital

If Rankin Inlet were chosen as capital, communities with less than 1000 people would have an average of 18.1 people per Nunavut Government employee, communities with 1001 to 2000 people would have an average of 10.2, and communities with more than 2000 people would have an average of 5.9.

Specific Comparison

The relevant bar chart reveals that, for all three models, the ratio of population to Nunavut Government employees would vary inversely to community size. Notwithstanding that common feature of all three models, the following quantitative comparison can be made:

Decentralization Comparison #22

Ratio of population of large sized communities (Iqaluit and Cambridge Bay) to Nunavut Government employees:

Cambridge Bay Model	**6.6**
Iqaluit Model	**6.1**
Rankin Inlet Model	5.9

With an objective of maximizing the ratio of population to Nunavut Government employees in large sized communities, the Cambridge Bay Model is best.

(k) Percentage Estimated Population Growth by Real Unemployment Rate (page A-14.11)

Underlying Assumptions

Twenty-nine percent of the total adult population of Nunavut were unemployed in 1994. The real unemployment rate for each of the three regions is: Baffin 26%; Kitikmeot 30%; and, Keewatin 34%. The real unemployment rate in the three regional centres is less than half that of the other communities (17% compared to 35%). It should also be noted that:

* **33.4% of the population live in communities with "low real unemployment" (between 3% and 19%);**
* 31.3% of the population live in communities with "medium real unemployment" (between 20% and 39%); and,
* 35.3% of the population live in communities with "high real unemployment" (between 40% and 47%).

Cambridge Bay as Capital

If Cambridge Bay were chosen as capital, communities with a less than 20% real unemployment rate would grow an average of 8%, communities with a 20% to 39% real unemployment rate would grow an average of 5%, and communities with a real unemployment rate of 40% or more would grow an average of 6%.

Iqaluit as Capital

If Iqaluit were chosen as capital, communities with a less than 20% real unemployment rate would grow an average of 5%, communities with a 20% to 39% real unemployment rate would grow an average of 10%, and communities with a real unemployment rate of 40% or more would grow an average of 4%.

Rankin Inlet as Capital

If Rankin Inlet were chosen as capital, communities with a less than 20% real unemployment rate would grow an average of 7%, communities with a 20% to 39% real unemployment rate would grow an average of 5%, and communities with a real unemployment rate of 40% or more would grow an average of 6%.

Specific Comparisons

In the relevant bar chart, the Iqaluit Model shows the largest percentage population growth in communities with a medium real unemployment rate, while the other two models show the smallest percentage population growth in such communities. The following quantitative comparisons are possible:

Decentralization Comparison #23

Percentage population growth in communities with the highest real unemployment rate:

Cambridge Bay Model	**6%**
Iqaluit Model	**4%**
Rankin Inlet Model	**6%**

With an objective of maximizing population growth in the communities with the highest unemployment rate, the Cambridge Bay and Rankin Inlet Models are best.

Decentralization **Comparison #24**

Percentage of population growth in communities with the lowest real unemployment rate:

Cambridge Bay Model	**8%**
Iqaluit Model	**5%**
Rankin Inlet Model	**7%**

With an objective of minimizing population growth in communities with the lowest real unemployment **rate, the Iqaluit Model is best.**

(1) 1999 Population per Nunavut Government Employee by Real Unemployment Rate (page A-14.11)

Underlying Assumptions

Assumptions as to real unemployment rates are set out above.

Cambridge Bay as Capital

If Cambridge Bay were chosen as capital, communities with a less than 20% real unemployment rate would have an average of 6.3 people per Nunavut Government employee, communities with a 20% to 39% real unemployment rate would have an average of 14.6, and communities with a real unemployment rate of 40% or more would have an average of 13.4.

Iqaluit as Capital

If Iqaluit were chosen as capital, communities with a less than 20% real unemployment rate would have an average of 6.6 people per Nunavut Government employee, communities with a 20% to 39% real unemployment rate would have an average of 12.0, and communities with a real unemployment rate of 40% or more would have an average of 14.6.

Rankin Inlet as Capital

If Rankin Inlet were chosen as capital, communities with a less than 20% real unemployment rate would have an average of 6.4 people per Nunavut Government employee, communities with a 20% to 39% real unemployment rate would have an average of 14.5, and communities with a real unemployment rate of 40% or more would have an average of 13.2.

Specific Comparisons

The relevant bar graph reveals that the highest ratio of population to employees is, for the Iqaluit Model, in the communities with the highest real unemployment rate and, for the other two models, in the communities with a medium unemployment rate. The following quantitative comparisons can be made:

Decentralization Comparison #25

Ratio of population to Nunavut Government employee in communities with the highest real unemployment rate:

Cambridge Bay Model	13.4
Iqaluit Model	14.6
Rankin Inlet Model	13.2

With an objective of minimizing the ratio of population to Nunavut Government employees in the communities with the highest real unemployment rate, the Rankin Inlet Model is best.

Decentralization Comparison #26

Ratio of population to Nunavut Government employees in communities with the lowest real unemployment rate:

Cambridge Bay Model	6.3
Iqaluit Model	6.6
Rankin Inlet Model	6.4

With an objective of maximizing the ratio of population to Nunavut Government employees in communities with the lowest real unemployment rate, the Iqaluit Model is best.

(m) Additional Comparisons not referenced in Appendix 14

Underlying Assumptions

The following comparisons are based on a number of facts, proposals and forecasts, i.e. :

- **1991** regional breakdown of Nunavut population (21,544) :

	No.	%
Kitikmeot	4,325	20%
Baffin	11,385	53%
Keewatin	5, 834	27%

* **1994** regional breakdown of territorial government employment in Nunavut:

	No.	%
Kitikmeot	572	18.5%
Baffin	1672	54.0%
Keewatin	852	27.5%

* Proposed allocation of new territorial government employment by region:

	No.	%
Cambridge Bay Model		
Kitikmeot	404	67%
Baffin	155	29%
Keewatin	41	7%
Iqaluit Model		
Kitikmeot	67	11%
Baffin	416.5	69.5%
Keewatin	116.5	19.5%
Rankin Inlet Model		
Kitikmeot	51	8.5%
Baffin	158	26.5%
Keewatin	391	65.0%

* Forecast 1999 regional breakdown of Nunavut population:

	No.	%
Cambridge Bay Model		
Kitikmeot	5676	20.8%
Baffin	14170	52.1%
Keewatin	7342	27.1%
Iqaluit Model		
Kitikmeot	5103	18.7%
Baffin	14614	53.8%
Keewatin	7470	27.5%
Rankin Inlet Model		
Kitikmeot	5076	18.7%
Baffin	14175	52.1%
Keewatin	7937	29.2%

* Proposed 1999 regional breakdown of territorial government employment in Nunavut (adjustments not made for additional FTEs to accommodate natural increase in Nunavut population) :

	No.	%
Cambridge Bay Model		
Kitikmeot	976	26.4%
Baffin	1827	49.4%
Keewatin	893	24.2%
Iqaluit Model		
Kitikmeot	639	17.3%
Baffin	2088.5	56.5%
Keewatin	968.5	26.2%
Rankin Inlet Model		
Kitikmeot	623	16.9%
Baffin	1830	49.5%
Keewatin	1243	33.6%

Specific Comparisons

Decentralization Comparison #27

Average percentage regional variation in proposed allocation of new territorial government employment from 1991 regional breakdown of Nunavut population:

Cambridge Bay Model	**30.3%**	**(47%, 24%, 20%)**
Iqaluit Model	**11.0%**	**(9%, 16.5%, 7.5%)**
Rankin Inlet Model	**25.0%**	**(11.5%, 26.5%, 38%)**

With an objective **of minimizing the average percentage regional variation in proposed allocation of new territorial government employment from 1991 regional breakdown in Nunavut population, the Iqaluit Model is best.**

Decentralization Comparison #28

Average percentage regional variation in proposed allocation of new territorial government employment from forecast 1999 regional breakdown of Nunavut population:

Cambridge Bay Model	**29.8%**	**(46.2%, 23.1%, 20.1%)**
Iqaluit Model	**10.5%**	**(7.7%, 15.7%, 8%)**
Rankin Inlet Model	**23 .9%**	**(10.2%, 25.6%, 35.8%)**

With an objective of minimizing the percentage regional variation in allocation of new territorial government employment from existing regional breakdown of Nunavut population, the **Iqaluit Model is best.**

Decentralization Comparison #29

Average percentage variation in regional allocation of total territorial government employment (FTEs) from 1999 regional breakdown of Nunavut population:

Cambridge Bay Model	**3.7%**	**(5.6%, 2.7%, 2.9%)**
Iqaluit Model	**1.8%**	**(1.4%, 2.7%, 1.3%)**
Rankin Inlet Model	**2.9%**	**(1.8%, 2.6%, 4.4%)**

With an objective of minimizing the average percentage variation in regional allocation of **total** territorial government employment **(FTEs)** from 1999 regional breakdown of **Nunavut population, the Iqaluit Model is best.**

Subsection **(iii) . Conclusions**

The comparisons made in the preceding subsection can be tabulated in the following way:

Decentralization Comparison	Best Model
Decentralization Comparison #1	Iqaluit Model
Decentralization Comparison #2	Iqaluit Model
Decentralization Comparison #3	Rankin Inlet Model
Decentralization Comparison #4	Iqaluit Model
Decentralization Comparison #5	Rankin Inlet Model
Decentralization Comparison #6	Iqaluit Model
Decentralization Comparison #7	Iqaluit Model
Decentralization Comparison #8	Iqaluit Model
Decentralization Comparison #9	Iqaluit Model
Decentralization Comparison #lo	Rankin Inlet Model
Decentralization Comparison #11	Iqaluit Model
Decentralization Comparison #12	Iqaluit Model
Decentralization Comparison #13	Iqaluit Model
Decentralization Comparison #14	Iqaluit Model
Decentralization Comparison #15	Iqaluit Model
Decentralization Comparison #16	Iqaluit Model
Decentralization Comparison #17	Iqaluit Model
Decentralization Comparison #18	Iqaluit Model
Decentralization Comparison #19	Iqaluit Model
Decentralization Comparison #20	Iqaluit Model
Decentralization Comparison #21	Cambridge Bay Model
Decentralization Comparison #22	Cambridge Bay Model
Decentralization Comparison #23	Cambridge Bay and Rankin Inlet Models.
Decentralization Comparison #24	Iqaluit Model
Decentralization Comparison #25	Rankin Inlet Model
Decentralization Comparison #26	Iqaluit Model
Decentralization Comparison #27	Iqaluit Model
Decentralization Comparison #28	Iqaluit Model
Decentralization Comparison #29	Iqaluit Model

As evidenced in this tabulation, the Iqaluit Model is the best model with respect to 22 comparisons, the Rankin Inlet Model with respect to four comparisons, the Cambridge Bay Model with respect to two comparisons, and the Cambridge Bay and Rankin Inlet Models are tied as best model with respect to one comparison.

It would be a mistake to assume that these comparisons are of the same order of importance. At the same time, no obvious means exist to distinguish comparisons as to their relative importance. It could be argued that some of the comparisons made in the

previous subsection may of such limited importance as to justify their removal from a list of meaningful, quantifiable distinctions as to the relative decentralization advantages and disadvantages of the three candidate communities. It could also be argued that additional comparisons could be developed and applied to the candidate communities with a view to providing further ways of distinguishing and rating them. Whatever the merits of such arguments, Commissioners have reached two conclusions with respect to the decentralization comparisons:

1. the number and variety of decentralization comparisons that have been made are sufficient to draw objective conclusions; and,

2. on the basis of a large majority of comparisons, the Iqaluit Model is the best model for the purpose of bringing about a decentralized Nunavut Government.

Section 3. Demographic and Related Social Impacts

(i) **Introduction**

The creation of the Nunavut Government will have significant demographic and related social impacts on Nunavut. In all three design models for the Nunavut Government developed by the NIC, an influx of some 1,031 people is expected into Nunavut. The NIC's efforts to keep the design of the Nunavut Government simple, and to emphasise recruitment of new employees within Nunavut, have combined to make this projected influx much smaller than anticipated in earlier work done by The Coopers & Lybrand Consulting Group for the GNWT (1991) and D IAND (1992). Nonetheless, in light of a projected population for Nunavut in 1999 of just over 27,000, the arrival of more than 1,000 new residents from outside will have discernible impacts.

It is important to avoid presenting the influx of new residents as a problem in and of itself. The people of Nunavut are open and welcoming. Many people have come to Nunavut from other parts of Canada and other parts of the world. They have helped build the Nunavut of today and will play an active role in the building of the Nunavut of tomorrow. The contributions of newcomers to Nunavut --- their skills, their energies, their ideas --- are part of the fabric and dynamics of life in Nunavut. In a world made up of societies that are increasingly inter-connected and inter-dependent, the people of Nunavut do not seek to stand alone.

The influx of new residents into Nunavut is, however, potentially problematic in two circumstances: (1) if the total influx is so large or so sudden as to create an abrupt break in the social and cultural character of Nunavut, particularly with respect to the central place occupied by Inuit culture in Nunavut society; or, (2) if the, influx of newcomers is manageable in a Nunavut-wide context, but is too large or too sudden from the perspective of localized impacts on specific communities. With respect to this second potential problem, it is important to remember that, from the perspective of a single community, all people from outside that community are newcomers. While newcomers from other communities in Nunavut can be expected to create fewer difficulties in being absorbed, adjustments are necessary in every case.

With respect to the first potential problem, the NIC is of the view that the total number of newcomers into Nunavut from outside Nunavut that was projected in "Footprints in New Snow" for all three organizational design options is a reasonable one. More specifically, the NIC believes that the influx of 1,031 newcomers into Nunavut to assist in the setting up and initial operation of the Nunavut Government does not constitute a threat to social stability and cultural continuity in Nunavut.

The importance of the second potential problem --- too big or too sudden demographic changes in specific communities --- has led the NIC to pursue an approach of favouring the maximum practicable decentralization of government activities within Nunavut. Such a policy has obvious advantages of reducing the likelihood of too much or too sudden demographic change occurring in one or more communities. In addition to reducing the likelihood of negative impacts in some communities, the approach has the advantage of allowing a more even distribution of employment opportunities across a range of communities, almost all of which face enormous difficulties of unemployment and underemployment.

While the three design models developed by the NIC for the Nunavut Government --- the Cambridge Bay Model, the Iqaluit Model and the Rankin Inlet Model --- are all animated by the objective of bringing about a maximum practicable level of decentralization, they vary considerably in the distribution of government employment across regions and communities. Not surprisingly, they entail divergent patterns of demographic and related social impacts.

Subsection (ii) . Comparisons

In seeking to compare the demographic and related social impacts of the three models in a meaningful, quantitative way, it is worth pointing out that such impacts are most logically assessed in relative, not absolute terms --- for example, whether a community may be adversely affected by sudden population growth will depend much more on the proportion of newcomers to established residents, than on the actual number of newcomers in question.

In developing comparisons among the three design models concerning demographic and related social impacts, a number of information items are relevant, including the information summarized in the following table:

Community	Population (1991 census)	% of Population Inuit (1991 Data Book)
Cape Dorset	961	93%
Igloolik	936	93%
Iqaluit	3,552	60%
Pangnirtung	1,135	94%
Pond Inlet	974	94%
Arviat	1,323	93%
Baker Lake	1,186	89%
Rankin Inlet	1,706	77%
Cambridge Bay	1,116	72%
Coppermine	1,059	92%
Gjoa Haven	783	96%

In developing comparisons among the three design models, it is helpful to remember a number of underlying assumptions made for demographic projections, financial calculations, and other purposes in "Footprints in New Snow" :

* the percentage of FTEs recruited from the community in which a position is located is assumed to be 25%; 25% of new FTEs will come from other communities within Nunavut, and the remaining 50% will come from outside Nunavut;

- 50% of FTEs will be occupied by Inuit (it is assumed that this figure will apply to new FTEs as well as total FTEs within the Nunavut Government) ;

- the average household size (including married and single persons) for Nunavut Government headquarters FTEs is assumed to be 4.2 for Nunavut hires and 2.7 for non-Nunavut hires; and,

- **0.4 additional private sector and federal government jobs are assumed to be created for every Nunavut Government position, and the demographics for private sector and federal government staff will be the same as for new Nunavut Government staff.**

In developing comparisons, it is also reasonable to make a couple of additional assumptions:

* putting aside the impact of the creation of the Nunavut Government, the ratio of Inuit to non-Inuit in communities will remain constant between 1991 and 1999; and,

- **50%** of new population resulting from a community becoming capital will be non-Inuit.

The comparisons that follow constitute an attempt to identify meaningful, quantitative differences among the three design models as to their demographic and related social impacts. Four points should be noted about these comparisons.

First of all, the comparisons examine demographic and related social impacts on a community basis not on a regional one; this reflects the NIC's assessment that, while all of the design models present the possibility of too rapid growth in specific communities, none of the design models anticipate explosive population growth for an entire region.

Secondly, the comparisons are all expressed in percentage terms; this reflects the NIC's assessment that the social impacts of population growth are a function not so much of how many new people come to live in a community, but rather how many new people come to live in a community in comparison with the pre-existing population.

Thirdly, Impacts Comparisons #1 and #2 reproduce comparisons previously made in the section of this report dealing with decentralization (Decentralization Comparisons #12 and #13 from that previous section) ; repetition reflects the NIC's assessment that base-line comparisons as to overall population increases in specific communities are of central relevance from both the perspective of promoting a maximum degree of decentralization and the perspective of avoiding the negative social impacts associated with excessive population growth.

Finally, the comparisons provide insight into only those social impacts directly attributable to population change; they do not offer insight into more specific manifestations of negative social impact such as crime, substance abuse, family stress, increased pressure on the renewable resource base, etc. Available evidence does not make it possible, for the purposes of this

report, to forecast, with any degree of objective measurement, such specific manifestations of negative social impact.

Impacts Comparison #1

Largest percentage population increase in a single community:

Cambridge Bay Model	**48%**	**(Cambridge Bay)**
Iqaluit Model	**21%**	(Igloolik)
Rankin Inlet Model	**26%**	**(Rankin Inlet Model)**

With an objective of minimizing the percentage population increase in a single community, the Iqaluit Model is best.

Impacts Comparison #2

Average percentage increase in the population growth of the capital and regional centres:

Cambridge Bay Model	**14.5%**	(CB, Coppermine, Iq, **RI)**
Iqaluit Model	**9.0%**	**(CB,** Iq, Igloolik, **RI)**
Rankin Inlet Model	**12. 0%**	(CB, Iq, **RI, Baker Lake)**

With an objective of minimizing the average percentage increase in the **population growth of the capital and regional centres, the Iqaluit Model is best.**

Impacts Comparison #3

Percentage of Inuit in the population of capital:

Cambridge Bay Model	**65%**	(Cambridge Bay as capital)
Iqaluit Model	59%	(Iqaluit as capital)
Rankin Inlet Model	71%	(Rankin Inlet as capital)

With an objective of maximizing the proportion of Inuit in the capital of Nunavut, the Rankin Inlet Model is best.

Impacts Comparison #4

Change in the percentage of Inuit in the population of the capital:

Cambridge Bay Model	-7%	(Cambridge Bay as capital)
Iqaluit Model	- 1%	(Iqaluit as capital)
Rankin Inlet Model	- 6%	(Rankin Inlet as capital)

With an objective of minimizing the change in the proportion of Inuit to non-Inuit in any community chosen as capital, the Iqaluit Model is best.

Impacts Comparison #5

Average percentage of Inuit in the population of the capital and regional centres:

Cambridge Bay Model	71.8%	(CB, Coppermine, Iq, RI)
Iqaluit Model	74.3%	(CB, Iq, Igloolik, RI)
Rankin Inlet Model	71.5%	(CB, Iq, RI, Baker Lake)

With an objective of maximizing the average percentage of Inuit in the population of the capital and regional centres, the Iqaluit Model is best.

