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**FINAL REPORT OF THE**  
***NWT SURVEY OF***  
***RESEARCH ACTIVITIES***  
***CONDUCTED IN 1993***

LEGISLATIVE ASSEMBLY  
APR 28 1995  
Yellowknife, N.W.T.

**Prepared by:**



**SCIENCE INSTITUTE**  
**OF THE NORTHWEST TERRITORIES**

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## **EXECUTIVE SUMMARY**

Northern people periodically raise concerns about the impact of research in their communities. To seek quantitative information about the role of research in the North, the Science Institute of the Northwest Territories, in collaboration with its licensing partners, the Department of Renewable Resources and the Prince of Wales Heritage Centre, undertook a survey of researchers licensed to conduct research in 1993.

The overall purpose of the survey was to characterize researchers involved in northern research and to identify the contribution that researchers make to both the northern economy and community knowledge about scientific research. Fifty-six percent of the researchers who received the survey responded to it, representing a cross-section of scientific disciplines and research agencies. Although the results of this survey cannot be used to make definitive conclusions, some general deductions can be made.

Specifically, the results of the survey show that a high percentage of research is conducted in the biophysical sciences. The majority of researchers are from southern agencies and generally have high education levels primarily in the sciences. Research teams are usually comprised of team members who visit the north, however, employees from the Northwest Territories play a significant role in the researcher and assistant technician positions. The data collection phase of the research cycle, the stage that is most likely to occur in the North, is the most costly phase of the research. A high proportion of the costs are for travel to, or in, the North.

The current requirements for research licenses do not appear to place an undue burden on researchers as the majority of researchers only require a scientists licence. Similarly, the current community contact requirement is effective in ensuring that researchers communicate to communities. However, although a high number of researchers communicate the results of their research through reports, less than half discuss their research results with community agencies.

The results of this survey provide a snapshot of the research community in the Northwest Territories in 1993. To have a more detailed and comprehensive analysis of the impact of research in the North, more information is required. Further study should include the collection of indepth research budget information from a stratified sample of researchers, surveys of communities impacted by researcher and key informant interviews with research agency personnel. The collection of data such as this over a number of years will enable the Science Institute to identify trends in scientific research and to draw conclusions that can be used to inform the design of scientific research policies in the Northwest Territories.

## **BACKGROUND**

The Northwest Territories, because of its unique biophysical and social environment, is the focal point of a significant amount of scientific research conducted by research agencies from the Northwest Territories, other parts of Canada and other countries around the world.

Northwest Territories legislation requires that scientific research be licensed by territorial agencies. The main agencies responsible for licensing research are the Science Institute of the Northwest Territories, the Department of Renewable Resources, and the Prince of Wales Northern Heritage Centre. The Science Institute of the Northwest Territories licenses scientific research in accordance with the NWT Scientists Act. Research conducted under the Wildlife Act requires a Wildlife Research Permit issued by the Department of Renewable Resources and archaeological research requires an Archaeologists Permit under the NWT Archaeological Sites Regulations. Archaeological Permits are coordinated by the Prince of Wales Northern Heritage Centre. The staff responsible for licensing in all three agencies work in close collaboration to ensure that requirements of all NWT legislation are met in the licensing process and that the affected communities are consulted.

Over the years, several themes with respect to research have emerged repeatedly in northern communities. First, northern communities want to be advised of the research taking place in their communities and want to be involved in the research whenever possible. Second, northern communities want some tangible benefits to accrue to northern communities. Third, northern communities want to ensure that research is relevant to issues that Northerners are concerned about.

The Science Institute, in collaboration with the Department of Renewable Resources and the Prince of Wales Northern Heritage Centre, set out to collect information with respect to these issues by surveying researchers who were licensed to conduct research in 1993. This report detail the responses to the survey.

## **SURVEY OBJECTIVES**

As noted above, the overall goal of the survey was to conduct a preliminary assessment of the role of scientific research in the Northwest Territories by examining research projects conducted in 1993 through a survey of researchers licensed to conduct research in that year. The objectives of the survey were to:

- estimate the value of research funding and expenditures;

- assess expenditures and educational opportunities provided by various research disciplines;
- identify characteristics of the NWT research community with respect to academic training, composition of research team etc.;
- assess by NWT region or research discipline, the number of licences, permits and reviews that NWT research activity require;
- characterize interactions between researchers and NWT communities; and
- assess researcher use of NWT research centres/stations.

This report forms the summary of the methods used in the survey, the results of the survey and an analysis of the survey data.

## **METHODS**

The 'Survey of Research Activities Conducted in 1993' was a collaborative effort between the Science Institute and other agencies responsible for licensing research in the Northwest Territories; specifically, the Government of the Northwest Territories Department of Renewable Resources and the Prince of Wales Northern Heritage Centre. The method adopted for this project was a mail-in survey of all researchers who were licensed to conduct research in 1993.

### **Survey Instrument**

The survey instrument was designed by the Science Administrator and reviewed by Science Institute staff and the permitting staff of the Department of Renewable Resources and the Prince of Wales Northern Heritage Centre. The survey, provided in Appendix A, was divided into four sections:

- nature of the research;
- economic of the research;
- interaction with residents of the NWT; and
- use of research centres.