Impacts Comparison #6

Percentage of outsiders in the population of the capital (7S% Of population growth resulting from creation of the Nunavut Government headquarters) :

Cambridge Bay Model	25%	(Cambridge Bay as capital)
Iqaluit Model	4%	(Iqaluit as capital)
Rankin Inlet Model	16%	(Rankin Inlet as capital)

With the objective of minimizing the proportion of outsiders in the population of the capital, the Iqaluit Model is best. (It shouldbe noted that, in the Iqaluit Model, Igloolik would experience a bigger impact in this respect than Iqaluit, with 13% of its 1999 population being made up of outsiders.)

Impacts Comparison #7

Percentage of outsiders arrivals in the population of the capital who come from outside Nunavut (50% of population growth) :

Cambridge Bay Model	**16.5%**	(Cambridge Bay as capital)
Iqaluit Model	2.8%	(Iqaluit as capital)
Rankin Inlet Model	10. 6%	(Rankin Inlet as capital)

With an objective of minimizing the percentage of outsiders in the population of the capital who come from outside Nunavut, the Iqaluit Model is best.

Subsection (iii) . Conclusions

The comparisons set out in the preceding subsection can be tabulated in the following way:

Impacts Comparison	Best Model
Impacts Comparison #1	Iqaluit Model
Impacts Comparison #2	Iqaluit Model
Impacts Comparison #3	Rankin Inlet Model
Impacts Comparison #4	Iqaluit Model
Impacts Comparison #5	Iqaluit Model
Impacts Comparison #6	Iqaluit Model
Impacts Comparison #7	Iqaluit Model

In this tabulation, the Iqaluit Model is the best model with respect to six comparisons and the Rankin Inlet Model with respect to one. The Cambridge Bay Model does not emerge as the best model with respect to any of the comparisons.

As mentioned in the conclusions drawn in this report with respect to decentralization, it would be a mistake to assume that the comparisons made in this section are of equal weight. In particular, it could be argued that the one comparison that favours Rankin Inlet --- the proportion of Inuit in the population of the capital of Nunavut --- has particular significance in view of the role of the Nunavut Government in promoting the special place of Nunavut in Canada as the only province or territory with a majority of Inuit. It could also be argued that additional comparisons might be devised to shed further light on the comparative attractions of the three design models.

Such arguments notwithstanding, Commissioners have concluded that it is possible to rely on the comparisons made in this section to make material distinctions among the three design models. Commissioners have further concluded that, notwithstanding the advantage offered by the Rankin Inlet Model in projecting a higher proportion of Inuit in the population of the capital of Nunavut, the combined weight of other comparisons makes the Iqaluit Model the preferred one.

Section 4. Costs

Subsection (i). Introduction

The relevant costs associated with the choices for the capital of Nunavut are in two broad categories:

* *one* time costs of the *infrastructure necessary* to establish the Nunavut Government; and,

* ongoing costs associated with operations of the Nunavut Government in the capital.

A comparison of these two categories of costs for the three alternate capital locations is important in assessing the three government design models.

Subsection (ii) . One Time Costs

The one time costs that have been considered for the purpose of this report are in relation to the following:

1. the new infrastructure necessary for the capital and recommended organizational structures;

2. the capital costs of the new infrastructure and the annual funding needed to operate and maintain such infrastructure;

3. the existing infrastructure that needs to be replaced or expanded earlier than necessary within a 20 year planning horizon due to the impact of establishing the Nunavut Government;

4. the incremental capital costs associated with the early expansion or replacement of existing infrastructure and the annual operation and maintenance costs associated with expansion; and,

5. the annual costs of leasing, operating and maintaining new staff housing and office space required to establish the Nunavut Government.

(a) Approach

A joint Technical Infrastructure Working Group (the Working Group) , co-chaired by Public Works and Services Canada and the GNWT Department of Public Works and Services, was established early on in the life of the NIC to address matters related to . infrastructure. The NIC requested that the Working Group undertake the work needed by the Commission with respect to infrastructure needs and costs associated with the capital being located in Iqaluit, Rankin Inlet or Cambridge Bay. As its part in this exercise, the GNWT has involved all of its program and service departments who share responsibility for planning and construction of territorial government infrastructure. The following cost calculations and comparisons flow from the detailed work supplied to the Commission by the GNWT.

(b) Net Increase in Positions in **Nunavut**

The infrastructure needs for each of the three capital location scenarios are based on the overall approach to government organizational design structure recommended by the Commission in its report, "Footprints in New Snow" . Net increases in Nunavut Government positions in relation to specific communities under the three government design models developed by

the Commission are as follows:

REGION/ Community	Scenario 1 Iqaluit	Scenario 2 Rankin Inlet	Scenario 3 Cambridge Bay
BAFFIN			
Iqaluit	99	2.5	2.5
Pangnirtung	80	41	41
Pond Inlet	77	53	37
Cape Dorset	67	0	8
Igloolik	93.5	61.5	66.5
Sub-total Baffin	416.5	158	155
KEEWATIN			
Rankin Inlet	33.5	216	-3
Arviat	55	76	27
Baker Lake	28	99	17
Sub-total Keewatin	116.5	391	41
KITIKMEOT			
Cambridge Bay	29	15	255
Coppermine	33	36	97
Gjoa Haven	5	0	52
Sub-total Kitikmeot	67	51	404
TOTAL	600	600	600

(c) Assumptions

The cost calculations and comparisons that follow are based on **a** number of assumptions adopted-by the NIC, namely:

1. the infrastructure needed to accommodate incremental growth due to establishment of the Nunavut Government is to be provided in accordance with GNWT capital works standards and criteria (this assumption flows from the principle that the scope and quality of programs and services of the Nunavut Government are to be the same as those of the GNWT) ;

2. a 20 year period, 1996/97 to 2015/16, is appropriate for the identification of incremental infrastructure required to establish the Government of Nunavut;

3. the average household size for each new Nunavut Government will be 3.45;

4. there will be a job multiplier of 0.4 (that is, 0.4 jobs in the federal government, municipal governments, and the private sector will be created for each new Nunavut Government position) ;

5. the average number of new Nunavut Government staff per new household will be 1.10;

6. 25% of new Nunavut Government employees will be hired from within the immediate community, 25% from other communities in Nunavut, and 50% from outside Nunavut;

7. calculations of community populations will follow from 1991 census results, with different annual population growth rates for each community (these range from 2.18 a year to 2.79 a year) ;

8. the housing mix for new Nunavut Government staff housing will be 5% single family housing, 50% multi-family/row housing, and 45% multi-family/apartment (low rise) ; and,

9. all staff housing will be leased by the Nunavut Government for its employees.

(d) Analysis and Conclusions

The following charts summarize the incremental capital and leasing costs associated with the establishment of the capital and the other governmental structures for the Commission's three design models, with their alternate capital locations. All costs are expressed in 1996 dollars and are adjusted to present value. It is important to emphasize that the costs shown in these charts cover incremental infrastructure needs for Nunavut over a 20 year planning period, 1996/97 to 2015/16.

NUNAVUT INCREMENTAL GROWTH IQALUIT as Capital Community: ALL	
INFRASTRUCTURE	**COSTS**
GN Office/Administrative	$52,139,000
GN Workstations	$11,618,000
GN Staff Housing	$39,726,000
GN Staff Housing Furniture	$ 7,875,000
Schools	$12,388,000
Cultural Facilities	$ 8,089,000
Health Facilities	$ 7,230,000
Justice (Courts, Corrections)	$ 4,831,000
Municipal Buildings /Roads	$ 2,420,000
Recreational Facilities	$ 782,000
Water Systems	$ 6,713,000
Sewage Systems	$ 2,281,000
Solid Waste Disposal	$ 421,000
Vehicles	$ 1,429,000
Land Development	$10,558,000
Air Transportation	$ 5,158,000
Marine Transportation	$ 0
Bulk Fuel Storage	$ 7,119,000
Power Supply	$ 7,233,000
TOTAL	$188,010,000

Notes:

1. All *costs* are in **$1996** in present value.
2. Costs for Legislative Assembly Building are included in GN Office/Administrative.
3. Vehicles include GN vehicles, POL vehicles, and municipal fire trucks and gravel trucks.
4. Land Development costs are for GN, federal/municipal and private sector staff housing needs, GN institutional needs and private residential needs. O&M costs for land development are not included.

NUNAVUT INCREMENTAL **GROWTH**
RANKIN INLET as Capital
Community: **ALL**

INFRASTRUCTURE	COSTS
GN Office/Administrative	$51,645,000
GN Workstations	$11,618,000
GN Staff Housing	$45,761,000
GN Staff Housing Furniture	$ 7,929,000
Schools	$ 8,839,000
Cultural Facilities	$ 8,050,000
Health Facilities	$13,136,000
Justice (Courts, Corrections)	$ 9,999,000
Municipal Buildings /Roads	$ 2,570,000
Recreational Facilities	$ 124, 000
Water Systems	$ 4,152,000
Sewage Systems	$ 2,462,000
Solid Waste Disposal	$ 600, 000
Vehicles	$ 1,449,000
Land Development	$12,743,000
Air Transportation	$ 5,780,000
Marine Transportation	$ 597, 000
Bulk Fuel Storage	$ 7,670,000
Power Supply	$ 8,642,000
TOTAL	$203,766,000

Notes :

1. All costs are in $1996 in present value.
2. Costs for Legislative Assembly Building are included in GN Office/Administrative.
3. Vehicles include GN vehicles, POL vehicles, and municipal fire trucks and gravel trucks.
4. Land Development costs are for GN, federal/municipal and private sector staff housing needs, GN institutional needs and private residential needs. O&M costs for land development are not included.

NUNAVUT INCREMENTAL GROWTH
CAMBRIDGE BAY as Capital
Community: ALL

INFRASTRUCTURE	COSTS
GN Office/Administrative	$52,839,000
GN Workstations	$11,673,000
GN Staff Housing	$37,841,000
GN Staff Housing Furniture	$ 8,049,000
Schools	$13,553,000
Cultural Facilities	$ 8,298,000
Health Facilities	$12,463,000
Justice (Courts, Corrections)	$10,923,000
Municipal Buildings /Roads	$ 4,169,000
Recreational Facilities	$ 81, 000
Water Systems	$ 2,984,000
Sewage Systems	$ 2,819,000
Solid Waste Disposal	$ 466,000
Vehicles	$ 1,441,000
Land Development	$ 7,108,000
Air Transportation	$ 7,730,000
Marine Transportation	$ 685, 000
Bulk Fuel Storage	$ 6,532,000
Power Supply	$ 6,352,000
TOTAL	$196,006,000

Notes :

1. All costs are in $1996 in present value.
2. Costs for Legislative Assembly Building are included in GN Office/Administrative.
3. Vehicles include GN vehicles, POL vehicles, and municipal fire trucks and gravel trucks.
4. Land Development costs are for GN, federal/municipal, and private sector staff housing needs, GN institutional needs and private residential needs. O&M costs for land development are not included.

These charts indicate that, with respect to overall costs for infrastructure, the costs of the Iqaluit Model are somewhat lower than is the case with the Rankin Inlet or Cambridge Bay Model. The primary reason for Iqaluit's lower cost position is that Iqaluit already has a regional hospital, court facility, and corrections facility.

Cost differences between Rankin Inlet and Cambridge Bay reflect two things: historically higher costs for leasing in Keewatin; and, lower capital water development costs for Cambridge Bay as the result of its water and sewage system being based on truck delivery and pick-up, not pipes. Apart from these two things, infrastructure costs in the Cambridge Bay and Rankin Inlet options are basically the same.

Subsection (iii) . Ongoing Operations And Capital Costs

Ongoing territorial government costs associated with operations in the capital of Nunavut are the second category of significant cost considerations in relation to the three design models.

(a) Comparisons

For the purpose of comparisons, the Commission identified the following cost indices for Iqaluit, Rankin Inlet, and Cambridge Bay:

1. Capital Costs:

1995 GNWT cost indices for capital projects

Iqaluit	1.25
Rankin Inlet	1.25
Cambridge Bay	1.30

2. Operations Costs

(a) Federal Isolated Post Living Allowance Differential (1993)

Iqaluit	155 - 160
Rankin Inlet	165 - 170
Cambridge Bay	185 - 190

(b) Family Weekly Food Cost (1991)
(source: GNWT Bureau of Statistics)

Iqaluit	$281
Rankin Inlet	$257
Cambridge Bay	$273

(c) GNWT Settlement Allowance (1995)

Iqaluit	$5,100
Rankin Inlet	$5,500
Cambridge Bay	$6,000

(d) Price Indices based on Living Cost Differentials
(Sources: GNWT 93-94 data &-Price Waterhouse 1995 study)

Iqaluit	1.23
Rankin Inlet	1.23
Cambridge Bay	1.36

(e) Electrical Rates - Government (1995)

Iqaluit	$0.3734/KWH
Rankin Inlet	$0.4570/KWH
Cambridge Bay	$0.4508/KWH

(f) Fuel Oil Rates - Government (1995)

Iqaluit	$0.3667/Litre
Rankin Inlet	$0.5700/Litre
Cambridge Bay	$0.7100/Litre

(b) Observations and Conclusions

Overall, the operating costs for the Nunavut Government would be approximately the same for Iqaluit and Rankin Inlet, while Cambridge Bay costs would be between 5% and 15% higher, depending on cost indices. The significance of cost differences for the alternate capital options must be considered in the context of the incremental growth in the location of the capital. The decentralized approach to governmental design advocated by the Commission provides a net increase in Nunavut Government positions in a total of 11 communities in Nunavut. The net increase in Nunavut Government positions for all of the three design models is much smaller than would be the case for a highly centralized organizational structure. Of the 600 new positions contemplated for Nunavut, the net increases in the number of positions to be located in the capital range from 99 in the Iqaluit Model to 255 in the Cambridge Bay Model. The net increases *in* Nunavut Government positions for the ten communities other than the capital range from 511 in the Iqaluit Model to 345 in the Cambridge Bay Model. The wide distribution of transferred positions substantially reduces the cost impacts on the capital " in each design model.

The costs of ongoing operations are approximately the same for Iqaluit and Rankin Inlet, and are about 10% higher on average for Cambridge Bay. A decentralized approach results in relatively modest growth in Nunavut Government positions in the capital with each design model and, therefore, the cost differences in ongoing operations in the capital would not be a significant factor in choosing between Iqaluit and Rankin Inlet. In relation to Cambridge Bay, the approximately 10% extra operating costs would be a factor, but it is important to remember that, in any event, the majority of new positions would be in communities other than the capital.

Section 5. **Infrastructure Considerations**

Subsection (i). Community Expansion **Factors**

(a) **Introduction**

The ability of a community physically to absorb up to 379 HQ FTEs (PYs in this section) and attendant spin off population growth is clearly of fundamental importance in selecting a capital location. Availability of land for new infrastructural development and housing; the capacity of existing government facilities to accommodate new Nunavut government employees; the capacity of community infrastructure and services to meet an influx of new employees and their families moving in --- these are important factors in determining the capital location.

At the request of the NIC in **1994,** DIAND Technical Services of Public Works and Government Services Canada undertook a technical analysis of the capacity of four communities, Cambridge Bay, Igloolik, Iqaluit and Rankin Inlet, to handle the establishment of a headquarters for the Nunavut Government. (Since Igloolik is no longer a likely location, analysis of its capabilities for expansion has not been included in this summary.) Findings were outlined in a draft report dated, October 3, 1994, entitled **"Technical Analysis of Population Influx Scenarios in Four Nunavut Communities".**

(b) **"Technical Analysis of Population Influx Scenarios in Four Nunavut Communities"**

As pointed out by its authors, the analysis contained in "Technical Analysis of Population Influx **Scenarios in Four Nunavut Communities"** (referred to in this section as the Report)* was both hypothetical and preliminary in nature, and subject to review and verification of data of current facilities by the GNWT . Given uncertainties surrounding the decentralized design of the government and the numbers of employees required for headquarters functions in any of the four communities, the Report limited itself to analysing the technical and physical facilities and characteristics of the communities.

The Report projected natural population growth and related community infrastructure needs until the year 1999. The Report further projected the infrastructure implications of scenarios involving the influx of various numbers of new people into communities in association with the creation of Nunavut (while recognizing the likelihood of local hire, the Report did not assume any) . For purposes of analysis, four things were factored into community profiles: total population increase; housing requirements; government infrastructure requirements; and,

community capability to absorb an influx of people. The Report did not attempt to forecast social and cultural impacts.

The overall conclusion of the Report was that none of the communities analyzed presented any abnormal obstacles to accommodating a Nunavut Government headquarters.

It should be pointed out that the Report made a number of assumptions, concerning such matters as average family size, that were different from assumptions used in the NIC report, "Footprints in New Snow" . This variation in assumptions does not detract from the reliability of the Report's overall conclusion as to the ability of all relevant communities to expand to accommodate influxes of up to 500 new workers; the 500 number is far in excess of the maximum of 255 additional workers for any single community contemplated in "Footprints in New Snow" .

(c) Population Analysis

A population analysis is essential in assessing overall demand for hard and soft community services and the demand for land. The Report determined that, in the calculation of total population impacts, the following factors must be included:

* normal growth;
* additional population growth created by federal government jobs;
* additional population growth created by private sector expansion to serve the new population levels;
* additional population growth to account for family members of federal and territorial public servants and of new private " sector employees; and,
* local hire.

(d) **Local Hire**

Local hire could reduce the need for housing and land and reduce the impact on community services. **In examining local hire, the Report reviewed the Coopers and Lybrand studies of 1991 and 1992 and a 1985 study by Reid Crowthers and Partners Ltd. Estimates of local hire varied from 5-50% due to the type of skills needed and available in any community as well as the success** of training programs. Due to uncertainty surrounding the issue, the Report deemed it best to assume a 100% influx.

(e) **Federal Job Creation**

The Report assumed a 0.1 multiplier effect for each new federal government employee as a result of Nunavut Government employment growth.

(f) **Private Sector Job Creation**

The Report assumed a 0.3 multiplier effect for job creation in the private sector **as a** result of government related employment growth.

(g) **Family** Increment

Population analysis in the Report extended to family members of employees of new Nunavut Government, federal government and private sector employees. The Report assumed that:

* 25% of new employees would be single and without dependents;
* 7s% of the new employees would have spouses, children, and possibly non-working relatives;
* the average Nunavut family would have 4.3 members, but this number could be higher for Inuit and lower for non-Inuit; and,
* the number of children aged 0-19 would be 2.1 per family.

(h) Housing/Lot Requirements

Housing is the largest land use in a community and a major determinant of infrastructure costs.

Based on total family formation projections, the Report estimated requirements for housing units. The Report examined various housing scenarios, ranging from a "worst case" scenario of one unit required for each influx employee, to 1.8 new jobs per household.

The Report defined housing needs in terms of single family detached dwellings (SFDs), attached duplexes and row dwellings (ADRs), and apartment units (APTs). The Report presented three scenarios for meeting housing requirements: SFD mixes of 30%, 50%, and 70%; ADR mixes of 15%, 20%, and 20%; and, APT mixes of 15%, 30% and 50%. The ratios used were a function of several factors: residential land availability; funding available for site development and dwelling construction; local and consumer preferences; and, federal and territorial government housing policies.

Subsection (ii) . Implications of Influx of Nunavut Government Jobs

The Report presented the implications of Nunavut Government jobs on the total influx of people. The implications of several scenarios were offered.

All the scenarios assumed certain constants: 10% federal employee growth; 30% private sector growth; no local hire; 75% of the employees married with families; and 4.3 members per family. The constants were factored against two population scenarios: 1.0 employee per family: and, 1.8 employees per family.

The Report examined a range of possible Nunavut Government influx scenarios for the three potential capital locations, based on influxes of one, 25, 50, 100, 250 and 500 new employees. The combined total Nunavut Government, federal government and private sector job influx growth was calculated to be a maximum of 715 jobs in the event of 500 Nunavut Government jobs. Total population influx ranged from 4.97 people to 2484.63 people (for 1.0 employee per family), and from 2.92 people through 1459.79 people (for 1.8 employee per family). These possible scenarios were then measured against a mix of housing requirements for SFDs, ADRs and APTs.

The minimum and maximum numbers of housing units per employee in the three different housing categories are set out below (for comparative purposes, the figure of 250 PYs is highlighted --- this figure is closest to the maximum number of 255 FTEs contemplated by the NIC for any community in any of its three design models) :

SFD requirements ranged from:

* a low of 1.00 to a high of 500.50 for 1.00 employee per family; and,

* a low of 0.67 to a high of 333.67 for 1.80 employees per family.

In the 250 employee influx range, SFD requirements ranged from:

* a low of 107.25 to a high of 250.25 for 1.00 employee per family; and,

* a low of 71.50 to a high of 166.83 for 1.80 employees per family.

ADR requirements ranged from:

* a low of 0.21 to a high of 143 for 1.00 employee per family; and,

* a low of 0.14 to a high of 95.33 for 1.80 employees per family.

In the 250 employee influx range, ADR **requirements ranged from:**

* **a low of 56.30 to a high of 71.5 for 1.00 employee per family; and,**

* **a low of 35.75 to a high of 47.67 for 1.80 employees per** family.

APT **requirements ranged from:**

* a low of **0.21** to a high of 357.50 for 1.00 employee per family; and,

* a low of 0.14 to a high of 238.33 for 1.80 employees per family.

In the 250 employee influx range, APT requirements **ranged from:**

* **a low of 53.63 to a high of 178.75 for 1.00** employee per family; and

* a low of 35.75 to a high of 119.17 for 1.80 employees per family.

Subsection (iii) . Nunavut Government Facility **Requirements**

The Report stated that the type of Nunavut Government functions associated with the influx of employees will affect the range of possible facilities required (office **space, special** purpose storage, museums, etc.) . This would be a factor in determining community expansion capability and community impact. The Report assumed that, initially, the focus for the Nunavut Government will be on its needs for conventional office space. Once more specific details are known about the government's operations, other needs could be further refined.

The Report assumed a job level breakdown based on "Information **on Nunavut and Baffin Region",** a report prepared by the GNWT Department of Education, Culture and Employment, in April, 1994, namely:

Senior/Executive Administration	6.5%
Mid-Level Administration	15. 1%
Officer	63.5%
Support	14.9%

(a) **Building Upgrade Assumptions**

Building categories in the Report came from a review of existing community services and analysis in the 1992 work of the Coopers and Lybrand Consulting Group.

Existing population based guidelines and **standards** (GNWT and federal government) were used to forecast thresholds for additional facilities. Site specific issues, such as travel distance for fire protection, were also considered.

(b) Office/Administrative **Facilities**

The Report assumed that small influxes of new staff into a community could be accommodated in a single office building, but when levels exceeded 100 PYs, office space requirements, combined with the scale of existing buildings, would dictate separate buildings, linked in a campus style. At the 250 PY level, individual building components might assume distinct functions.

(c) **Educational** Facilities

The Report relied on current GNWT guidelines for schools: preferred operating capacity should be at 85%; all new facility space should open at a 70% utilization rate; and, schools should not reach 100% utilization in under five years. Standard classrooms should house 22 students. Schools in the relevant communities had recently been upgraded. While 100% capacity would be required, the preferred operating factor to use was 85%. The Report took into account GNWT policy favouring use of private

homes for boarding students; where new construction would be required, student hostels/residences could be converted later on into residential units. Adult learning centres could be upgraded through the addition of classrooms and expanded facilities.

(d) Health Facilities

All communities have a health station, a health centre, or regional health centre, depending on size. Community size determines facility size. Medical libraries and research facilities could be incorporated into health facilities. Recently, Rankin Inlet has proposed construction of a Regional Multi-Level Health Care Facility and Iqaluit has proposed construction of a Regional Hospital. Both proposals are under review by the GNWT.

(e) Community/Recreation Facilities

The GNWT uses population based guidelines to determine thresholds for construction and upgradings of community halls, gymnasiums, arenas and other recreational activities. Facilities are based on community size and layout. Some of the recreational needs of young people could be served through the use of community facilities such as schools, and wider recreational needs could be taken into account when developing educational facilities.

(f) Municipal Facilities

The GNWT has population based guidelines to determine thresholds for construction and upgrading of fire halls, municipal offices, maintenance garages and parking garages. Such facilities are based on community size and 1 ayout. The Report states that municipal facilities should be reviewed to determine* the need for expansion.

(g) **Housing**

A major limiting factor affecting housing is the availability of land; therefore, verification of the number of lots available is a first consideration. Design criteria should be based on CMHC guidelines for social and cooperative housing under the Maximum Unit Price Program.

(h) Social Semites Buildings

The Report addressed facilities directly related to the Nunavut Government in its initial development phase. Day care facilities were included due to their potential impacts on education and training. Population influxes of more than 250 PYs require day care needs to be analyzed in conjunction with educational and recreational facilities.

(i) **Commercial**

The Report did not review commercial development. Potential commercial development scenarios would be reviewed after a review of completed community technical profiles.

Subsection (iv) . **Community Expansion Capability**

The Report examined each community's capability to respond to population increases associated with projected Nunavut Government requirements. Specifically, the Report examined:

* land availability;
* existing capacities and expansion capability of community infrastructure and transportation systems;
* space availability for Nunavut Government functions; and,
* existing capability of, and further requirements for, community services.

The community data used in the Report were derived from the "Community Technical Profiles" prepared by the Nunavut Technical Working Group, September, 1994. Analysis of community expansion capability was undertaken after normal community growth had been taken into account.

(a) Cambridge **Bay**

The Report assumed the population of Cambridge Bay to be 1210 in 1994 and, with natural population growth, to be 1366 by 1999. At a maximum number of 500 Nunavut Government employees with 1.8 employees per household, the community would have a population of 2826 in 1999. At a maximum number of 250 Nunavut Government employees with 1.8 employees per household, the community would have a population of 2096 in 1999. The NIC Cambridge Bay Model contemplates the largest number of FTEs in any single Nunavut community in any model considered by the NIC: an increase of 255 FTEs in Cambridge Bay.

Land Availability (Cambridge Bay)

Cambridge Bay has drafted a land use plan and zoning by-law. The plan would accommodate all influx levels. The Report found no major development obstacles or cost anomalies. Granular supply **was** estimated at 20 years.

Municipal Services (Cambridge Bay)

The Report found that except for the need for additional water and sewage trucks (four for a 500 employee influx) , there would be no problems with the expansion of water supply and sewage disposal. The water supply would have to be increased for population increases above 1500.

Energy (Cambridge Bay)

The Report found that, taking into account natural population growth, there would be a surplus in energy capacity for 1999. The Report estimated that Cambridge Bay could handle a population influx up to the 100 PY range. The NWTPC tank farm could absorb a 100% increase in capacity; it will be expanded to meet normal growth between 1995-99.

Communications (Cambridge Bay)

All Nunavut communities are served by the CBC. Telecommunications services are provided by NorthwesTel, with Cambridge Bay being served out of Yellowknife, and Iqaluit and Rankin Inlet being served out of Iqaluit. Iqaluit has state of the art equipment and telephone service. The Report stated that services such as video-conferencing and distance learning would be feasible with appropriate equipment.

Air Transportation (Cambridge Bay)

Cambridge Bay has a 1524 by 46 metre gravel airstrip that is technically adequate for all transportation needs scenarios. With a higher population it might be more cost effective to pave the strip and extend it to 1830 metres. The Report stated that the air terminal building and landing instruments should be upgraded as increased traffic warrants. The Report concluded that there are no major obstacles to expansion.

Marine Transportation (Cambridge Bay)

Cambridge Bay receives one NTCL barge visit a year. The Coast Guard wharf (43 by 9 metres) and marshaling areas are adequate for minor increases in traffic, but navigation aids and wharf and marshaling areas would have to be upgraded for significant increases in traffic. Storage facilities and pollution response equipment would be required. The Report concluded that there are no major obstacles to expansion.

Roads (Cambridge Bay)

The Report stated that an all weather road to Cambridge Bay *(or* any of the communities in Nunavut) from the South would not be feasible due to excessive costs.

Facilities (Cambridge Bay)

The Report found that existing office and housing space could not cover anything beyond normal community growth requirements . Municipal buildings would have to be upgraded after a 100 PY threshold was reached.

The Report concluded that there are no foreseeable obstacles to upgrading or constructing additional facilities to accommodate influxes of up to 500 Nunavut Government employees.

Community Services (Cambridge Bay)

Community social and education services are adequate for normal community growth with a limited spare capacity beyond current anticipated growth. Existing health and recreation capacity may be able to accommodate an influx of 25 Nunavut Government PYs. The Report concluded that there are no foreseeable obstacles to upgrading existing facilities to accommodate up to 500 Nunavut Government employees.

(b) **Iqaluit**

The Report assumed the population of Iqaluit to be 3844 in 1994 and, with natural population growth, to be 4330 by 1999. At a maximum number of 500 Nunavut Government employees with 1.8 employees per household, the community would have a population of 5790 in 1999.

Land Availability (Iqaluit)

A 1987 community plan provides for large scale expansion to accommodate normal community growth and an influx of people should Iqaluit become the capital. The Report found that Iqaluit should be able to handle a large population influx in the Apex Road subdivision, with other expansion areas available for commercial, community and institutional needs. Industrial development could be accommodated in the vicinity of the airport.

Municipal Services (Iqaluit)

The Report found a current need to upgrade the central water supply, treatment and distribution facilities, including water storage. There is also a need to upgrade sewage pumping stations and sewage treatment capacity. Provided these facilities are built, as identified in the five year capital plan, they could accommodate all influx scenarios. The Report concluded that there are no obstacles to upgrade these facilities.

The Report stated that additional compactor garbage trucks would be required for expansion (four trucks for 500 Nunavut Government employees). The Report found the two current solid waste disposal plants to be inadequate.

Energy (Iqaluit)

The Report found that there would be a current surplus in energy capacity which could be expected to meet lower population influx levels in 1999. Replacement of an older engine, as identified in the capital plan, could be sized to meet all new population influx levels. Expansion or addition of powerhouse space would not be needed for a population influx. The tank farm has space and a pad for a new fuel tank.

Communications (Iqaluit)

All Nunavut communities are served by the CBC. Telecommunications services are provided by NorthwesTel, with Cambridge Bay being served out of Yellowknife, and Iqaluit and Rankin Inlet being seined out of Iqaluit. Iqaluit has state of the art equipment and telephone service. The Report stated that services such as video-conferencing and distance learning would be feasible with appropriate equipment.

Air Transportation (Iqaluit)

Iqaluit has a paved 2743 by 60 metre airstrip, with facilities adequate for all scenarios.

Marine Transportation (Iqaluit)

Iqaluit *receives* five sea lift visits a year. There is a dredged channel, cleared beach, wood wharf, and marshaling area adequate for current sea lift. Significant increases in shipping would benefit from improvements to the channel and anchoring facilities and would require storage facility for pollution response equipment. The Report concluded that there are no major obstacles to expansion.

Roads (Iqaluit)

The Report stated that an all weather road to Iqaluit (or any of the communities in Nunavut) from the South would not be feasible due to excessive costs.

Facilities (Iqaluit)

The Report found that, due to its size and its significant GNWT infrastructure, Iqaluit could absorb up to 25 additional PYs without any significant upgrading of existing office/administrative space. Municipal buildings would not have to be upgraded until the 100 PY threshold was reached. Additional housing would be required to accommodate influxes of new Nunavut Government employees. Land availability is not a problem for the construction of additional facilities, although current development patterns might entail special approaches to

the planning and design of incremental facilities.

Community Services (Iqaluit)

The Report found community social and health services to be adequate for normal community growth. Education and recreational facilities could accommodate up to 50 Nunavut Government PYs without significant upgrading. The Report concluded that there are no foreseeable obstacles to the construction of additional capacity to existing community services to accommodate up to 500 new Nunavut Government employees.

(c) Rankin Inlet

The Report assumed the population of Rankin Inlet to be 1863 in 1994 and, with natural population growth, to be 2124 by 1999. At a maximum number of 500 Nunavut Government employees with **1.8** employees per household, the community would have a population of 3583 in 1999.

Land Availability (Rankin Inlet)

The Report found that a community plan and zoning bylaws have been drafted for Rankin Inlet which allocate sufficient land for all likely purposes, although some land remains to be serviced. Granular supply is projected for 20 years at the new Itivia site.

Municipal Semites (Rankin Inlet)

The Report found expansion of the central water supply and sewage disposal to be **ongoing in accordance with the five year . capital plan. Once this work is complete, there will be adequate capacity for all expansion scenarios. The Report concluded that there are no obstacles to expansion** of facilities should expansion be required.

The Report stated that additional compactor garbage trucks would be required for expansion (four trucks for 500 Nunavut Government employees) . If the upgrade in the five year capital plan for solid wastes is completed, there will be adequate capacity for all Nunavut Government scenarios.

Energy (Rankin Inlet)

The Report found that current energy capacity is adequate and has some surplus capacity; with normal capital planning, it could meet normal population growth requirements. An influx of Nunavut Government employees would require new energy capacity. Required upgrading for tank farms would be straightforward.

Communications (Rankin Inlet)

All Nunavut communities are served by the CBC. Telecommunications services are provided by NorthwesTel, with Cambridge Bay being served out of Yellowknife, and Iqaluit and Rankin Inlet being served out of Iqaluit. Iqaluit has state of the art equipment and telephone service. The Report stated that services such as video-conferencing and distance learning would be feasible with appropriate equipment.

Air Transportation (Rankin Inlet)

Rankin Inlet has a paved 1829 by 46 metre airstrip and facilities adequate for all scenarios.

Marine Transportation (Rankin Inlet)

Rankin Inlet receives three NTCL barge and two ship sea lift visits a year. Upgrading of resupply facilities (wharf and terminal) began in 1994 and is due to be completed in 1998; this upgrading will be adequate to meet all growth scenarios. The Report concluded that there are no major obstacles to expansion.

Roads (Rankin Inlet)

The Report stated that an all weather road to Rankin Inlet (or any of the communities in Nunavut) from the South would not be feasible due to excessive costs.

Facilities (Rankin Inlet)

The Report found that existing office/administration and housing space are adequate to accommodate normal community growth with enough capacity to serve less than 25 additional Nunavut Government PYs. Municipal buildings would not have to be upgraded until the 50 PY threshold is reached. The Report concluded that there are no foreseeable obstacles to the construction of additional community facilities to meet influx levels up to 500 new Nunavut Government employees.

Community Services (Rankin Inlet)

The Report found community social, health and recreational facilities to be adequate for normal community growth with spare capacity adequate to meet influx levels of approximately 25 new Nunavut Government PYs. The newly completed training centre could accommodate an influx of up to 50 new Nunavut Government PYS. The Report concluded that there are no foreseeable obstacles to the construction of additional capacity to accommodate up to 500 new Nunavut Government employees.

Subsection (v) . Discussion

The Technical Analysis Report concluded that Cambridge Bay, Iqaluit and Rankin Inlet all have the potential to absorb foreseeable population influxes. Existing GNWT plans can accommodate normal community growth, but may have to be revised to accommodate significant additional population growth. Adjustments in capital plans are required to allow for land, facility and infrastructure upgrades to accommodate population influxes. Sufficient lead times are required for planning and development of infrastructure. There appear to be no significant physical or environmental impacts associated with population influxes but, in some communities, a high influx level could more than double the population; this might be of some concern with respect to social, cultural, and economic impacts.

(a) **Land Availability**

The Report concluded that there is adequate land available in all the communities studied to accommodate land uses associated with influx levels. Except for low influx levels that can be accommodated by existing surpluses of serviced lands to 1999, expansion will require normal subdivision planning and surveying as well as normal grading and drainage. The Report did not note any extraordinary site limitations or land use conflicts.

Community planning and approvals will have to be undertaken. The Cambridge Bay and Rankin Inlet community plans identify new development areas for all land uses. In the Rankin Inlet plan, population influx levels have been specifically addressed and the Iqaluit plan is expected to do the same. The Iqaluit plan prepared in 1987 provides for population growth in keeping with. the levels set out in the Report.

(b) Municipal Services

In Cambridge Bay, additional water and sewage trucks would be required. In Iqaluit and Rankin Inlet, additional water and sewage mains would be required.

The analysis provided in the Report assumed that the proposed GNWT five year capital plan will be fully implemented on schedule. The influx of people beyond normal population growth would necessitate expansion sooner than currently expected.

(c) **Energy**

All three communities have some surplus in current energy generation capacity and fuel storage capacity which may be adequate to accommodate low population influxes. No significant obstacles exist with respect to increasing capacity.

(d) Access

Air access for all three communities is currently adequate for all influx scenarios. The Cambridge Bay airstrip and terminal buildings and facilities might have to be upgraded for higher population levels.

Marine facilities at Cambridge Bay should be upgraded to accommodate higher population influx levels. Permanent docking facilities at Iqaluit are assumed to be uneconomical due to the high level of tides. Facilities contemplated in the five year plans of both Rankin Inlet and Iqaluit should be adequate for increased population levels. Additional storage space and pollution response equipment will be required for Cambridge Bay and Iqaluit.

The Report concluded that there are no major obstacles to the expansion of marine and air facilities and that an all weather road to any of the communities from the South is not economically feasible.

The Report concluded that none of the relevant communities has extra office and housing accommodation capacity beyond coping with normal population growth and up to 25 Nunavut Government PYS . Substantial construction of additional buildings will therefore be required.

The Report concluded that all the communities may be able to absorb influxes from under 50 up to 100 PYs before significant upgrading to municipal buildings is required.

The Report also concluded that any spare facility capacity transferred from the GNWT to the Nunavut Government will raise construction thresholds accordingly, enabling a better delineation of the differences between the communities.

(e) Community Services

The Report concluded that some existing community buildings have additional capacity beyond normal growth requirements to accommodate fewer than 25 Nunavut Government PYs. These exceptional cases (the Rankin Inlet training centre and Arctic College in Iqaluit) may raise spare capacity thresholds upward to between 25 and 50 Nunavut Government PYs. The Report also concluded that any spare capacity transferred from the GNWT to the Nunavut Government would raise construction thresholds.

Subsection (vi) . **Conclusions**

All the communities could physically absorb small increments of people in addition to their natural growth rates, but larger population influxes would require some expansion. Generally, there are no significant obstacles to community expansion in any of the communities.

The Report contained several charts summarizing its findings (these charts are reproduced in Appendix 3 of this report). The charts show two things: the capability of communities in 1999 to accommodate PYs in relation to natural population growth by 1999; and, the capability of communities to expand to accommodate population increases beyond natural population growth.

With respect to land availability, the charts indicate that all three communities could accommodate, more or less equally, small increases in population growth in the areas of housing, office and institutional space, and commercial and industrial use. All three communities could accommodate expansion to meet the needs of any of the population influx scenarios.

With respect to infrastructural development associated with water, sewage, solid waste disposal, roads, energy and communications, the charts indicate that all three communities could absorb, more or less equally, small increases in population without expansion. All three could accommodate expansion for any of the scenarios. Cambridge Bay would be a little more hard pressed to accommodate expansion in the areas of water, sewage and solid disposal than the other communities. In the field of communications, Cambridge Bay and Rankin Inlet are less developed than Iqaluit.

With respect to air transportation, the charts indicate that all three communities could equally absorb increases of population for any of the scenarios and are equally capable of expansion.