The survey requested information solely about research projects conducted in the 1993 calendar year. Researchers were asked to complete a survey for each research project that they were involved in.

### **Survey Sample**

The survey sample was drawn from the Science Institute Research licence data base and from the data bases of the partner agencies, Department of Renewable Resources and the Prince of Wales Northern Heritage Centre. The survey was mailed to all researchers (292) who had been licensed to conduct research in the Northwest Territories in 1993. The survey was conducted in February 1994 and the deadline for receipt of completed surveys was March 18, 1994. The deadline was extended to April 31, 1994 to accommodate those researchers that responded late. A total of 164 completed surveys were received. This represents a response rate of 56%, a very high rate for a mail-in survey.

### **Collation and Analysis**

As noted above, completed surveys were submitted to the Science Institute in April of 1994. In May 1994, the principle researcher responsible for the survey resigned her position with the Science Institute and was unable to complete the study. Responsibility for the survey was assumed by the A/Assistant Executive Director.

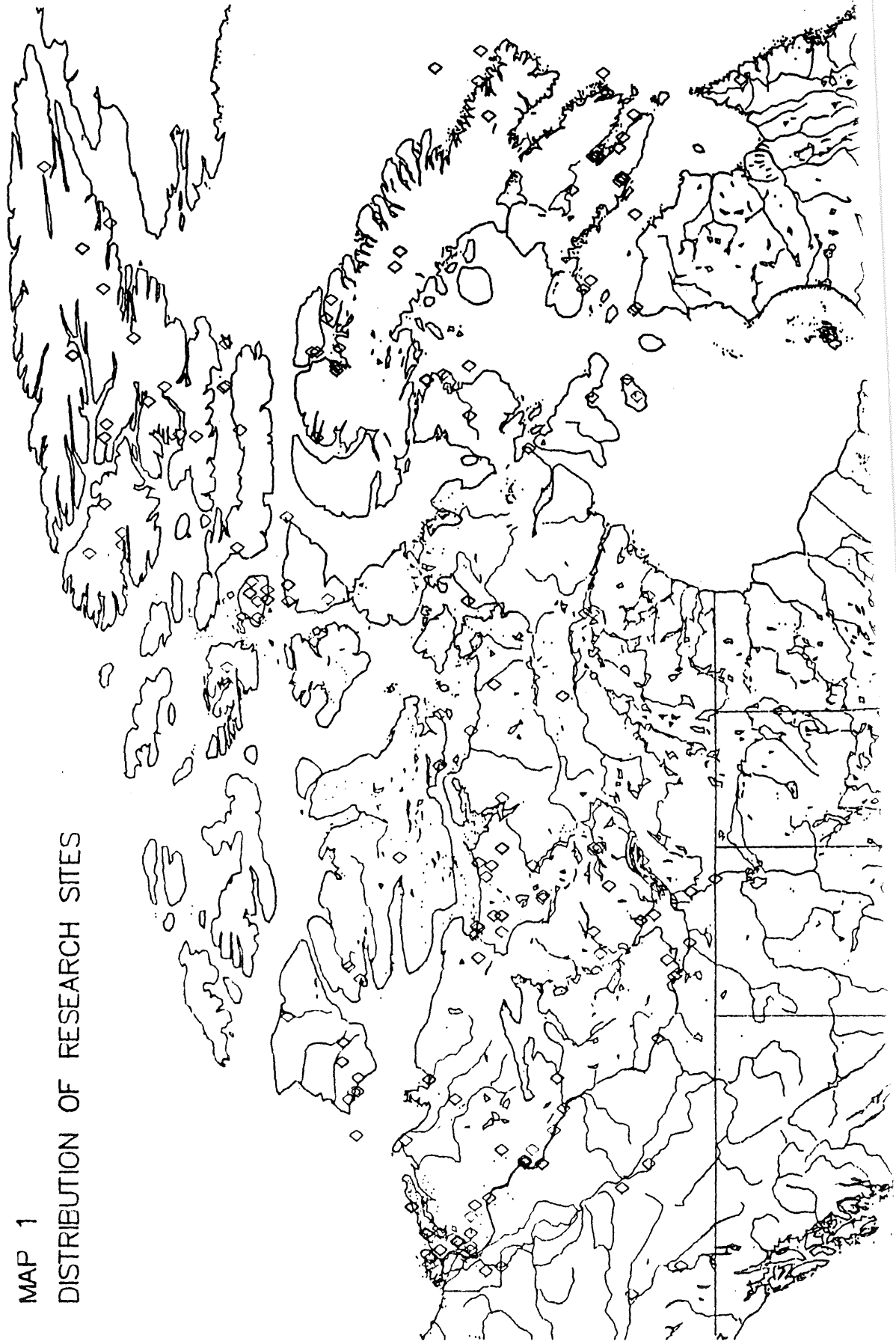
In the fall of 1994, a Paradox data base was designed for the survey and the results entered into the database. The results were collated and analyzed based on the objects detailed above. During this phase of the study, one question (Q14) was withdrawn because the question was unclear and did not yield a sufficient number of responses. All averages, unless otherwise indicated, are based on the total of the responses within a category divided by the total number of survey respondents.

### **Limitations of the Data**

The survey represents the views of the researchers who responded to the survey. These researchers were licensed researchers with involvement with one of the three licensing/permitting agencies in the Northwest Territories. There are a significant number of researchers who do not secure a license. The views of this group are not represented. Similarly, because a mail-in survey is self-selecting, it is reasonable to assume that the respondents are those researchers who are most interested in and committed to Northern research.

The results of this survey are also limited in providing an overall perspective of research issues in the North. A qualitative analysis of the responses shows that some of the questions were interpreted differently by each respondents. Further substantiating data is required in the research budget section to definitively establish the role of research in the economy. As well, for the analysis of research issues to be comprehensive and provide the perspective of all stakeholders, surveys of community agencies and licensing agencies are also required.

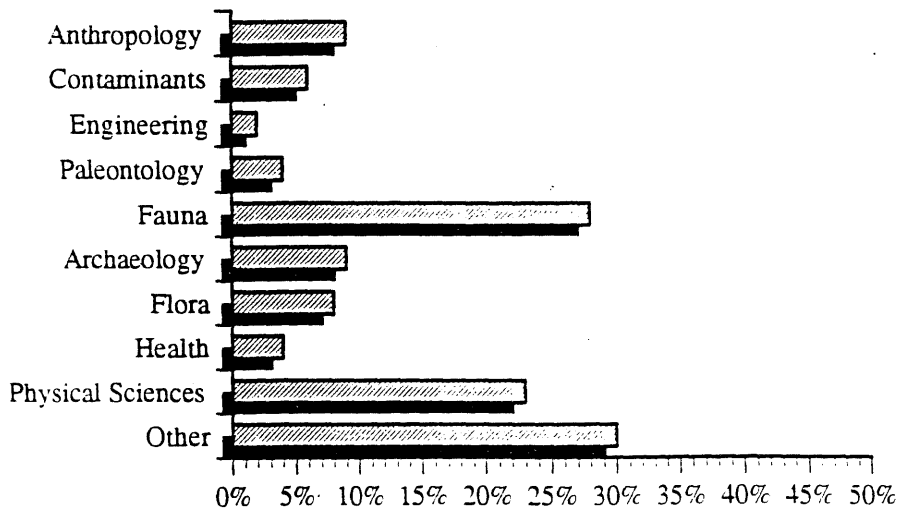
MAP 1  
DISTRIBUTION OF RESEARCH SITES



## THE RESEARCHERS THAT RESPONDED

The results of this survey show that the respondents represent a cross section of research disciplines and a range of research agencies. Figure 1 identifies the survey respondents by discipline of research in 1993.

**Figure 1. Percent of Respondents by Discipline**



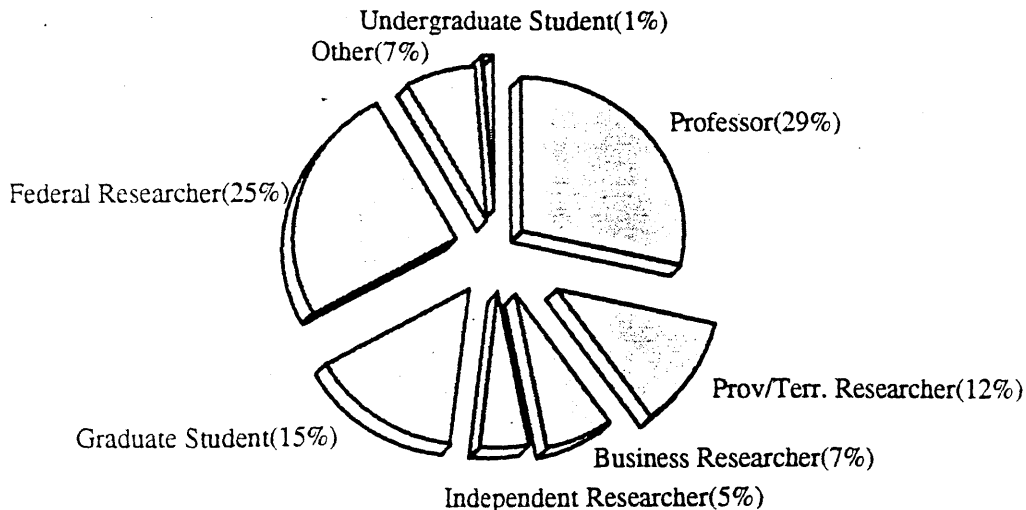
This data shows that overall the survey results characterize most research disciplines, however, the largest specific categories of research disciplines represented are fauna (28 percent) and physical sciences (23 percent). The respondents that identified their discipline as 'other' were generally from earth science or social science fields. The representation of research disciplines in this survey is comparable to the overall volume of research licenses issued by discipline. For example, in 1993-94, 36 percent of the Scientists licenses issued were for biological research, 33 percent for earth/physical sciences, 23 percent for social sciences, four percent for health and four percent for palaeontology.

This research was conducted in locations across the Northwest Territories. Map 1 shows the research sites for which geographic coordinates could be identified. The distribution of research sites for 1993 is widely dispersed, however, the greatest concentrations are in the MacKenzie delta, Coppermine, South Baffin and High Arctic Regions.

The majority of researchers who responded were from universities or federal agencies. Figure 2 shows that 29 percent of the principle investigators who responded to the survey were university professors.