With respect to marine services, the charts indicate that Iqaluit and Rankin Inlet could equally absorb large influxes of population, and that both are equally capable of expansion. Cambridge Bay, although capable of expansion, would be a little more hard pressed to absorb significant increases in population without it.

With respect to facilities associated with office/administration, municipal and commercial buildings, and housing, the charts indicate all the communities are more or less equally capable of absorbing small increases in population without expansion, with Cambridge Bay being more slightly more capable in the area of municipal buildings. All three

communities are equally capable of expansion to meet any of the likely scenarios.

With respect to community services such as social services, education, and health and recreation, the charts indicate that all three communities could absorb, more or less equally, small increases in population, with Cambridge Bay being slightly more capable of doing so in the areas of health and recreation. All three communities are equally capable of expansion to meet any of the scenarios.

Of the three communities, only Cambridge Bay would require its airstrip to be paved, its terminal and landing instruments to be improved, and its marine wharf and marshaling area to be upgraded, for significant increases in traffic associated with larger population influxes. Storage facilities and pollution response equipment would also be required in Cambridge Bay. Shipping associated with Iqaluit would benefit from improved channel and anchoring facilities, storage facilities and pollution response equipment. There are no obstacles to installation of necessary infrastructure in the communities.

Although it is physically possible to connect Rankin Inlet to a land transportation network South of 60, an all weather road connecting it or any of the other communities would be cost prohibitive.

Iqaluit has the most up to date communications and telephone service of the three communities. Cambridge Bay is the only one of the three communities serviced by NorthwesTel out of Yellowknife and not serviced by the CBC out of Iqaluit.

In Cambridge Bay, surplus energy capacity could accommodate 100 or more new PYs. In Iqaluit, the current energy surplus could accommodate low population influxes, but all influx scenarios could be met if the capital plan being contemplated is implemented. In Rankin Inlet, energy capacity would have to be upgraded to accommodate more than natural population growth.

In Cambridge Bay, except for the need for additional water and sewage trucks, there would be no problems in the expansion of the water supply and sewage disposal. The water supply would have to be increased for population increases above 1500. In Iqaluit, water supply, treatment and distribution plans contemplated in the five year capital could accommodate all influx scenarios, but the solid waste disposal plans would prove inadequate. In Rankin Inlet, the water and sewage system could accommodate all population influx scenarios if the five year capital plan were implemented. Iqaluit and Rankin Inlet would both need additional compactor garbage trucks.

Municipal buildings in Cambridge Bay and Iqaluit would both have to be upgraded for more than 100 new Nunavut Government PYs, while upgradings would be required in Rankin Inlet for more than 50 new PYs.

Community social and education services in Cambridge Bay would require expansion for population influx levels greater than 25 new PYs. Community social and health services in Iqaluit would require expansion for population influx levels greater than 50 new PYs. Community social, health and recreational services in Rankin Inlet would require upgrading for population influx levels greater than 25 new PYs, except for the training centre, which could absorb up to 50 new PYs.

Cambridge Bay, through natural growth, is forecast to have 1366 people in 1999. At a maximum of number of 250 Nunavut Government employees with 1.8 employees per household, the community would have a population of 2096 in 1999. This would mean an 153.4% increase in the overall population. (The NIC Cambridge Bay Model proposes a 255 Nunavut Government FTE (PY) increase in Cambridge Bay.)

Iqaluit, through natural growth, is forecast to have 4330 people in 1999. At a maximum number of 250 Nunavut Government employees with 1.8 persons per household, the community would have a population of 5060 in 1999. This would mean a 16.4% increase in the overall population. (The NIC Iqaluit Model proposes a 99 Nunavut Government FTE (PY) increase in Iqaluit.)

Rankin Inlet, through natural growth, is forecast to have 2124 people by 1999. At a maximum number of 250 Nunavut Government employees with 1.8 persons per household, the community would have a population of 2854 in 1999. This would mean a 74.4% increase in the overall population in 1999. (The NIC Rankin Inlet Model proposes a 216 Nunavut Government FTE (PY) increase in Rankin Inlet.)

In summary, land is available in all three communities for expansion. Cambridge Bay would be a little more hard pressed to accommodate expansion in the areas of water, sewage and solid waste disposal. Air transportation facilities in all three communities could absorb increases in population and could be expanded, but the facilities in Cambridge Bay might have to be upgraded. The marine transportation facilities in all three communities could accommodate expansion, but the facilities in Cambridge Bay would have to be upgraded. All three communities could accommodate small influxes of population in relation to municipal buildings and all three communities could accommodate expansion. All three communities could accommodate small population influxes in the areas of social services, health, education and recreation and all three communities could accommodate expansion. All three communities would require new

housing. A 250 PY increase, at 1.8 employees per household, would mean an population increase of 153.4% in Cambridge Bay, a 16.4% increase in Iqaluit, and a 74.4% increase in Rankin Inlet.

On the basis of the above facts and analysis, Commissioners have concluded that, with respect both to existing infrastructure and to capability of expansion of infrastructure, all three candidate communities for capital are equally well positioned; there are no compelling reasons to favour one community over the others in this respect.

Section 6. Geographic Position

Subsection (i) . Introduction

The NIC'S discussion paper of June, 1994, entitled "Discussion Paper Concerning the Development of Principles to Govern the Design and Operation of the Nunavut Government", identified two factors concerning the geographic location of the capital and its position in relation to other regional centres in Nunavut and to major centres outside Nunavut:

* existing and potential transportation links within Nunavut and outside Nunavut; and,

* position/accessibility within the overall circumpolar world.

The location of the capital and its position is important for reasons of transportation and communication.

The discussion that is offered in the following subsection as to the comparative geographic advantages and disadvantages of the three candidate communities for capital draws, to some extent, on information supplied in the report, entitled "Technical Analysis of Population Influx Scenarios in Four Nunavut Communities", prepared by DIAND Technical Services, Public Works and Government Services Canada, dated October 3, 1994.

Subsection (ii) . Comparisons

(a) Transportation: Overview

Transportation linkages within Nunavut, and between Nunavut and places outside Nunavut, both in Canada and abroad, are of some importance in the selection of a capital location. Ease of access with other major centres is important to the smooth and efficient running of the Nunavut Government. Air and marine transportation are the only practical means of transporting people and freight over large distances to a widely dispersed population living in a difficult terrain and a cold climate.

Cambridge Bay, Iqaluit and Rankin Inlet all have facilities adequate to accommodate air traffic associated with large population influxes (the facilities in Cambridge Bay might have to be upgraded) . Although air routings currently link the regional centres within Nunavut in an established pattern, routings can be easily changed, provided that appropriate servicing and landing facilities are available. All three airports have the capability to expand to meet demands.

All three communities have marine service facilities that are capable of handling population increases, although facilities in Cambridge Bay may require upgrading.

(b) Air Transportation

In relation to air transportation networks within Nunavut, Rankin Inlet occupies the most central location of the three candidate communities for capital. It is 730 miles from Rankin Inlet to Iqaluit, 707 miles to Yellowknife, and approximately 560 miles to Cambridge Bay. The distance from Cambridge Bay to Yellowknife is 529 miles and to Iqaluit approximately 1040 miles. Employing 1991 census data, Rankin Inlet, if chosen to be the capital, would be a central air hub serving a population of approximately 22,000 people within Nunavut. On a regional basis, Rankin Inlet would serve approximately 5,800 people in the Keewatin, Cambridge Bay would serve approximately 4,000 people in the Kitikmeot, and Iqaluit would serve approximately 11,000 people in the Baffin Region.

In relation to connections to major centres outside Nunavut, Cambridge Bay to Edmonton is 1154 miles (via Yellowknife) , Rankin Inlet to Winnipeg is 914 miles, and Iqaluit to Ottawa is 1304 miles and to Montreal 1272 miles. Using modern jet aircraft, there is only about one hour's difference in flying time between any of the three communities and their southern counterparts.

In relation to Inuit populations outside Nunavut but within Canada, Cambridge Bay is closest to the Inuvialuit Settlement Region in the Beaufort Sea Region, and Iqaluit is closest to the

Nunavik Inuit in Northern Quebec and the Labrador Inuit in Newfoundland and Labrador. Iqaluit's location within the Baffin Region (pop. 11,000), and its proximity to Northern Quebec (pop. 7,800) and Northern Labrador (pop. 4,500), make it centrally located to some 23,300 people. Iqaluit is connected by regularly scheduled air service to the regional centre of Koudjouac in Northern Quebec, a distance of 383 miles. Cambridge Bay's location in the Kitikmeot (pop. 4,000), and its proximity to Inuvialuit (pop. 5,000), make it centrally located to connect some 9,000 people.

In relation to locations within the circumpolar world, Cambridge Bay is closest to Alaska (Inuit pop. 44,000), and Iqaluit is closest to Greenland (pop. 55,000, of which 47,000 are Inuit). There is no regularly scheduled air service between Cambridge Bay and Alaska. There is regularly scheduled seasonal air service between Iqaluit and Nuuk, Greenland, and regularly scheduled annual air charters between Grise Fiord and Quanaq, Greenland.

Air transportation services and airport closures can be affected by several factors, including, weather, runway conditions, and air traffic control technology. Airport closures must also be assessed from the standpoint of reasons for closure. For instance, an airport may be technically inoperable because of snow on the runway which may not be cleared until there are scheduled flights. According to Transport Canada neither Rankin Inlet nor Iqaluit in 1994 was closed in a way that affected scheduled flight service. The airport in Cambridge Bay was closed for three or four days in 1994 resulting in only one or two scheduled flight cancellations. Other flights were rescheduled for the following day.

(c) Marine Transportation

Marine services are affected by sea, ice and weather conditions and the off loading facilities and port facilities at cargo destinations. The **DIAND Technical Analysis Report indicated that all three communities are capable of absorbing increased marine traffic and are also capable of expansion. Of the three communities, only Cambridge Bay would require upgrading of its wharf and marshaling area** facilities. Iqaluit and Cambridge Bay would require an upgrade of storage facilities and pollution response equipment. Rankin Inlet is the closest to a major port, Churchill, Manitoba, approximately 300 miles south. Cambridge Bay is approximately 800 miles from a major port in Tuktoyatuk.

Regarding connecting ship transportation within Nunavut, only Iqaluit and Rankin Inlet could maintain regular seasonal connections. Connections with Cambridge Bay from either community would require transit of the Northwest Passage, an

unreasonable proposition for regularly scheduled marine service. Both Rankin Inlet and Iqaluit could maintain seasonal marine links with Northern Quebec, Northern Labrador and Greenland. Shipping eastward from Cambridge Bay to Greenland and eastern Canada would require transiting the Northwest Passage, as would shipping westward to the Beaufort Sea and Alaska from Iqaluit and Rankin Inlet. Ships from Cambridge Bay could more readily reach the Beaufort Sea and Alaska.

(d) Land Transportation

Cambridge Bay is approximately 750 miles from a connecting road, the Dempster Highway, which links Inuvik with Dawson City in the Yukon. It is closer to seasonal winter roads that connect the city of Yellowknife with mining operations in the western territory. Rankin Inlet is the closest community to a rail head at Churchill, Manitoba, 300 miles south. A 300 mile rail line from Churchill to Thompson, Manitoba, connects with roads to southern Canada. Rankin Inlet is connected to Arviat, 150 miles north of Churchill, Manitoba, by bombadier service in the winter.

(e) Communications

Telephone and broadcasting of radio and television signals are important links between the communities and the outside world. The communities of Iqaluit and Rankin Inlet receive telephone service from NorthwesTel out of Iqaluit, and Cambridge Bay out of Yellowknife. The CBC services all communities, with Rankin Inlet receiving CBC broadcast out of Iqaluit and Cambridge Bay receiving service out of Inuvik. Iqaluit has the most up to date telephone system in Nunavut. Nunatsiaq News, the only large weekly northern newspaper produced in both Inuktitut (syllabics) and English, is read mainly in the eastern portion of Nunavut.

The "Footprints in New Snow" report recommended that the Nunavut Government be a decentralized government. The NIC's June, 1994, Discussion Paper recommended that "full advantage should be taken of new and emerging technologies in order to facilitate the coherent operation of government departments and agencies that are distributed across the various regions and communities." Establishing a modern telecommunications infrastructure will allow for a more efficient and cost effective Nunavut Government. By processing information electronically, communication costs become transmission time-related, rather than distance-related. Accordingly, apart from initial infrastructural costs and perhaps servicing costs, there is no appreciable advantage or disadvantage to locating the capital in any particular region.

Subsection (iii). Conclusions

In relation to air transportation, there is little difference in flying time from the three communities to their southern Canadian supply points. No scheduled flights had to be cancelled in either Iqaluit or Rankin Inlet in 1994, and only one or two had to be cancelled in Cambridge Bay.

Viewing Nunavut as a whole, Rankin Inlet is the most centrally located of the three communities. Iqaluit is 730 miles to the east of Rankin Inlet, and Cambridge Bay is 560 miles to the northwest of Rankin Inlet. Geography notwithstanding, none of the three communities is more centrally located than the others in relation to providing services to all of Nunavut. Although Rankin Inlet could just as easily service the east Kitikmeot communities as does Cambridge Bay, it would be hard pressed to service the High Arctic communities of the Baffin. Likewise, Iqaluit would be hard pressed to service the Kitikmeot Region, and Cambridge Bay the Baffin Region.

On a regional basis, Iqaluit is in the best position to service the 11,000 people of the Baffin Region, approximately half the population of Nunavut. Rankin Inlet is best located to service the 5,600 people of the Keewatin, who make up some 30% of the population of Nunavut, and Cambridge Bay is best located to service the 4,000 people of the Kitikmeot, who make up some 20% of the population of Nunavut.

Looking at Nunavut's connections within Canada, Iqaluit is closest to the Inuit populations of Northern Quebec and Northern Labrador; together, these populations amount to 12,300. Cambridge Bay is furthest to the west, placing it closest to 5,000 Inuvialuit. Iqaluit is closest to Ottawa, at a distance of 1304 miles, and Cambridge Bay is closest to Yellowknife, at a distance of 527 miles.

Looking at Nunavut's connections outside Canada, Cambridge Bay is closest to 44,000 Alaskan Inuit. Iqaluit is closest to 55,000 Greenlanders, of whom 47,500 are Inuit.

None of the three communities has road access to the southern Canada, and none will likely have such access in the foreseeable future.

With respect to ship transportation, only Iqaluit and Rankin Inlet could have seasonal marine transportation links to Northern Quebec, Northern Labrador and Greenland. Rankin Inlet is closest to the port of Churchill, Manitoba. Ship transportation eastward from Cambridge Bay would require transiting the Northwest Passage, as would ship transportation westward from Iqaluit and Rankin Inlet. Ships from Cambridge Bay could more readily reach the Beaufort Sea and Alaska.

Regarding telecommunications, apart frOm initial infrastructural costs and perhaps servicing costs, there would be no appreciable advantage or disadvantage in locating the capital in any particular region.

It is possible to summarize this section of the report in the following way:

* if centrality of location within Nunavut is a key consideration, then Rankin Inlet would make the best choice for capital;

• if proximity to the largest number of Inuit in Canada (as well as in Nunavut) is a central consideration, then Iqaluit would make the best choice for capital;

* if weather, as it relates to air transportation, is a central issue, then all communities are similarly positioned;

* the probabilities of road access to the South, or of seasonal marine transportation linkages between regional centres, are too slim to make such considerations significant; and,

• regarding telecommunications, apart from the initial infrastructural costs and perhaps servicing costs, there is no appreciable advantage or disadvantage in locating the capital in any particular region.

Based on these assessments, the NIC comes to the following conclusions:

1. no single consideration as to geographic position is of such primary significance as to warrant favouring one community . as capital strictly on that basis; and,

2. no single community emerges as a clear favourite as to geographic position when a variety of considerations are examined.

Accordingly, the NIC concludes that considerations of geographic position do not equip any candidate community for capital with a preferred standing over the other two possibilities.

Section 7. Regional Support

The NIC, in its June, 1994, discussion paper entitled, "Discussion Paper Concerning the Development of Principles to Govern the Design and Operation of the Nunavut Government", identified the extent of regional support as an element of consideration in the determination of the capital location.

The location of the capital of Nunavut has long been a hot topic of discussion, as evidenced by such things as the creation of capital support committees in Iqaluit and Rankin Inlet. For its part, the NIC has received more correspondence on the topic than any other issue: approximately 25 letters on the subject. In addition, the choice of capital was an important topic of discussion in each of the 26 communities in Nunavut visited by Commissioners in December, 1994, and January 1995. During those community visits, nine potential locations for capital were suggested: Arviat; Baker Lake; Cambridge Bay; Igloolik; Iqaluit; Nanisivik; Pond Inlet; Rankin Inlet; and, Taloyoak (of these nine communities, Baker Lake, Cambridge Bay, Gjoa Haven, Igloolik, Iqaluit and Rankin Inlet expressed a formal interest in being considered for choice as capital) .

The range of views expressed to the NIC as to why the capital should or should not be placed in any particular location has been wide and divergent (for a summary of what was said about the choice of capital during the NIC community tours, see Appendix 9 of report, "Footprints in New Snow") . Most people have said that the capital should be located in one of the three main regional centres, citing population, infrastructure, weather and transportation as the main factors for doing so. People supporting communities other than the three main candidates have generally proposed their own communities or communities in their regions. People that did not want their home communities to become the capital, because of perceptions of negative impacts, often identified alternate communities within their own regions as possible capital locations.

Centrality of location was identified as an important consideration by people in the Keewatin who supported the capital being located in their region. It was also mentioned by some people in the Kitikmeot who did not want the capital to be too far away, and who feared that the smaller Kitikmeot population would not count for much against the larger regional populations of the Baffin and the Keewatin Regions.

In "Footprints in New Snow", the NIC recommended that the capital location be limited to Cambridge Bay, Iqaluit and Rankin Inlet . The NIC further recommended that no plebiscite be conducted on the choice of capital because of the long-term

divisiveness that could be engendered by both the process and results.

Although "Footprints in New Snow" did not delve into the mechanics of a plebiscite, it should be pointed out that many difficult questions would need to be satisfactorily dealt with in order to stage a plebiscite, questions such as:

* **who** would organize the plebiscite?

* **who** would pay for the plebiscite?

* who would decide the plebiscite question or questions?

• would the plebiscite involve

  each voter naming the location he or she most prefers ("filling in the blank(s)")?

  - **each** voter stating and ranking more than one preferred location?

  each voter choosing among Cambridge Bay, Iqaluit and Rankin Inlet? all the communities interested in becoming capital? other combinations of locations?

* what would be the minimum voting age in the plebiscite? --- the minimum voting age was 16 in the ratification vote of the Nunavut Agreement;

* what would constitute a "clear" outcome to the plebiscite? a plurality of votes in favour of a particular location? a majority of 50% plus one? **a** majority reaching some higher . threshold --- 60%? 66%?

* in the event that the plebiscite results were not sufficiently clear, would there be a second plebiscite in the form of some kind of "run off"? what if the results of a second plebiscite were also unclear?

* how long would a plebiscite take to organize and conduct, and how would the time taken up by a plebiscite process affect the ability of the Minister of DIAND to make a timely submission to the federal Cabinet on Nunavut issues in order to secure infrastructure, training, and other funding approvals?

* would timing of a plebiscite be affected by NWT Legislative Assembly elections scheduled for this fall?

In the absence of a plebiscite or a carefully designed and administered opinion survey poll, it is impossible to offer very precise numerical assessments as to comparative levels of public

support; even with evidence in the form of a plebiscite or opinion survey, of course, some interpretive latitude might exist. From the NIC's perspective, it would appear, based on anecdotal rather than rigorous methodological analysis, that popular preferences at the moment roughly correspond with regional identities, that is, residents of the Kitikmeot Region tend to favour Cambridge Bay as capital, residents of the Baffin Region tend to favour Iqaluit as capital, and residents of the Keewatin Region, tend to favour Rankin Inlet as capital. Given that the Baffin Region constitutes approximately half of the total Nunavut population, it is realistic to suppose that more residents of Nunavut favour Iqaluit as capital than any other community.