**Figure 2. Percent of Researchers By Position**



Twenty-five percent are federal researchers and 15 percent are graduate students. Only 12 percent considered themselves to be affiliated with provincial/territorial agencies.

The educational level of respondents was generally high. Fifty-three percent of respondents have doctoral level qualifications (43 percent in the sciences, eight percent in the arts, two percent 'other').<sup>1</sup> Twenty six percent have a Master's level degree (17 percent have an MSc and 9 percent possess an MA). The remaining 21 percent of respondents was comprised of nine percent with a Bachelor of Arts degree, nine percent with a Bachelor of Science degree and three percent categorized as 'other'.

The researchers who responded to the survey are from all parts of Canada and the United States. However, a higher concentration of respondents are from Ontario (27 percent), the Northwest Territories (21 percent), Alberta (13 percent) and the United States (17 percent).

### **Size of Research Party**

The number of participants in research projects also affects the degree of impact of the research project on Northern communities. Eighty-nine percent of the research projects represented in this study involved two or more participants in research activities in the Northwest Territories. The average size of the research parties was seven participants. Eighty percent of the research parties were composed of 1-9 members, 12 percent had 10 -19 members and five percent had over 20 members.

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<sup>1</sup>The averages for education levels are based on the total number of respondents who answered this question.

Because the research projects are often southern based, some research projects involve participants who do not visit the Northwest Territories. Although in the majority of cases, all members of the research team visited in the Northwest Territories in 1993, 44 percent of the respondents were involved in projects in which some members of the research team did not visit the Northwest Territories in that calendar year. The average number of research team members who did not visit the Northwest Territories was two.

**Role of Research Team Members**

As noted above, a research team is often comprised of several members, some of whom participate at the research site and some of whom work at the research agency. As well, many research projects attract volunteers who work with the project solely for employment or academic experience.

Table 1 details the average number of individuals/project involved in the research projects in varying capacities and the average number of days/project these individuals stayed in the Northwest Territories.

**Table 1. Types of Positions on Research Teams and Numbers of Days Worked<sup>2</sup>**

Type of Position	Average # of Paid employees	Average # of Days in NWT	Average # of Volunteers	Average # of Days in NWT
Researchers	2	55	.5	13
Assistant/Technician	3	48	.5	8
Camp Manager	*	*	*	*
Bear Monitor	*	*	*	*
Translator	*	*	*	*
Other	.5	6	*	*

Overall, the results of the survey suggest that a significant proportion of research projects in the Northwest Territories involve paid researchers and assistants/technicians. Specifically, seventy-seven percent of research teams included a paid researcher. Table 1 shows that the average number of paid researchers per research project was two and the average number of

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<sup>2</sup>All data rounded to the nearest .5

<sup>3</sup> Although some research parties indicated that their research team included individuals in these categories, there was insufficient data collected to draw conclusions.

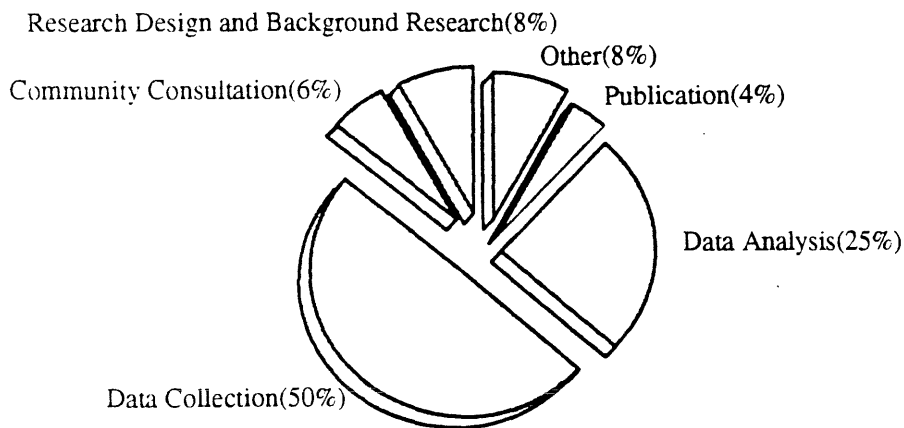
days that the researcher stayed in the Northwest Territories was 55. With respect to assistants/technicians, twenty-three percent of research teams included a paid assistant/technician. As noted above, the average number of assistants technicians per research project was 3 and the average number of days that the assistant/technician stayed in the Northwest Territories was 48.

The role of volunteers in research projects, in terms of numbers of people and length of stay in the Northwest Territories, is not significant. However, the role of volunteers is greatest in the researcher and assistant/technician positions. The data shows that, while 23 percent of respondents involved volunteers as researchers and 22 percent involved volunteers as assistant/technicians.

### **ALLOCATION OF RESEARCH BUDGETS**

To estimate the way in which research dollars are allocated, the average expenditures in each category was calculated. Figure 3 shows a comparison of the research expenditures as a proportion of the total cost of a research project.

**Figure 3. Allocation of Financial Resources**

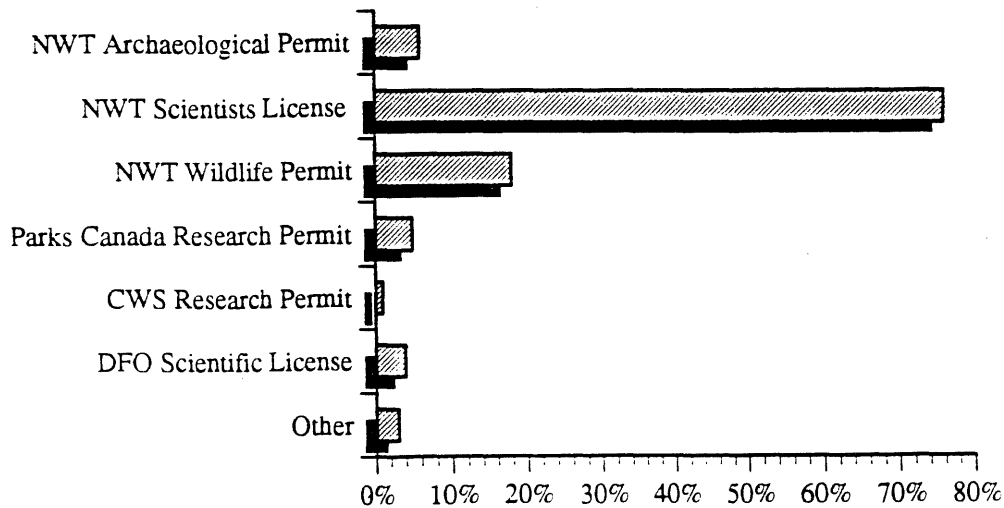


Overall, the average total cost per project of the research projects for which budgets were reported was \$44,349. A review of the way in which financial resources were expended in the project cycle for the 1993 research activities shows that respondents spent an average of \$2,793 on research design and background research (8 percent of project costs), an average of \$29 on licenses and permits (.06 percent), an average of \$2,933 (6 percent) on community consultation, \$22,098 on data collection (50 percent), \$11,080 (25 percent) on data analysis, \$1785 on publication (4 percent) and \$3,631 (8 percent) on other costs.

### Licensing Requirements

Researchers have, in the past, expressed concern that the licensing and permitting process in the Northwest Territories places a burden on research in the Northwest Territories. The results of this survey suggest that the licensing process with the greatest impact on the greatest number of researchers is the NWT Scientists License. Figure 4 shows that 76 percent of the respondents required a NWT Scientists License.

**Figure 4. Licenses/Permits Required By Respondent**



Eighteen percent of respondents required a NWT Wildlife Permit and 6 percent required a NWT Archaeological Permit.

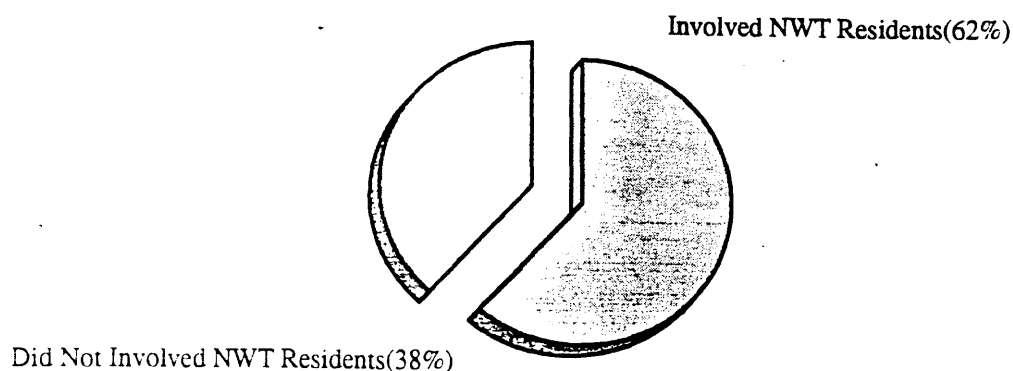
A similar assessment of requirements for land use access permit, environmental impact assessments, collection or banding/tagging permits and miscellaneous other permits shows only a small number of respondents were required to have additional permits. Specifically, 16 percent of respondents required environmental impact assessments, 13 percent needed land use permits for Federal Crown Land and 9 percent required land use permits for private lands within Aboriginal Land Claim areas. Five percent of respondents required a bird banding or collection permit from the Canadian Wildlife Service while only one respondent required a GNWT Renewable Resources Forestry Permit. Within the miscellaneous permit/licenses category, 36 percent of respondents required firearms permits, 16 percent required radio permits and 5 percent needed import/export permits for animals.

### INVOLVEMENT OF NORTHERNERS IN RESEARCH

Overall, a high percentage of respondents involved Northern residents in their research work in some capacity. Figure 5 shows that 62 percent of all respondents involved NWT residents

in their research activities.

**Figure 5. Percent of Respondents That Involved NWT Residents in Research**



One of the ways in which research projects involved NWT residents was as employees on a short term basis. Table 2 shows the range of positions that Northerners held and the total number of days that each individual was involved in the research project.