Following from the above discussion, Commissioners conclude that:

1. Cambridge Bay, Iqaluit and Rankin Inlet all have discernible community and regional support for choice as capital and, accordingly, have significant support within the total population of Nunavut;

2. a decision to locate the capital in any particular region would likely be supported by the majority of residents in that region;

3. Commissioners continue to see major difficulties associated with any plebiscite on the capital, both with respect to the divisiveness of the process and the results of any plebiscite, and also with respect to the unanswered issues regarding plebiscite design, organization and timing; and,

4. anecdotal evidence suggests that, consistent with the size of the Baffin Region population within the total population of Nunavut, it is likely that more residents of Nunavut currently support Iqaluit as capital than any other community.

Section 8. Climate

Cambridge Bay, Iqaluit and Rankin Inlet are all situated in the Canadian Arctic, well above the tree-line, and all have a climate associated with the Canadian Arctic: long, cold winters involving the freeze up of adjacent inland and offshore waters; short growing seasons supporting tundra vegetation; and, low amounts of precipitation falling principally in the form of snow.

While all three candidate communities for capital share an Arctic climate, Iqaluit's climate is more modified by surrounding ocean areas than is the case with either Cambridge Bay or Rankin Inlet, and Rankin Inlet's climate is more modified by the large expanse of Hudson Bay than Cambridge Bay's climate by adjacent gulfs and straits. Accordingly, air temperatures in Iqaluit are cooler in the summer and milder in the winter than in Cambridge Bay, with Rankin Inlet occupying a middle position. Along with differences in ice clearing patterns, this results in Iqaluit have a longer open water season than either Cambridge Bay or Rankin Inlet, and Rankin Inlet having a longer open water season than Cambridge Bay. As is the case in the rest of North America east of the continental divide, precipitation levels increase from west to east. There is little difference in wind speeds. Because of their respective latitudes, Cambridge Bay has-more daylight in the summer and less in the winter than Iqaluit or Rankin Inlet.

Some of these observations can be captured more precisely in the following table:

	Cambridge Bay	Iqaluit	Rankin Inlet
July temps. (degrees celsius)			
mean high	15.1	11.4	13.1
mean low	5.9	3.7	4.5
Jan. tamps . (degrees celsius)			
mean high	-31.6	-21.5	-27.9
mean low	-37.9	-29.7	-35.2
Wind sp. (km/h)	21.8	16.7	24
Precipitation (cm/rain equivalent)	13.6	43.9	27.8
Break up (approx.)	mid July	early July	early July
Freeze up (approx.)	Sept/Ott.	early Dec.	late Oct.

Like people all over the world, the people of Nunavut like to talk about the weather, in particular, differences in weather patterns as experienced from place to place. Such differences lead to endless speculation as to whether a community's weather is "better" than that of another community. Speculation is fuelled, of course, by a general inability to agree on what might constitute "better" weather --- for example, do sharper seasonal swings in temperature make a climate more varied and invigorating or is a relatively "mild" climate preferable in all cases? How much precipitation is too much? How little is not enough? To what extent is the predictability of weather as important as its qualities? The list of questions can go on and on. Suffice it to say that there is a great deal of subjective opinion as to the relative attractions and horrors of various types of weather patterns and subjective opinion is, by definition, immune to objective, quantifiable analysis.

It is possible to conceive of a number of objective tests which could be used to distinguish the comparative climatic advantages and disadvantages of the three candidate communities for capital. Such tests can be used to investigate two concerns:

* whether the climate of a community seeking to become capital is such that citizens of Nunavut would regularly be impeded from getting into, out of, or around the capital; and,

* whether the climate of a community seeking to become capital is such as to impose significant economic burdens in the form of higher capital construction or operating costs in comparison with other communities also seeking to become capital; this could take the form of such things as higher heating bills due to colder temperatures, higher electrical bills because of darker winters, higher retail prices because" of unreliability of re-supply from outside the community, lost staff time due to weather delays, etc.

With respect to the first concern, Section 5 of this report has indicated that the steady improvements in air navigation and transportation in the North have been such that residents of Cambridge Bay, Iqaluit and Rankin Inlet can all count on uninterrupted airline services; so few scheduled flights are cancelled in these communities as to remove inaccessibility due to weather as a relevant comparative factor.

The second concern as to weather --- additional costs associated with setting up and operating the headquarters functions of a capital in one community as opposed to another --- is of continuing relevance. Insofar, however, as different candidate communities for capital present variant profiles of installation and operating costs, these comparisons are best made in the context of overall financial analysis of the three

design models developed by the NIC. Such considerations have been taken into account in Section 4 of this report, and there is no obvious reason to make stand alone comparisons of a financial nature under the general rubric of "climate".

Given its thinking as to these two concerns, the NIC concludes that the only meaningful distinctions that can be drawn among the three candidate communities for capital with respect to climate are distinctions rooted in cost considerations and are best dealt with in Section 4 of this report. As a result, the NIC concludes that the factor of climate does not lend itself to an objective ranking of the three communities.

PART III : CONCLUSIONS

Part II of this report analyzes a number of factors concerning the comparatives advantages and disadvantages of Cambridge Bay, Iqaluit and Rankin Inlet as capital of Nunavut. Part II analyzes the advantages and disadvantages of these communities in the context of the respective design models in which these communities would serve as capital (i.e., the Cambridge Bay Model, the Iqaluit Model and the Rankin Inlet Model) . The conclusions flowing from the analysis offered in Part II can be summarized as follows:

Decentralization

The NIC has reached two conclusions with respect to decentralization comparisons among the Cambridge Bay Model, Iqaluit Model and the Rankin Inlet Model:

1. the number and variety of decentralization comparisons that have been made are sufficient to draw objective conclusions; and

2. on the basis of a large majority of comparisons, the Iqaluit Model is the best model for the purpose of bringing about a decentralized Nunavut Government.

Demographic and Related Social Impacts

The NIC concludes that it is possible to rely on objective impacts comparisons to make material distinctions among the three design model alternatives identified for the Nunavut Government. The NIC further concludes that the weight of comparisons gauging demographic and related social impacts favours the Iqaluit Model.

Costs/Finances

The NIC concludes that with respect to the capital and leasing costs for the infrastructure necessary to establish the headquarters in the capital and implement the associated decentralized organizational structure, the Iqaluit Model is the most cost effective, although there are not major cost differences among the three design models.

The ongoing cost of territorial government operations in the capital would be approximately the same for Rankin Inlet and Iqaluit and approximately 10% higher in Cambridge Bay.

Infrastructure Considerations

The NIC concludes that, with respect both to existing infrastructure and to capability of expansion of infrastructure, Cambridge Bay, Iqaluit and Rankin Inlet are equally well positioned; there are no compelling reasons to favour one community over the others in this respect.

Geographic Position

The NIC concludes the following in relation to the geographic positions of Cambridge Bay, Iqaluit and Rankin Inlet:

1. **no single consideration as to geographic position is of such primary significance as to warrant favouring one community as capital strictly on that basis; and,**

2. **no single community emerges as a clear favourite as to geographic position when a variety of considerations are examined.**

Accordingly, the NIC concludes that considerations of geographic position do not equip any candidate community for the capital with a preferred standing over the other two possibilities.

Regional Support

The NIC concludes that

1. Cambridge Bay, Iqaluit and Rankin Inlet all have discernible community and regional support for choice as capital and, accordingly, have significant support within the total . population of Nunavut;

2. a decision to locate the capital in any particular region would likely be supported by the majority of residents of that region;

3. the NIC continues to see major difficulties associated with any plebiscite on the capital, both with respect to the divisiveness of the process and the results, and also with respect to the unanswered issues regarding plebiscite design, organization and timing; and,

4. anecdotal evidence suggests that, consistent with the size of the Baffin Region population within the total population of Nunavut, it is likely that more residents of Nunavut currently support Iqaluit as capital than any other community.

Climate

The NIC concludes that the only meaningful distinctions that can be drawn among the three candidate communities for capital with respect to climate are distinctions rooted in cost considerations and are best dealt with in Section 4 of this report. As a result, the NIC concludes that the factor of climate does not lend itself to an objective ranking of the three communities.

Overall Results

It is possible to tabulate the conclusions discussed above in the following way:

Factor	Best Model
Decentralization	Iqaluit Model
Demographic and Related Social Impacts	Iqaluit Model
costs	Iqaluit Model*
Infrastructure Considerations	Equal results
Geographic Position	Equal results
Regional Support	Equal results**
Climate	Equal results

* One time costs associated with Iqaluit are somewhat lower than for Cambridge Bay and Rankin Inlet. Operating costs for Cambridge Bay are somewhat higher than for the other two communities.

** An equal level of regional support for each of three potential capital locations is, due to the larger population of the Baffin region, likely to translate into a higher level of popular support for Iqaluit on a Nunavut-wide basis.

Considering all the factors, it is apparent that the three design models, with their alternate capital locations, are equal in more respects than not. It is also apparent that, insofar as differences do emerge, the factors of decentralization, demographic and related social impacts, and costs, give Iqaluit the best overall results.

APPENDIX 1: Correspondence Concerning the Development of this Supplementary Report

Indian and Northern Affairs Canada
Affaires indiennes et du Nord Canada

CANADA REMEMBER
LE CANADA SE SOUVI

Your file Votre référence

Our file Notre référence

MAY - 4 1995

Mr. Simon Awa
Executive Director
Nunavut implementation Commission
P.O. Box 1109
IQALUIT NT XOA OHO

Dear Mr. Awa:

Follow Up to the Report from the NIC

On Thursday, April 20, 1995 officials from the Nunavut Tunngavik Incorporated, the Government of the Northwest Territories, and this department met in Ottawa to review "Footprints in New Snow'*. As follow up from these discussions, I have been requested by the parties to write to you to identify areas where additional advice is required to better assess the planning scenario developed by the Commission.

While the review covered the full report, and each of the parties may be developing its own position on the various issues, I would like to focus in on a number of key implementation activities where the Commission can be particularity helpful in providing further advice and which clearly fall within its mandate. The key implementation activities requiting the further advice of the Commission at this time are in the areas of administrative design, infrastructure development, selection of the capital, and training.

Administrative Design:

The Commission recommends that the centre selected as the capital of Nunavut should decentralize many of its existing regional functions. Can the Commission provide some insight into the implementation aspects of this recommendation, with particular attention to scheduling, human resource and cost implications?

../2

The Commission provides a detailed breakdown of the proposed administrative design but defers on the matter of phase in and details on the transition period to 1999. As the period leading to 1999 is critical, can the Commission provide details on the transition period and provide some additional consideration or clarification on the recommended approach to phase in?

Infrastructure Development:

The Commission supports the participation of the private sector and the use of leasehold arrangements as the preferred approach to the construction and maintenance of facilities. The Commission has also indicated that it is looking at the financial implications of lease versus Crown construct.

Fundamental issues arise regarding planning horizons, cost impacts and investment strategies. It is understood that the NIC will be examining these questions further, including the question of lease and Crown construct. The parties consider this to be a vital area within the Commission's mandate which requires further work. PWGSC and GNWT-PWGS are prepared to lend their assistance to the NIC on the technical aspects of this work.

This should then allow the Commission to clarify in its view the timing and scheduling of construction, year-to-year impacts, requirements for specific facilities and resulting year-to-year financial implications. Again, PWGSC and GNWT-PWGS will lend their assistance to the NIC on the technical aspects of this work.

The Commission advocates the integration of information technology into the workplace and the development of an increased capability in the communities of Nunavut. Can the Commission advise on the impact this would have on the administrative structure with particular emphasis on the cost and benefits? It is also requested that the Commission advise on the information systems requirements of the Government and related transition implications, including the timing for the development of Government of Nunavut systems and the merits of Departmental/agency autonomy in this regard.

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Selection of the Capital:

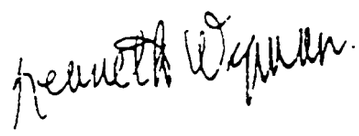
In narrowing options for the selection of the capital of Nunavut, the Commission recommends criteria to be used in the selection process. The parties feel it is important for the Commission to provide additional clarification on the criteria and some relevant weighting to aid in the process of analysis?

Training:

The Commission puts forward a range of training projects as the recommended approach to preparing Inuit for employment in the Nunavut Public Service. Can the Commission be more precise in relating its approach directly to the proposed administrative design with particular attention to senior management, technical and para-professional training, scheduling, coordination with claims implementation training, and identifying existing and new or modified program requirements.

1 trust this provides you with some framework for future research and discussions. Officials from the parties would be pleased to meet with NIC staff to discuss these and related issues at an early date. I would suggest May 23rd or 24th, if practical, for this purpose.

Yours sincerely,



Kenneth Wyman
Associate Director
Northern Affairs Program

c.c.: Cindy Fair, GNWT
Alex Campbell, NTI

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Nunavut Hivumukpalianikhaagut Katimayit
Nunavut Implementation Commission
Commission d'etablissement du Nunavut

May 24, 1995

"By Fax"

The Hon. Ron Irwin,
Minister,
Department of Indian Affairs and
Northern Development,
Ottawa, Ontario

The Hon. Nellie Cournoyea,
Government Leader,
Government of the Northwest Territories,
Yellowknife, NT

Mr. Jose Kusugak,
President,
Nunavut Tunngavik Incorporated,
Iqaluit, NT

Dear Mr. Irwin, Ms. Cournoyea, and Mr. Kusugak,

On March 31, 1995, I wrote to you in association with the submission of the Commission's comprehensive report, **"Footprints in New Snow".** Since the date of that letter, the Commission has had feedback on that report from the three parties to whom it supplies advice, and has been requested to give more detailed advice in relation to a number of matters covered by the report. Commissioners have also had **an** opportunity to reflect on how best to direct the on-going efforts of the Commission in the wake of **"Footprints** in New **Snow",** and to formulate organizational priorities. I am writing to you at this time to outline the Commission's intentions with respect to what it seeks to accomplish in the coming months.

The Commission undertakes to supply advice to the parties, supplementary to its recent comprehensive report, in the form of two additional reports.

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P.O. Box 1109. Iqaluit, NT XOA OHO, Tel: (819)979-4199 Fax: (819)979-6862
ᑎᑎᖅᑯᓂᖅ 1109, ᐃᖅᓗᐃᑦ, ᓄᓇᕗᒻᒥ XOA OHO ᐅᖅᓯᐅᑎᖅ: (819)9794199 ᕿᑎᐸᓂ: (819)979-6862

The first report will offer further analysis and advice with respect to the comparative advantages of Cambridge Bay, Iqaluit and Rankin Inlet as capital of Nunavut based on a detailed examination of objective factors, particularly, set up and operational costs, and compatibility with overall decentralization of government operations. The Commission will submit this report to the three parties by **June 30, 1995.**

The Commission further undertakes to supply a second report to the three parties. This second report will provide further analysis and advice on those topics, apart from the choice of capital (namely, administrative design, infrastructure, and training), broadly outlined in a letter from Ken Wyman, Nunavut Secretariat, DIAND, to Simon Awa, Executive Director, NIC, dated May 4, 1995. The Commission will submit this second report by early August, 1995.

1 hope these undertakings are satisfactory to you and I welcome any comments that you may have with respect to them.

Given the high level of interest in Nunavut concerning these issues, especially the choice of capital, it is the Commission's intention to make this letter public on the occasion of the press conference planned for May 25 in association with release of the report, **"Footprints in New Snow".**

Yours sincerely,

John Amagoalik
Chairperson
Nunavut Implementation Commission

cc - Jack Anawak, MP

APPENDIX 2: Appendix A-14 from “Footprints in New Snow”

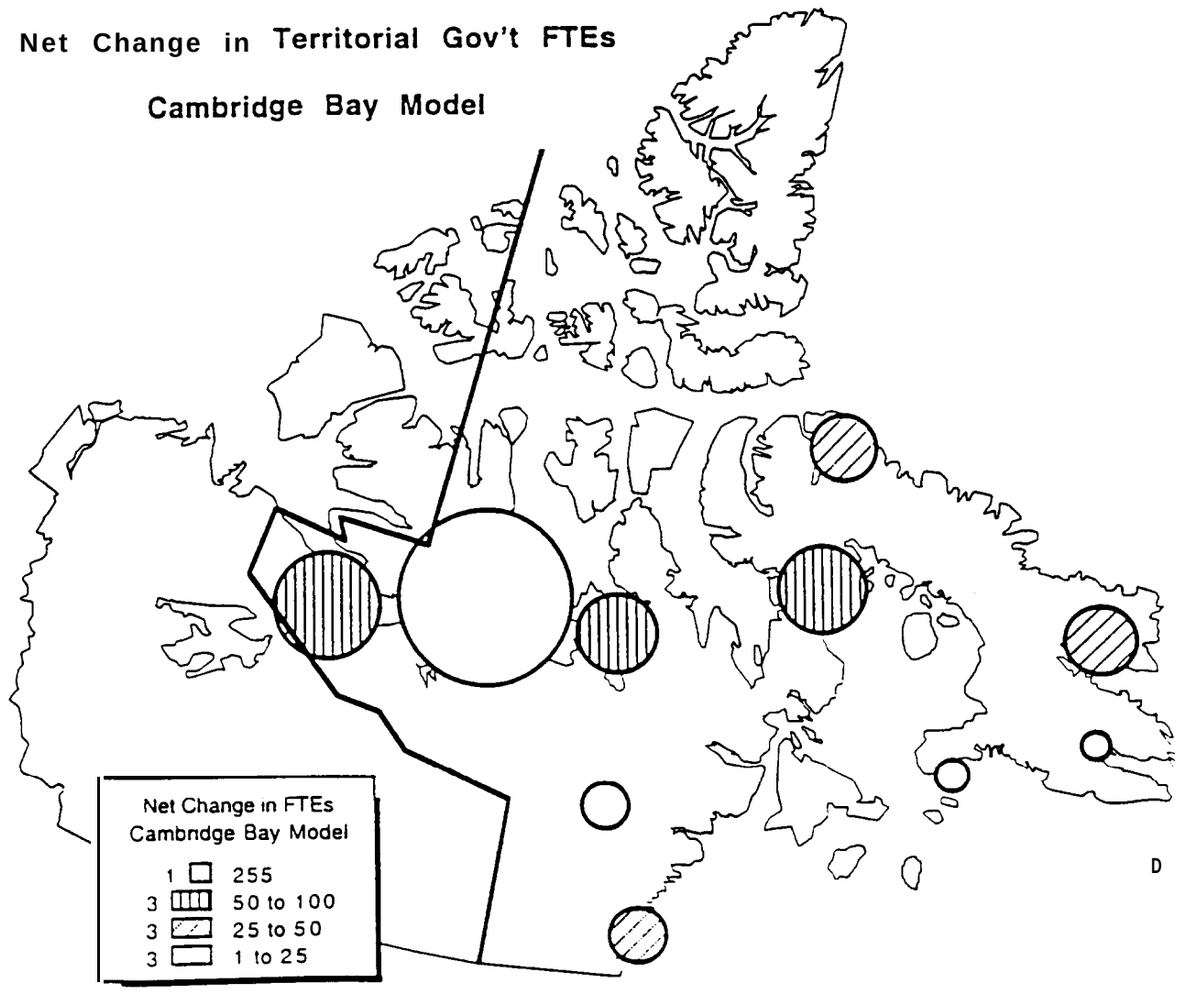
Appendix A-14

Comparison of the Distribution and Demographic Impacts of the Three Decentralized Design Models