**Table 2 Characteristics of Positions Held By Residents of the NWT<sup>4</sup>**

Type of Position	Average # of Paid employees	Average # of Days in NWT	Average # of Volunteers	Average # of Days in NWT
Researchers	.5	16	**** <sup>5</sup>	****
Assistant/Technician	1	34	****	****
Camp Manager	****	****	****	****
Bear Monitor	****	****	****	****
Translator	****	****	****	****
Other	1	5	****	****

The majority of respondents, who involved N.W.T. residents in their projects, involved them

<sup>4</sup>All data rounded to the nearest .5

<sup>5</sup> Although some research parties indicated that their research team included individuals in these categories, there was insufficient data collected to draw conclusions.

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as paid employees. According to the data provided in Table 2, the total number of NWT residents hired by research projects as researchers in 1993, based on 300 research projects per year, was approximately 150 and the total person days of employment accumulated was approximately 2400. The same calculation for assistants/technicians shows that the total number of NWT residents hired as assistants/technicians in 1993 was approximately 300 and the total number of person days of employment accumulated was approximately 10,200.

The total number of NWT residents hired in the camp manager, translators, bear monitors, or other categories was small, however, 35 research projects (21 percent) hired employees in at least one of these categories for approximately five days.

The wage of NWT employees of research projects provides some insight into the impact on the economies of communities. The average income per day of NWT employees involved in the research projects that are represented in this survey was:<sup>6</sup>

Researcher	\$200
Camp Manager	160
Translator	100
Assistant/Technician	130
Bear Monitor	180
Other	200

This means that the approximate total value of wages paid to NWT residents by research projects is \$1,850,000.

Similarly, the costs estimates of service purchased in the Northwest Territories show the benefits accrued to the northern economy generally. The average cost to researchers of specific services is detailed below:

Travel:	Airplane:	Scheduled	\$2,297	Charter	\$3,578
	Helicopter:	Charter	\$2,547	Other	\$ 271
	Car:	Rental	\$ 116	Taxi	\$ 54
	Boat:	Rental	\$ 613	Other	\$ 96
Lodgings:	Hotel/Motel		\$643		
	Private		\$253		
	Other		\$199		

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<sup>6</sup>This data is based on the total daily wages in each category divided by the number of respondents who provided data.

Food: Groceries \$1,264  
Bought Meals \$ 291

Miscellaneous: \$1,244

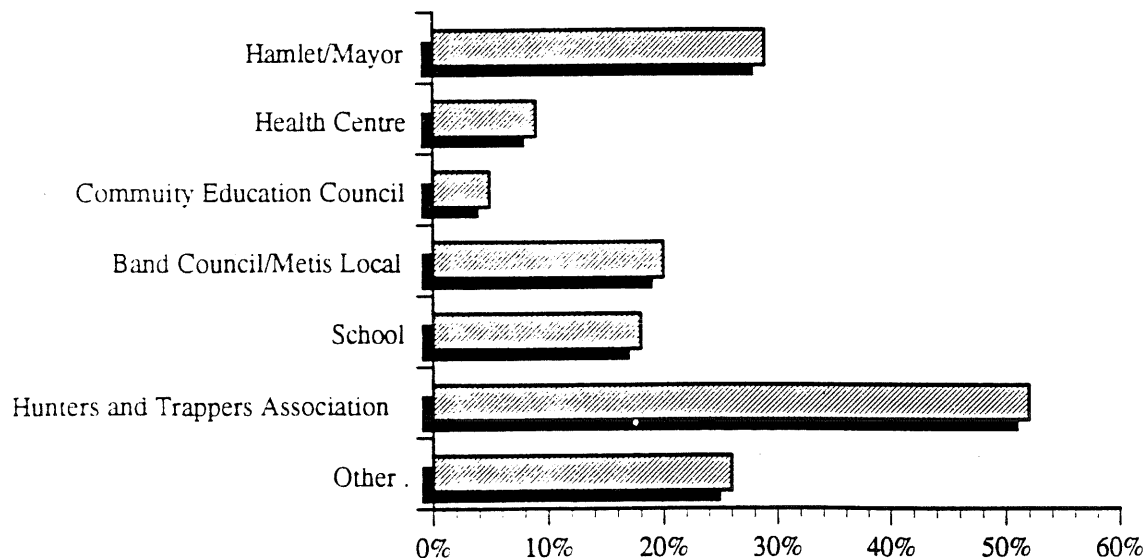
The average total expenditures for services purchased from the NWT private sector was \$13,466 per research project. Assuming that there is approximately 300 research projects licensed by the three licensing agencies in the Northwest Territories, the overall contribution to the economy of the Northwest Territories from expenditures of research parties was approximately \$4,000,000 in 1993. Air travel accounts for a large component of this (approximately \$2,500,000). Expenditures for purchases account for approximately \$1,500,000 of this overall contribution.

The total contribution to the Northwest Territories economy from licensed research, including all expenditures and wages, is therefore approximately \$5,850,000.

### Community Involvement

Overall, 85 percent of respondents had interacted with communities in the Northwest Territories. Figure 6 indicates the types of community agencies that the researcher interacted with.

Figure 6. Types of Agencies Contacted



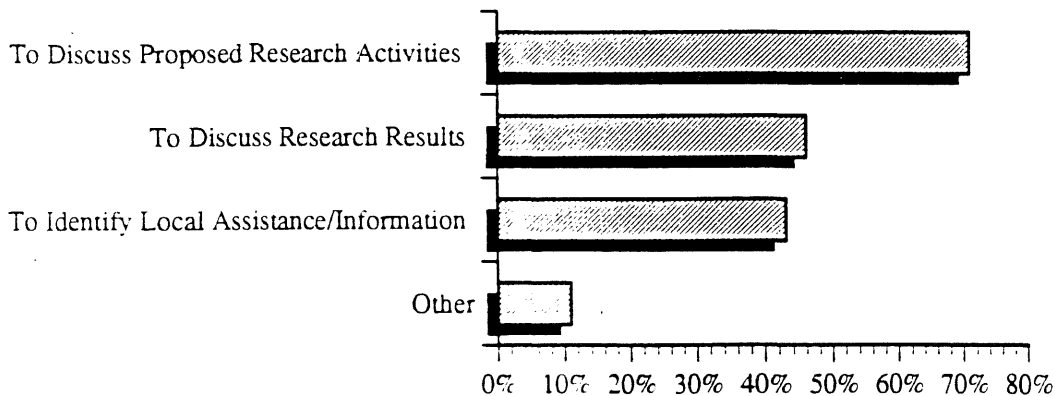
The agency types most frequently contacted are the Hunters and Trappers Associations(52

percent) and the Hamlet Council/Mayor (29 percent). In many cases, researchers contacted several different groups in the community.

Several different government or community agencies play a role in advising researchers to contact communities that could in some way be impacted by their research. The highest percentage of respondents (35 percent) who contacted communities indicated that the communities were identified for them by 'other' sources. In the majority of these cases, this means that the respondent was aware of the community groups that they should contact from prior experience conducting research in the North. Twenty-nine percent of the respondents were advised by the Science Institute and 19 percent by the Department of Renewable Resources. Polar Continental Shelf advised researchers in 13 percent of the responses. The Prince of Wales Northern Heritage Centre and various community agencies played a role in seven percent and five percent of responses respectively.

Respondents contacted communities for a variety of different reasons and through a range of different means. Figure 7 shows that the majority of researchers (71 percent) contacted community agencies to discuss proposed research activities.

**Figure 7. Purpose of Community Interactions**



The researchers communicated to communities about proposed research activities by mail, by phone and/or in person; however, researchers most frequently (56 percent of all researchers) communicated by mail.

Forty-six percent of all researchers discussed the results of their research with the community agencies either by mail (29 percent), by telephone (21 percent) and/or in person (29 percent). Forty-three percent of researchers contacted community agencies for assistance or information.



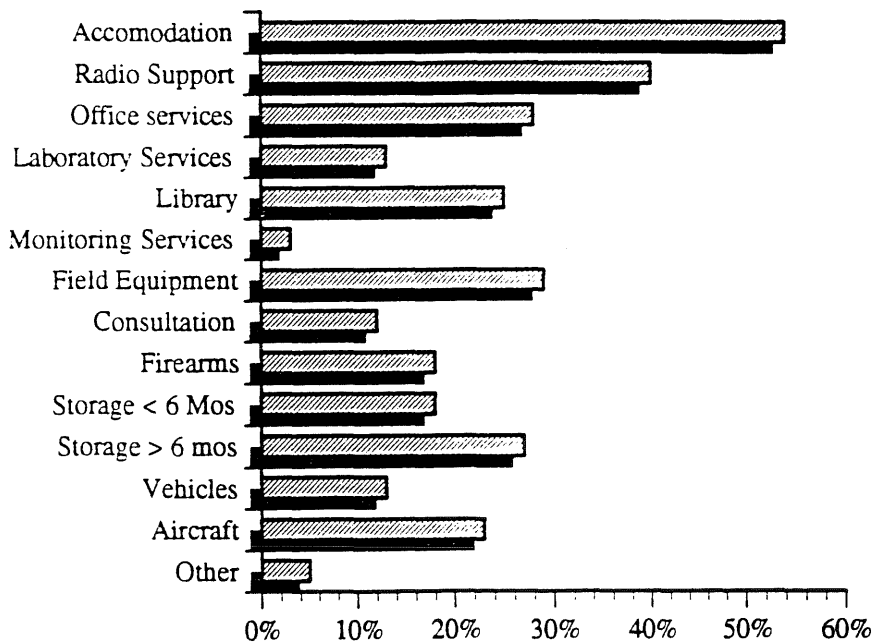
Seventy-eight percent of all respondents communicated the results of their 1993 research to residents of the Northwest Territories through a research report. Thirty-six percent also gave talks about their research in the North and 22 percent made poster presentations about their research activities.

### USE OF RESEARCH CENTRES AND STATIONS

A total of 110 respondents (67 percent) reported that they had used the services of either the Science Institute Research Centres or Polar Continental Shelf Stations. Respondents indicated that they used the Science Institute Research Centres (40 percent of respondents) just slightly more frequently than Polar Continental Shelf Stations (37 percent). Of those researchers that used the Science Institute Research Centres, 62 percent used the Inuvik Research Centre, 30 percent used the Iqaluit Research Centre, 9 percent the Igloodik Research Centre and 1.5 percent used the South Slave Research Centre. One respondent used two research centres during the course of the research, however, 35 researchers (21 percent) used both a Science Institute Research Centre and a Polar Continental Shelf Station.