introduction

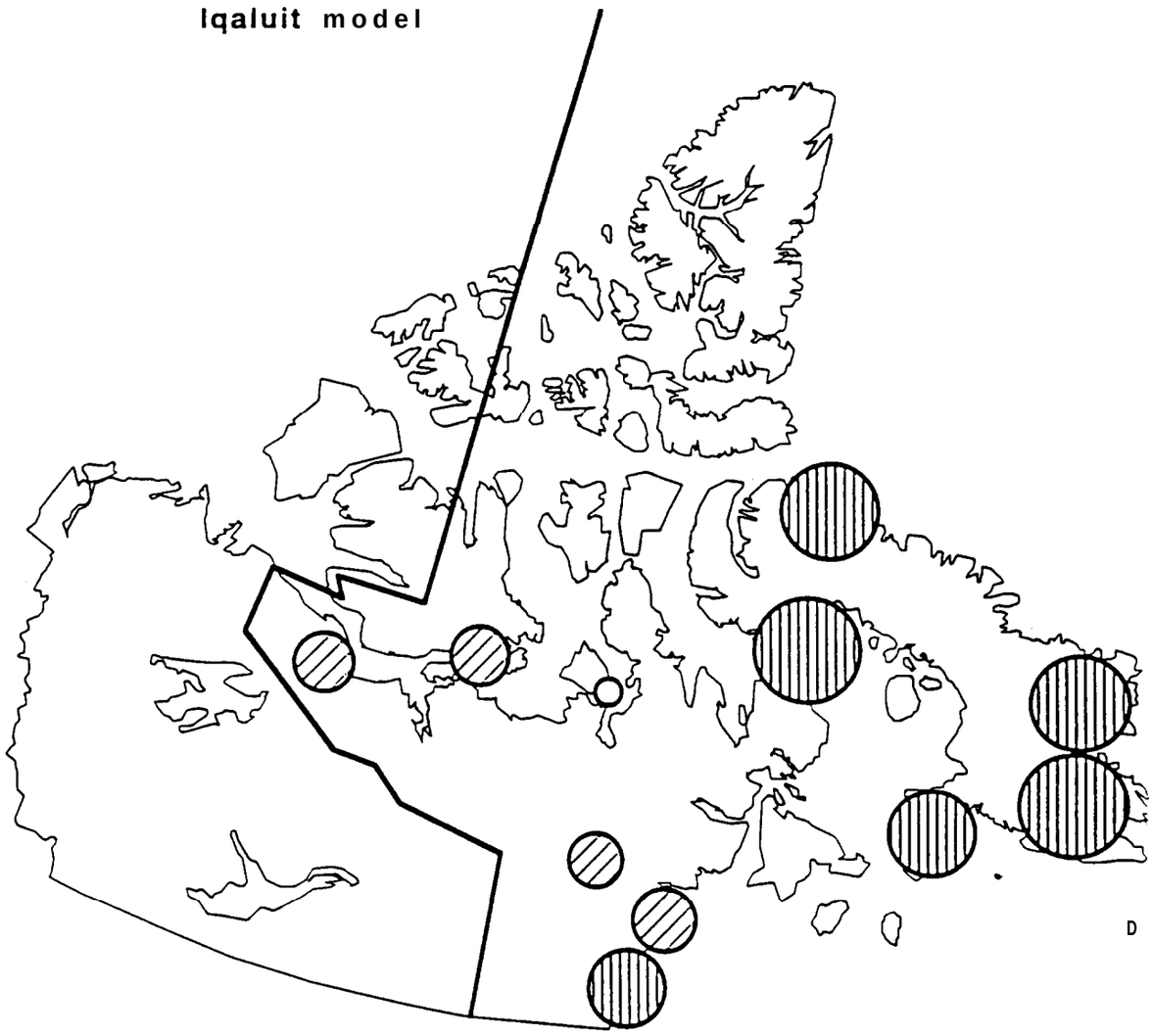
This appendix presents comparative data for the three decentralized models—the first with Cambridge Bay as capital, the seared with Iqaluit as capital, and the third with Rankin Inlet • s capital.

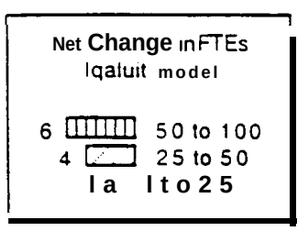
Pages A-14.1 to A-143 present maps which show which communities would experience increased employment with each of the models, and pages A-14.4 and A-145 show the same data in chart form. Pages A-14.6 and A-14.7 detail the estimated population growth which would result from each of the three models. Pages A-14.8 to A-14.11 detail the estimated population growth and the ratio of residents per Government of Nunavut employee which would result from each of the three models by region; by the three regional centres; by the communities grouped by their projected populations as of April 1, 1999; and, by the communities grouped by their current levels d 'red unemployment'.



Net Change **in Territorial Gov't FTEs**

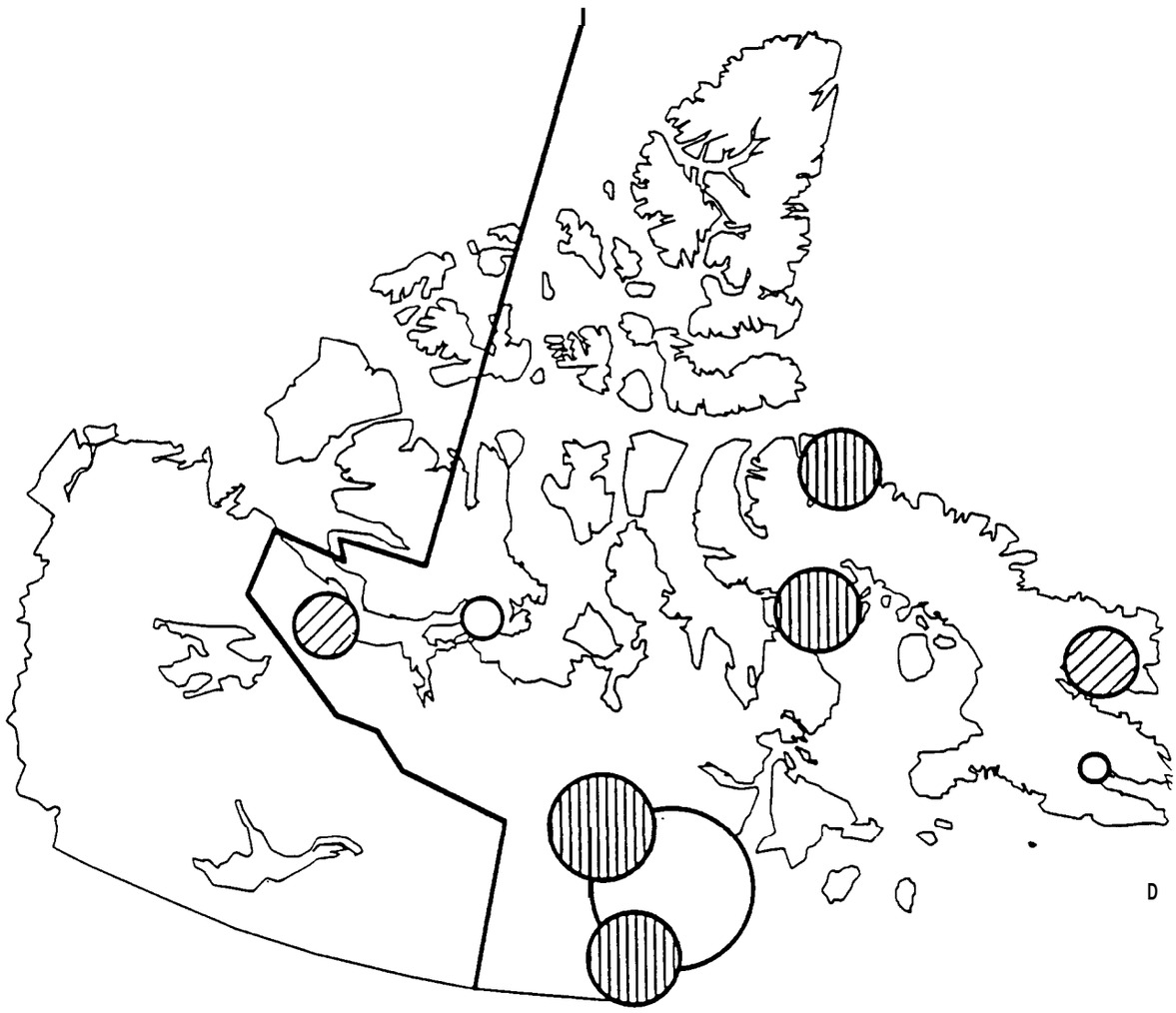
Iqaluit model





Net Change in Territorial Gov't FTEs

Rankin Inlet model



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Rankin Inlet model

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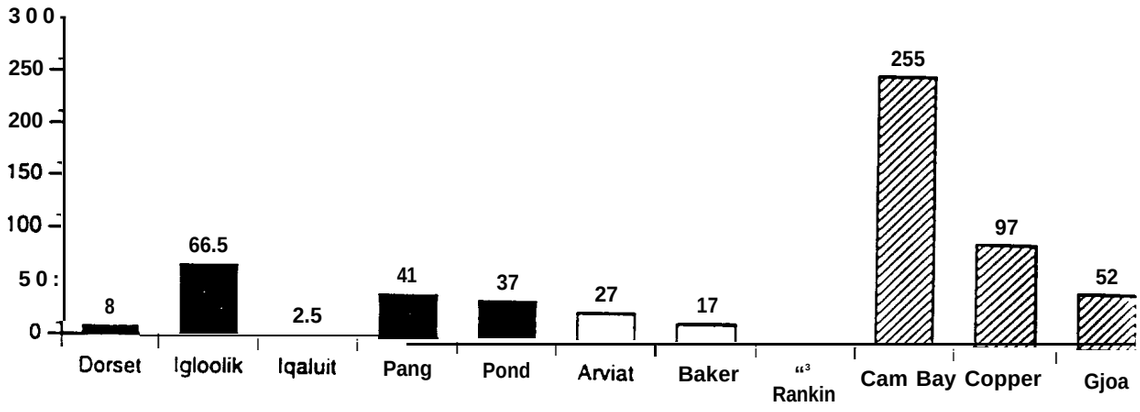
Net Change in the Number of Territorial Gov't FTEs with the Cambridge Bay Model



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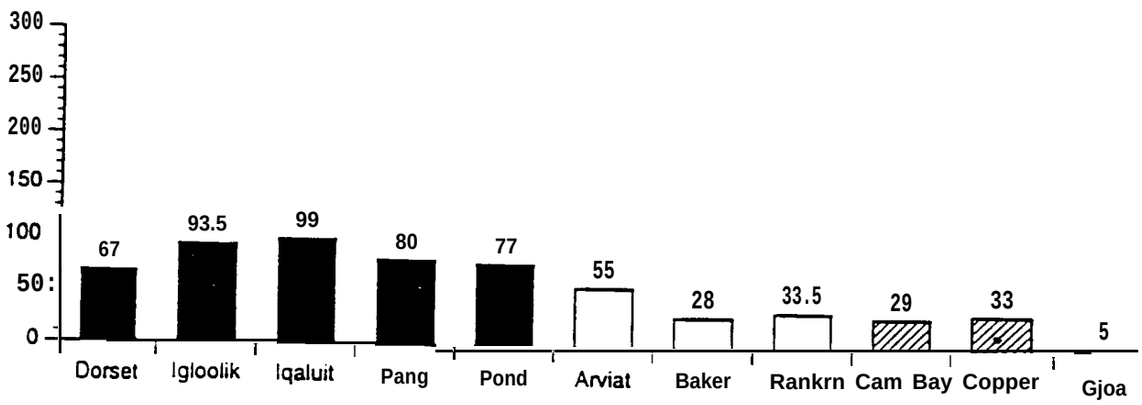
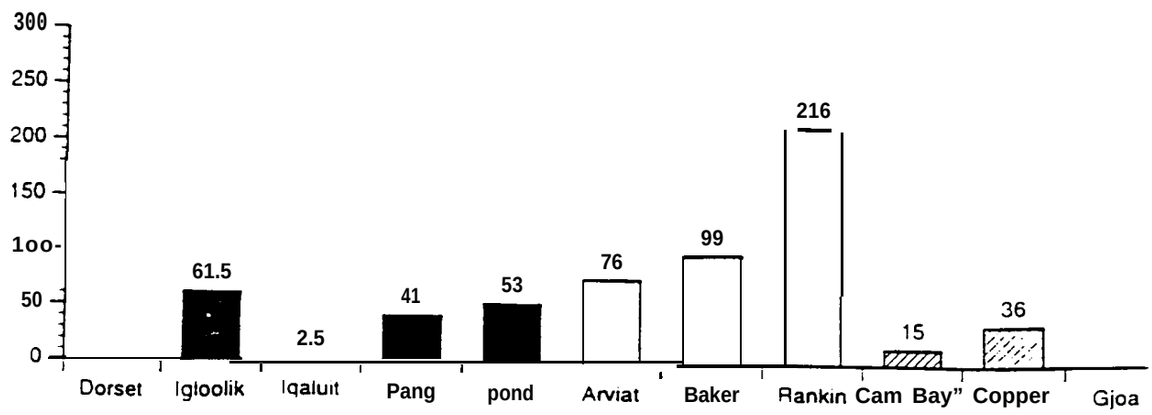
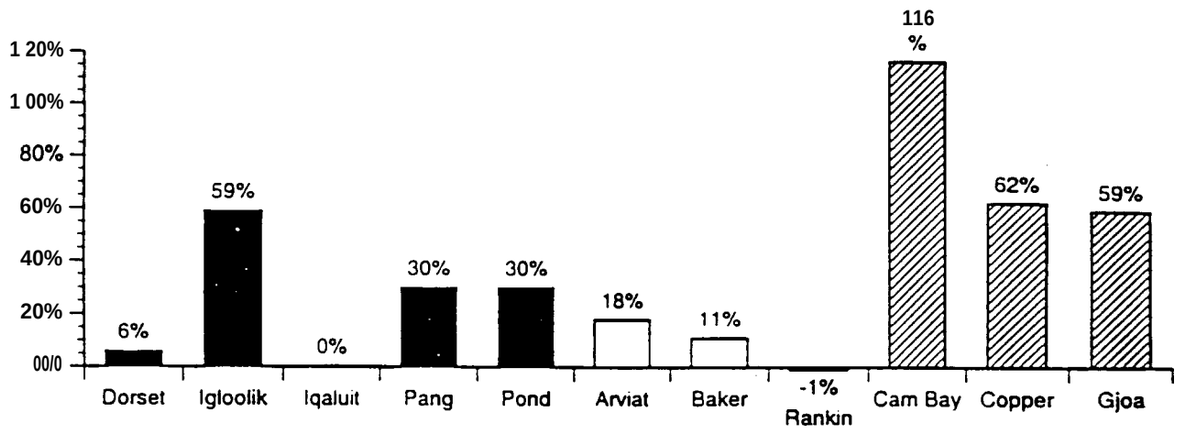


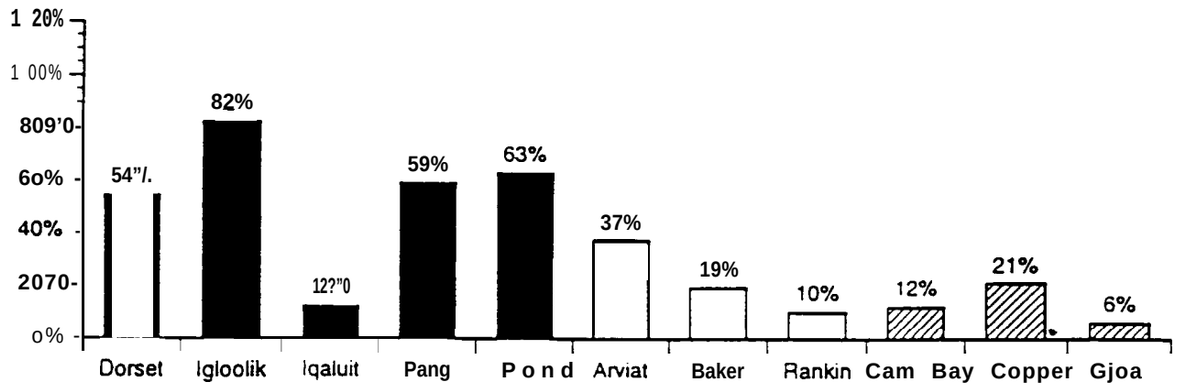
Net Change in the Number of Territorial Gov't FTEs with the Rankin Inlet Model



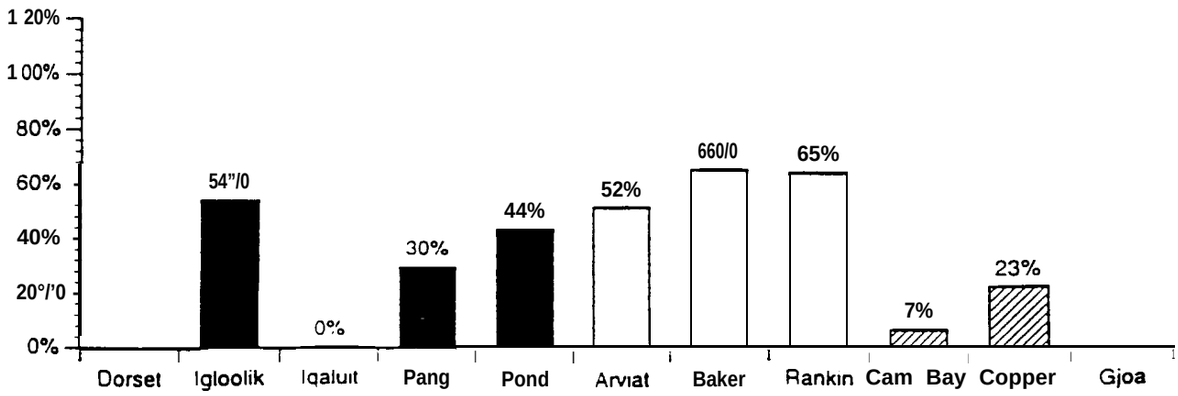
% Increase in the Number of Territorial Gov't FTEs with the Cambridge Bay Model



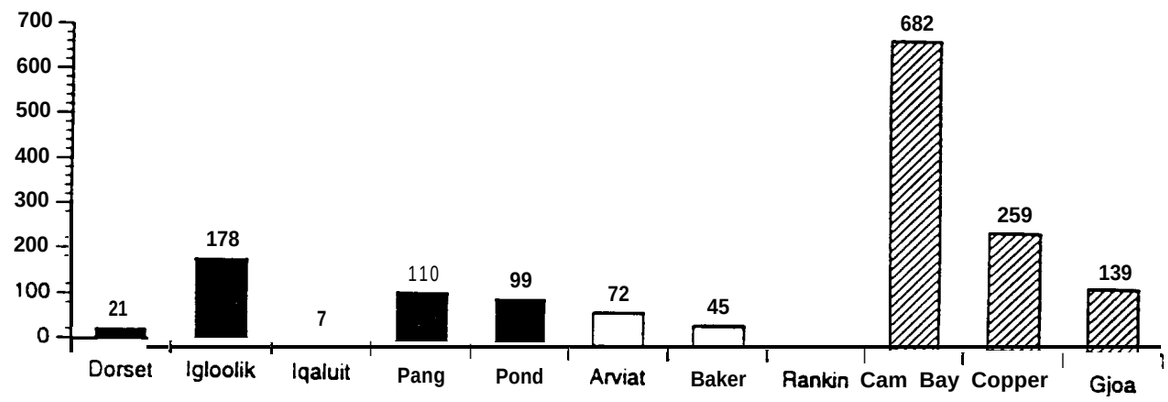
% Increase in the Number of Territorial Gov't FTEs with the Iqaluit Model



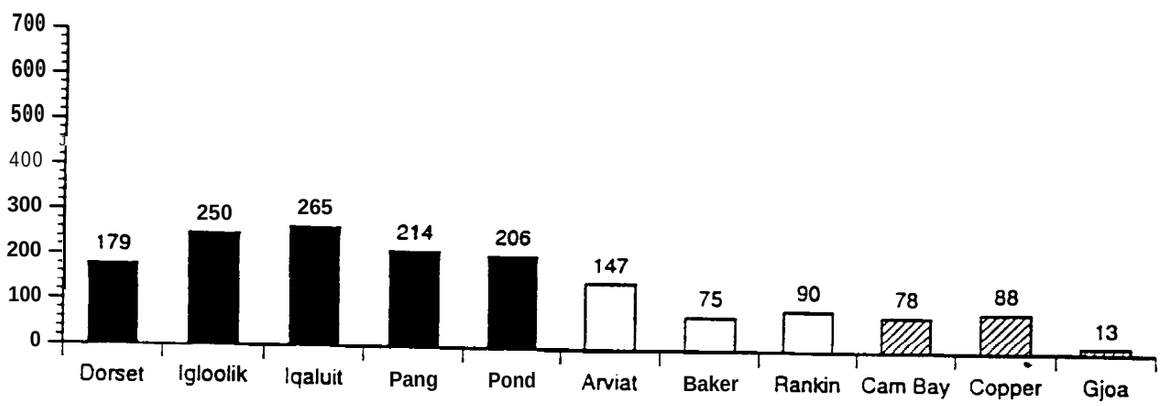
% Increase in the Number of Territorial Gov't FTEs with the Rankin Inlet Model



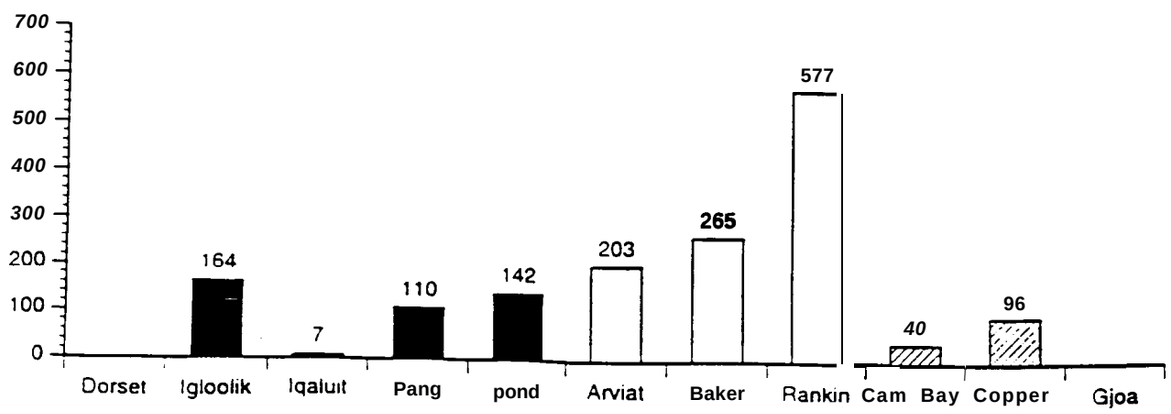
Estimated Population Growth with the Cambridge Bay Model



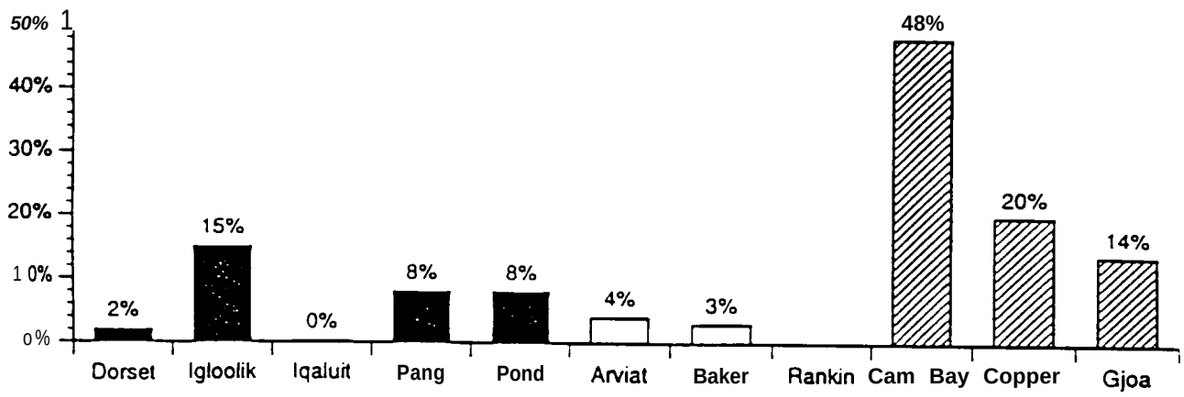
Estimated Population Growth with the Iqaluit Model



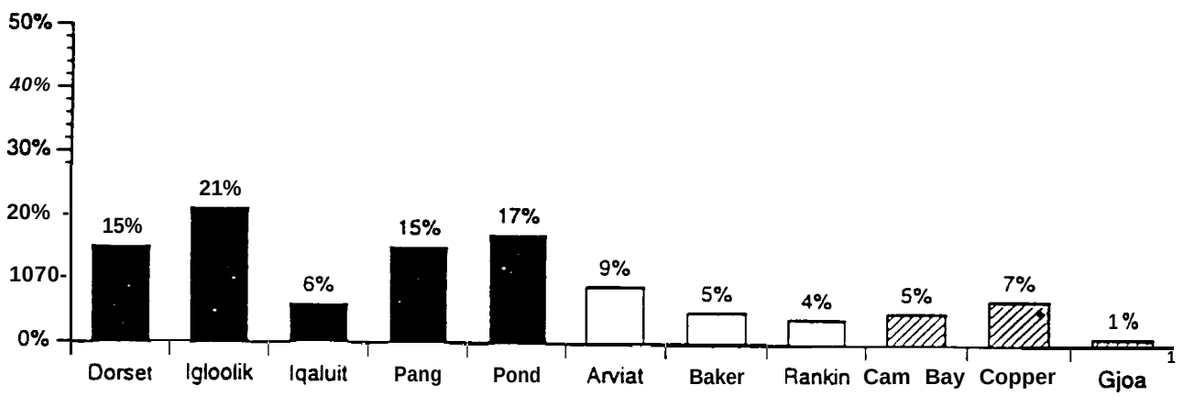
Estimated Population **Growth with the Rankin Inlet Model**



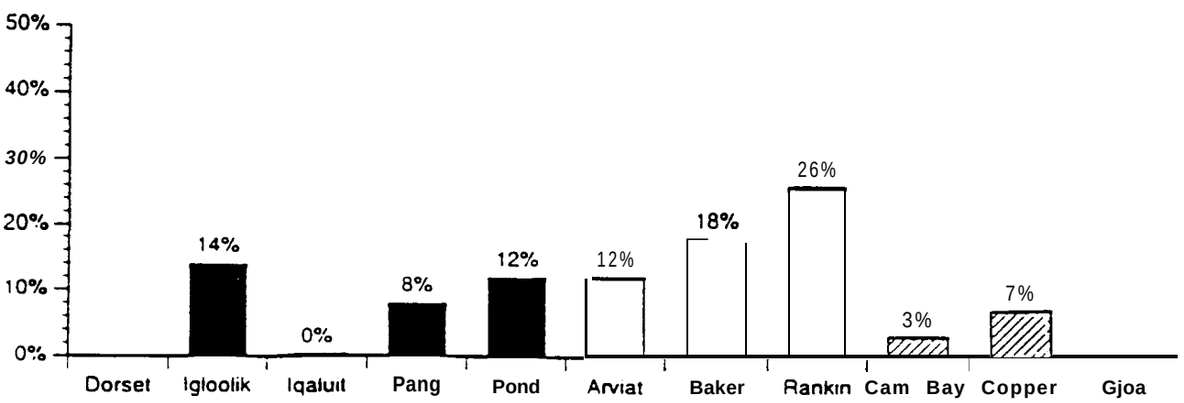
% Estimated Population Growth with the Cambridge Bay Model



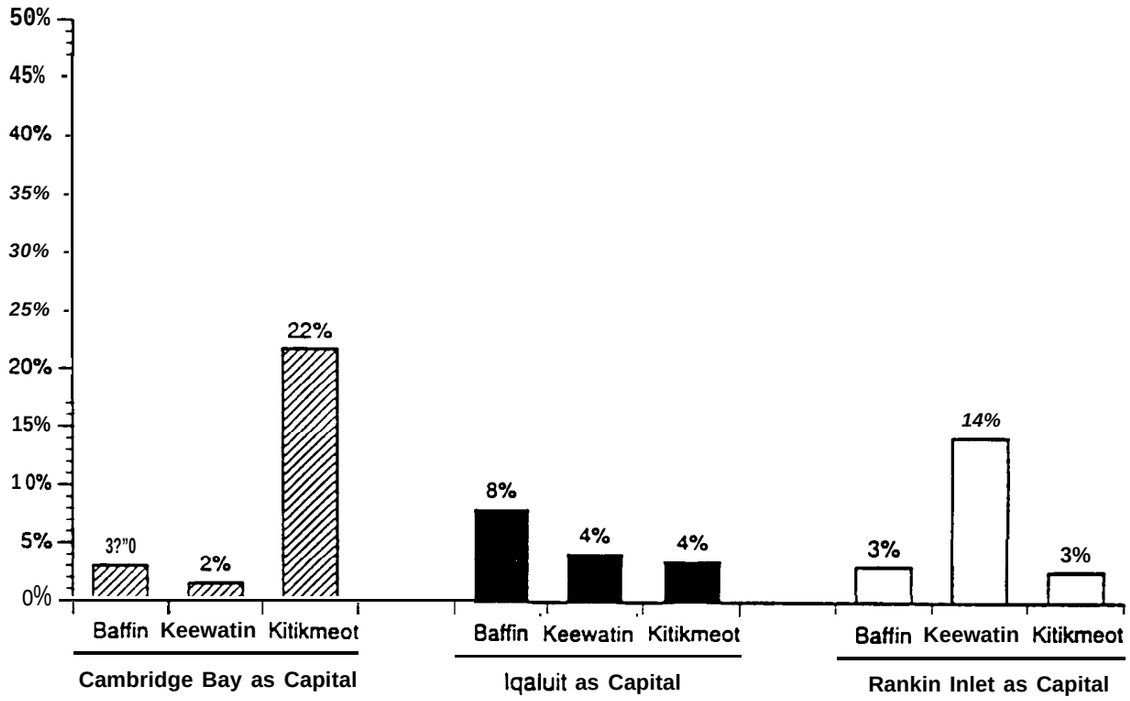
% Estimated Population Growth with the Iqaluit Model



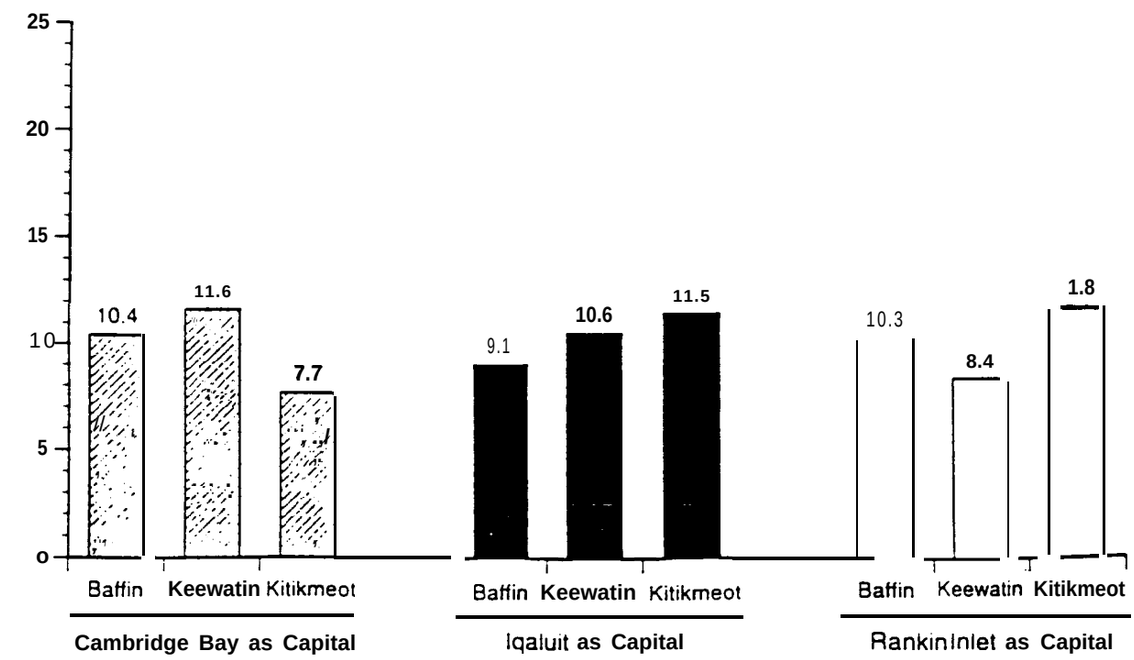
'/. Estimated Population Growth with the Rankin Inlet Model



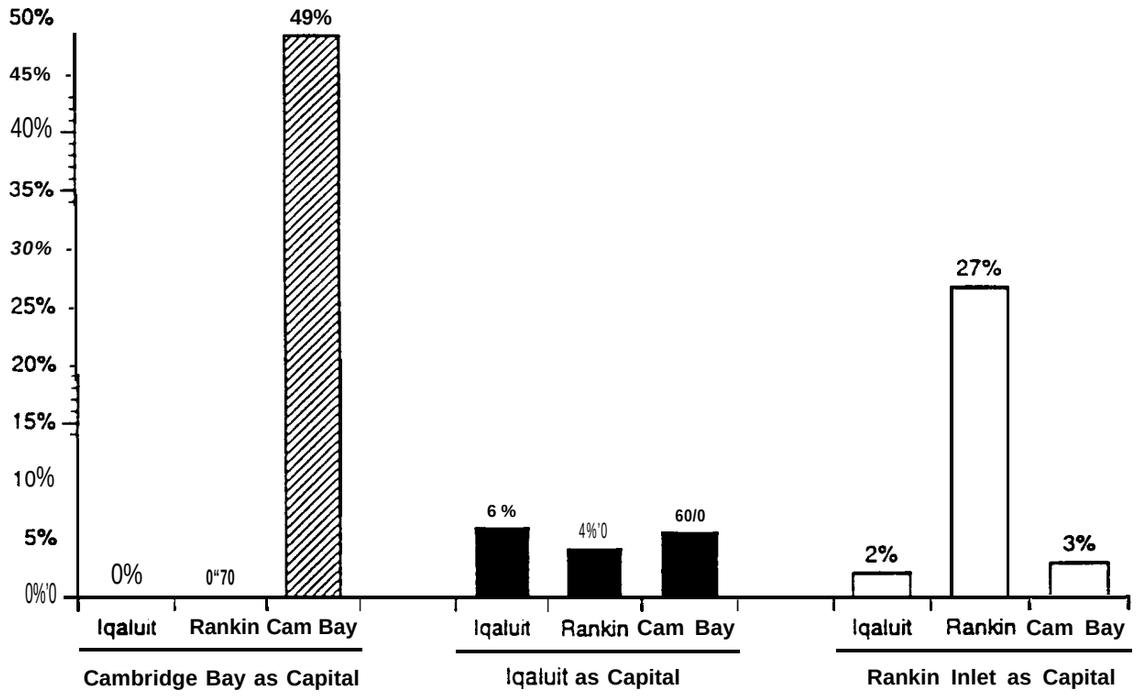
% Estimated Population Growth, by Region



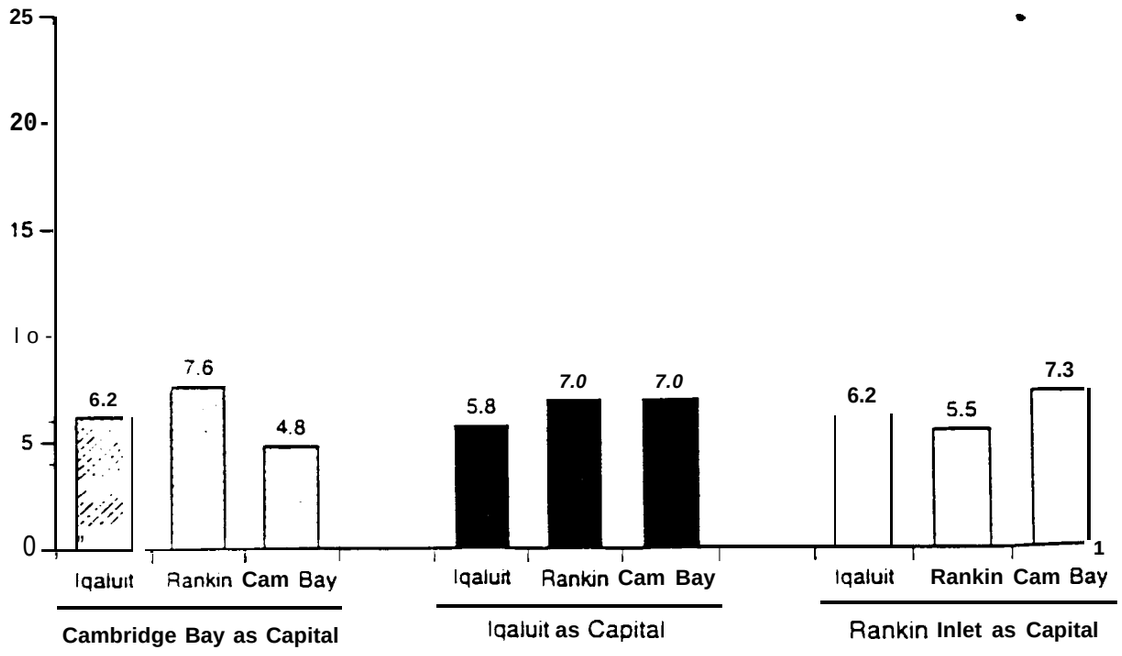
1999 Population per Nunavut Government Employee, by Region



% Estimated Population Growth, by Regional Centre

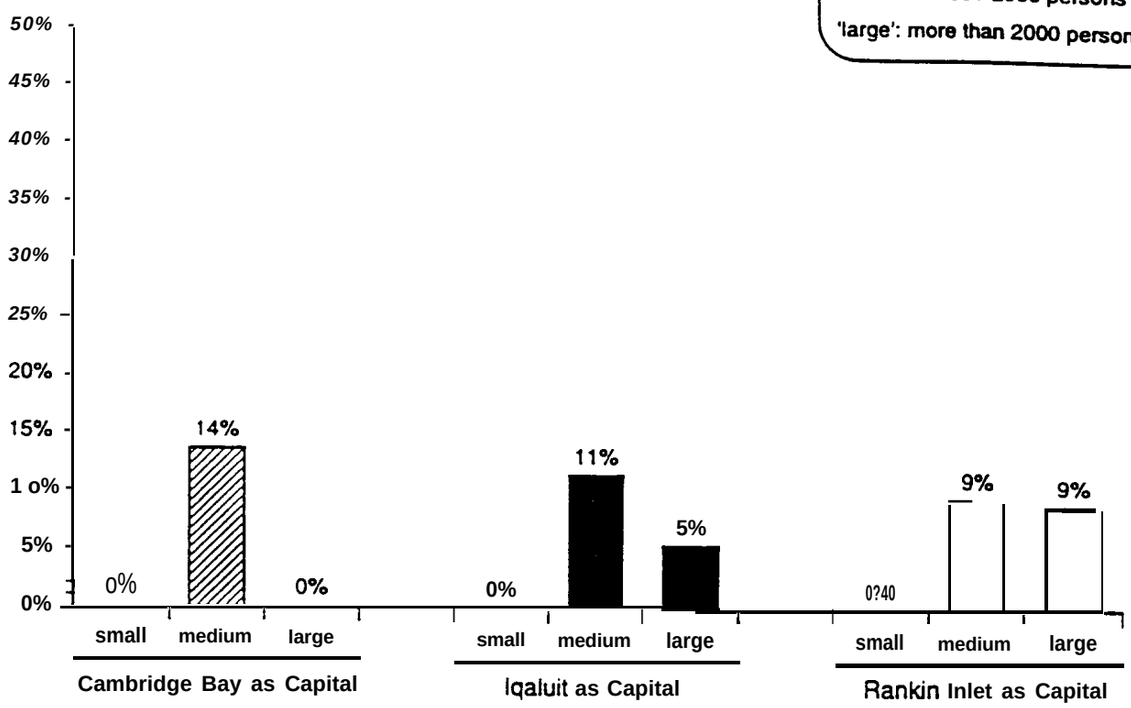


1999 Population per Nunavut Government Employee, by Regional Centre

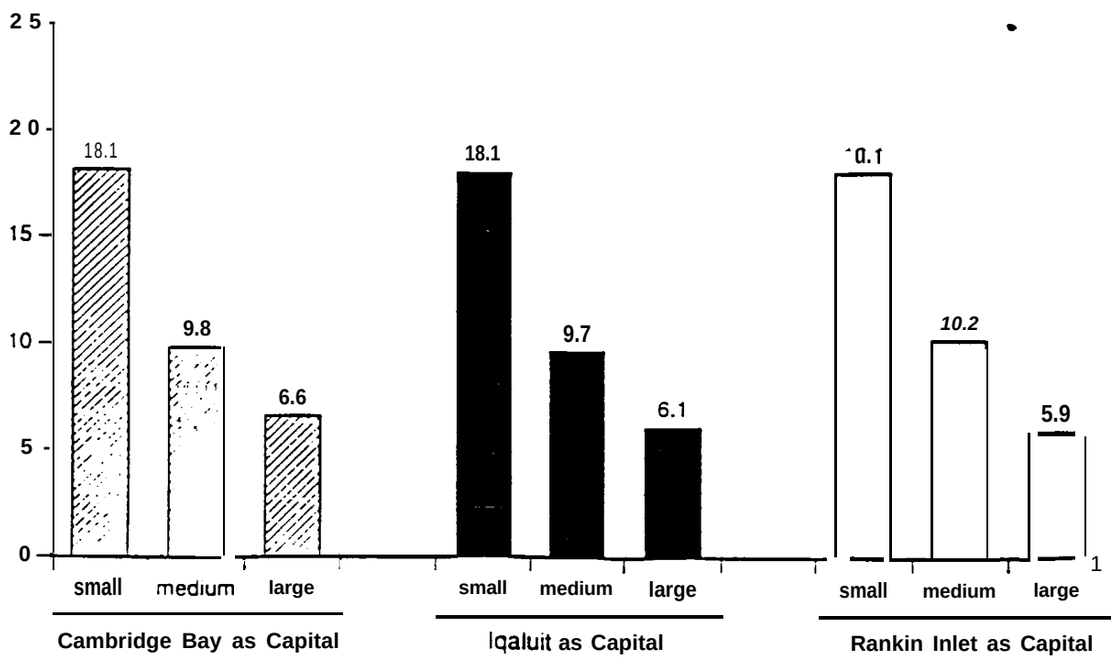


% Estimated Population Growth, by 1999 Community Size

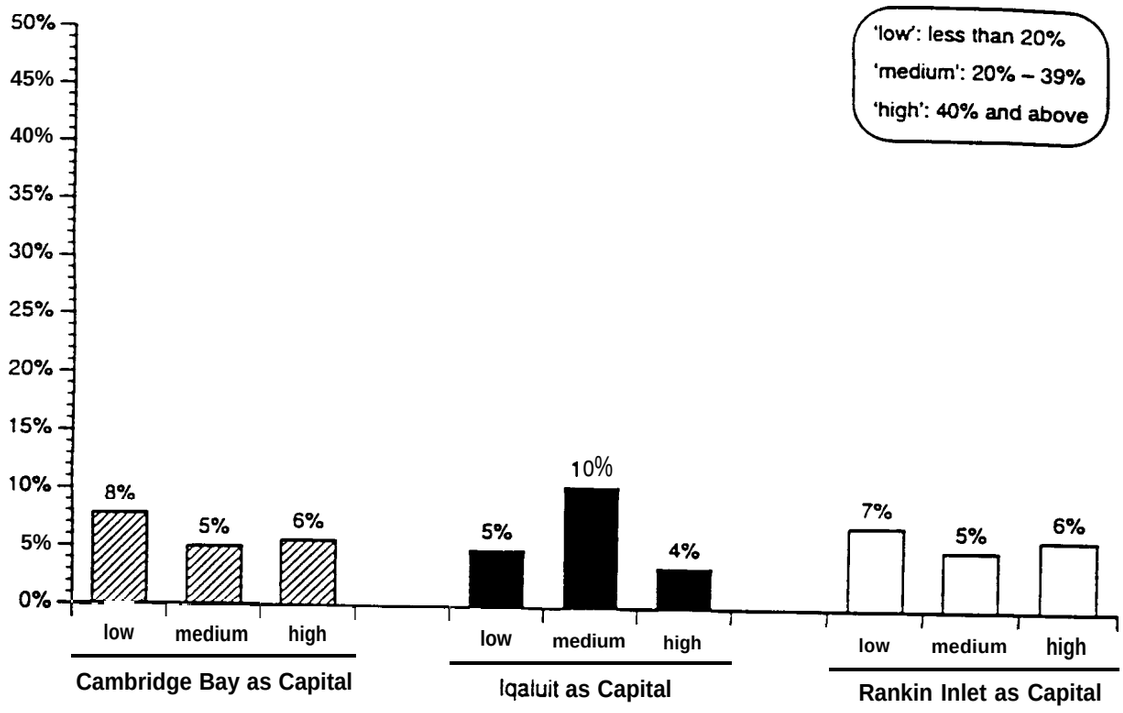
'small': less than 1000 persons
'medium': 1001-2000 persons
'large': more than 2000 persons



1999 Population per Nunavut Government Employee, by 1999 Community Size



% Estimated Population Growth, by Real Unemployment Rate



1999 Pop. per Nunavut Gov't Employee, by Real Unemployment Rate

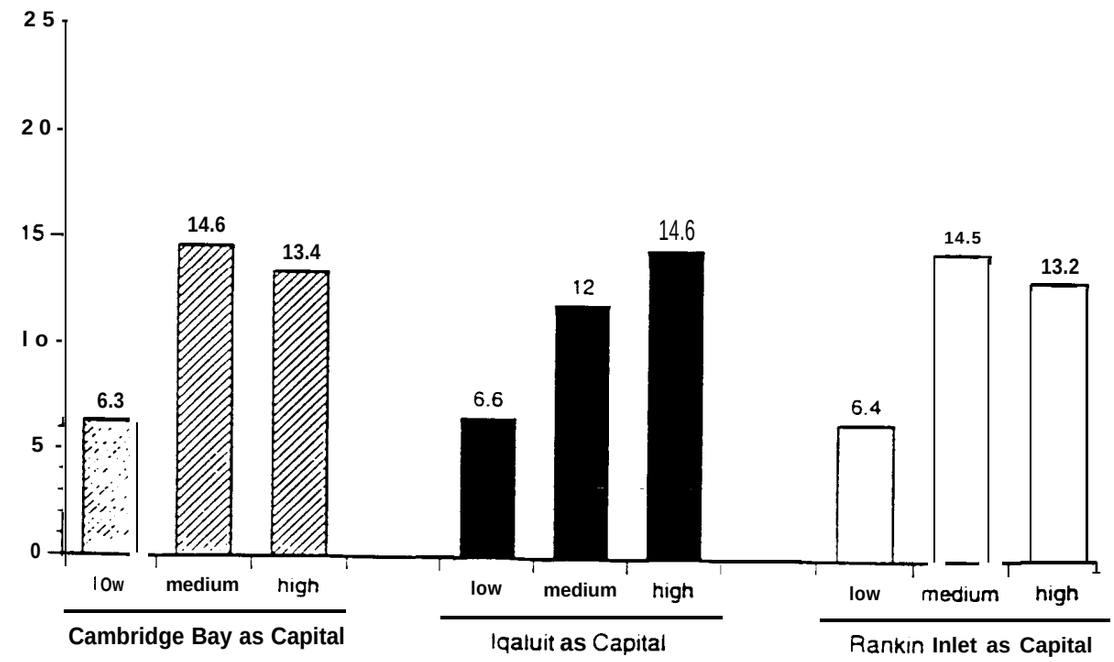


Chart 1

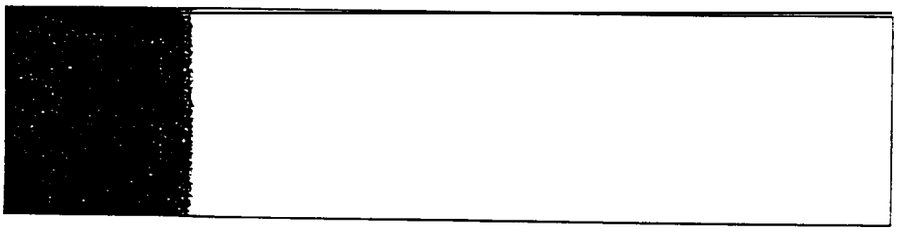
CAMBRIDGE BAY

Population 1994: 1210
Natural Growth per Year: 31.3

Community Expansion Capability at Influx Levels of...

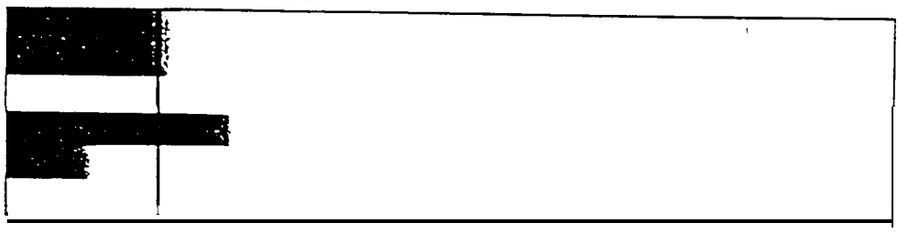
NATURAL GROWTH BY 1999	INFLUX DUE TO GON					Factor
	25	50	100	250	500	GON Influx Employee
	73	146	292	730	1460	Influx Pop. due to GON
157	230	303	449	887	1617	Incremental Pop. at 1999
1366	1439	1512	1658	2096	2826	Total Population at 1999

LAND AVAILABILITY



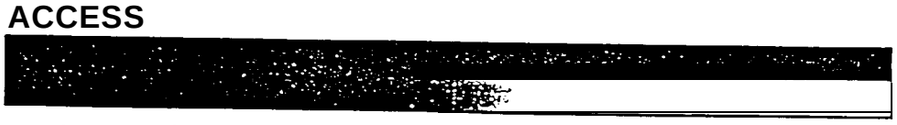
Housing
Office
Institutional
Community Use
Commercial
Industrial

INFRASTRUCTURE



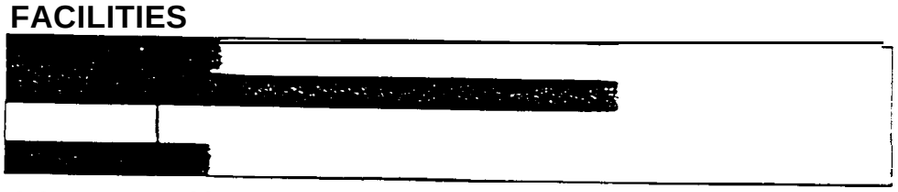
Water
Sewage
Solid Waste
Roads
Energy
Communications

ACCESS



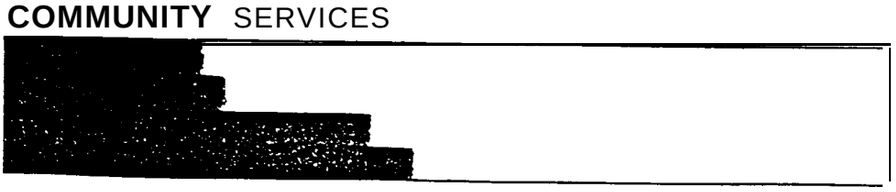
Air
Marine

FACILITIES



Office / Admin.
Municipal Bldgs.
Commercial
Housing

COMMUNITY SERVICES



Social Services
Educational
Health
Recreational

Chart 3

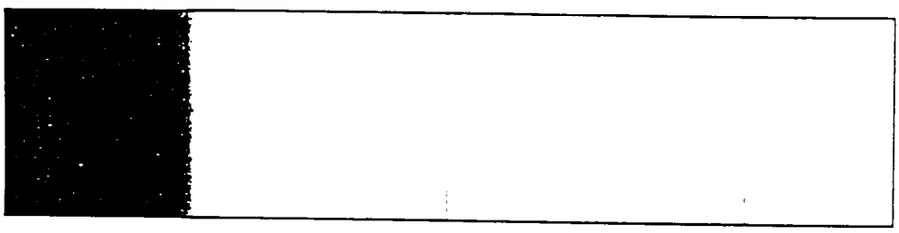
IQALUIT

Population 1994: 3844
Natural Growth per Year: 97.3

Community Expansion Capability at Influx Levels of...

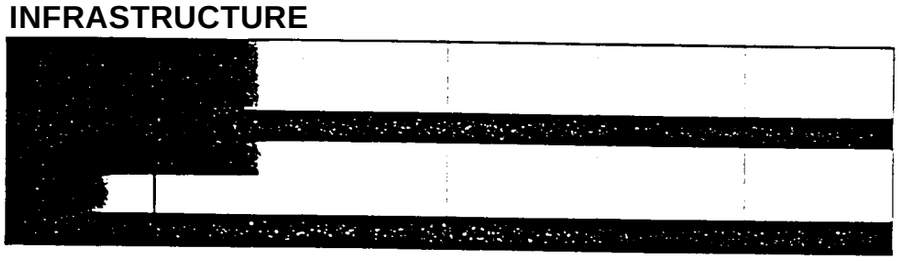
NATURAL GROWTH BY 1999	INFLUX DUE TO GON					Factor
	25	50	100	250	500	GON Influx Employee
	73	146	292	730	1460	influx Pop. due to GON
487	560	633	779	1217	1947	Incremental Pop. at 1999
4330	4403	4476	4622	5060	5790	Total Population at 1999

LAND AVAILABILITY



Housing
Office
Institutional
Community Use
Commercial
Industrial

INFRASTRUCTURE

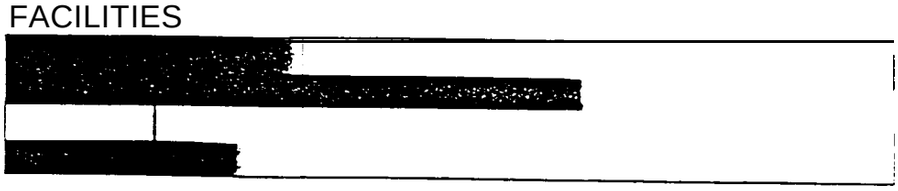


Water
Sewage
Solid Waste
Roads
Energy
Communications

ACCESS

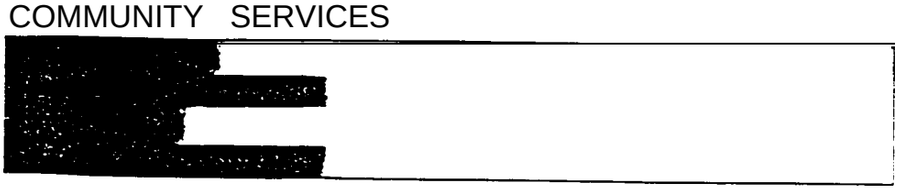
Air
Marine

FACILITIES



Office / Admin.
Municipal Bldgs.
Commercial
Housing

COMMUNITY SERVICES



Social Services
Educational
Health
Recreation

Chart 4

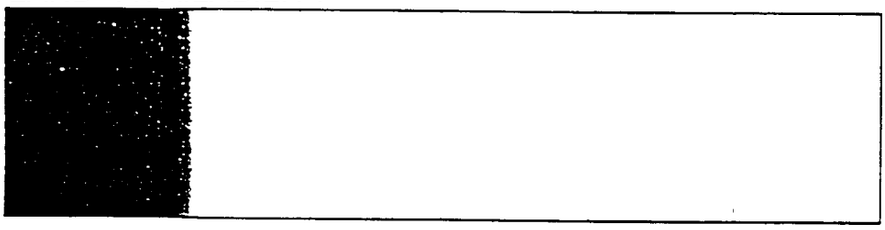
RAN KIN INLET

Population 1994: 1862
Natural Growth per Year: 52.2

Community Expansion Capability at Influx Levels of...

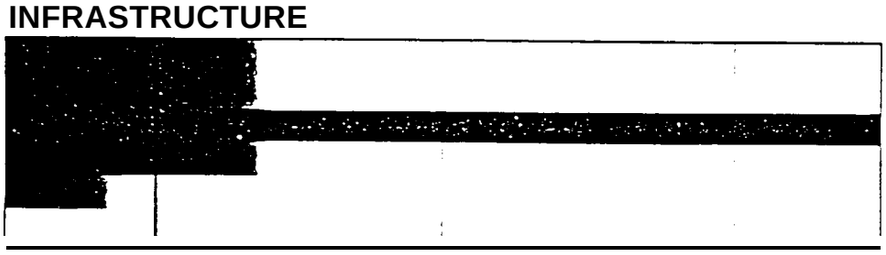
NATURAL GROWTH BY 1999	INFLUX DUE TO GON					Factor
	25	50	100	250	500	GON Influx Employee
	73	146	292	730	1460	Influx Pop. due to GON
261	334	407	553	991	1721	Incremental Pop. at 1999
2123	2196	2269	2415	2853	3583	Total Population at 1999

LAND AVAILABILITY



Housing
Office
Institutional
Community Use
Commercial
Industrial

INFRASTRUCTURE

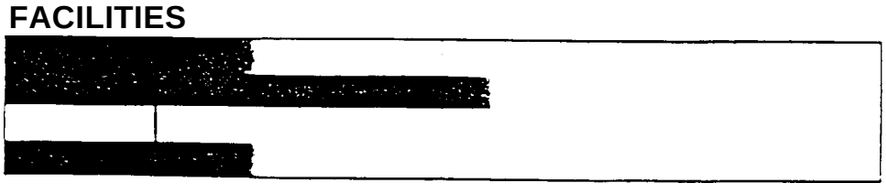


Water
Sewage
Solid Waste
Roads
Energy
Communications

ACCESS

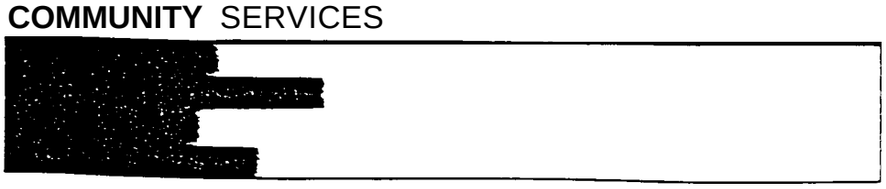
Air
Marine

FACILITIES



Office / Admin.
Municipal Bldgs.
Commercial
Housing

COMMUNITY SERVICES



Social Services
Educational
Health
Recreational