Figure 8 shows that researchers used a wide range of services of the research centres/stations.

Figure 8 Services Used at Research Centres



The majority of the researchers using the centres/stations used several services at each centre/station. The service most frequently used by researchers at the research centres/stations was the accommodation (54 percent). However, the combination of services used by research varied widely.

## **SERVICES REQUIRED**

Researcher were asked to identify any additional services not currently provided by the researcher centres that they feel are needed. The only theme that emerged repeatedly was that the existing services are excellent and make a substantial contribution to the research project. This view was expressed with respect to all research centres, licensing agencies and Polar Continental Shelf. Many researchers also referred to the friendliness and support of research centre staff, government agencies and community members.

With respect to services of research centres/stations, the specific suggestions that were identified by more than one respondent were:

- ☛ more lab facilities are required;
- ☛ assistance with coordination and screening of local field assistants would be useful;
- ☛ information in advance about research services that communities could use; and
- ☛ a research centre is required in the central Arctic.

Some researchers expressed concern that the user fees will adversely impact research in the North while others felt that user fees were either a good idea or at least a reasonable expectation. Two researchers suggested that funding support for researchers to hire northern assistants would be encourage researchers to involve Northerners as employees more often.

Several researchers referred to the cumbersome nature of the licensing process. As well, the survey was viewed by some researchers as unclear and not appropriate to their research. Many of these respondents suggested that a single licensing process be established and a more simplified survey method be adopted.

## **EMERGING PATTERNS**

The data collected in this survey can be used primarily to suggest that specific patterns were evident in the research sector in the Northwest Territories in 1993. The general patterns that were demonstrated are:

1. The biophysical sciences play a larger role in research conducted in the North in terms of volume than other disciplines.
2. Licensed scientific research is conducted by researchers with high education levels primarily in the sciences.
3. Research in the north is primarily conducted by southern agencies.
4. The majority of research team members visit the North during the course of research.
5. Research teams are generally comprised of paid employees; however, volunteers play a significant role in the researcher and assistant technician positions.
6. A high percentage of researchers hire NWT residents as researchers or assistants/technicians.
7. The most costly stage of the research cycle is the data collection phase.
8. Research license requirements do not place an undue burden on researchers as the majority of researchers only require a scientists licence.
9. The current community contact requirement is effective in ensuring that researchers communicate to communities.
10. A high number of researchers communicate the results of their research through reports but less than half discuss their research results with community agencies.
11. The Science Institute Research Centres and the Polar Continental Shelf Stations are effective mechanisms for providing logistical support to scientific research in the North.

# APPENDIX A

**SURVEY OF NWT RESEARCH ACTIVITIES CONDUCTED IN 1993**

**SECTION 1: INFORMATION ABOUT YOUR RESEARCH PROJECT**

**Q1. What is the discipline of your 1993 research? (Check appropriate discipline(s))**

- |   |  |
|---|--|
| <input type="checkbox"/> Anthropology, Traditional Knowledge      | <input type="checkbox"/> Archaeology                       |
| <input type="checkbox"/> Contaminants                             | <input type="checkbox"/> Flora (Plant, Lichen, Fungi)      |
| <input type="checkbox"/> Engineering                              | <input type="checkbox"/> Health (Physical, Mental, Social) |
| <input type="checkbox"/> Paleontology                             | <input type="checkbox"/> Physical Sciences                 |
| <input type="checkbox"/> Fauna (mammal, bird, fish, invertebrate) |  |
| <input type="checkbox"/> Other: _____                             |  |

**Q2. Where was your research conducted?**  
(List all sites visited during 1993: identify a region if appropriate to your project)

Latitude:	Longitude:	Place Name (if available):
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**Q3. As primary investigator of your project, what is your position? (Check one)**

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Professor                     | <input type="checkbox"/> Graduate Student               | <input type="checkbox"/> Undergraduate Student |
| <input type="checkbox"/> Prov./Terr. Researcher        | <input type="checkbox"/> Federal Researcher             |  |
| <input type="checkbox"/> Researcher (Private Business) | <input type="checkbox"/> Researcher (Aboriginal Agency) |  |
| <input type="checkbox"/> Independent Researcher        | <input type="checkbox"/> Other: _____                   |  |

**Q4. What is your education and/or training as a researcher? (Check one)**

- |  |                                |                                   |              |
|--|--------------------------------|-----------------------------------|--------------|
| <input type="checkbox"/> Doctorate of Philosophy (Ph.D.) |                                |                                   |              |
|  | Arts: <input type="checkbox"/> | Science: <input type="checkbox"/> | Other: _____ |
| <input type="checkbox"/> Masters:                        | Arts: <input type="checkbox"/> | Science: <input type="checkbox"/> | Other: _____ |
| <input type="checkbox"/> Bachelor:                       | Arts: <input type="checkbox"/> | Science: <input type="checkbox"/> | Other: _____ |
| <input type="checkbox"/> College Diploma:                | Arts: <input type="checkbox"/> | Science: <input type="checkbox"/> | Other: _____ |
| <input type="checkbox"/> Other: (please specify) _____   |                                |                                   |              |

**Q5. Please identify your primary place of residency. (Check one)**

- |  |   |                                   |  |
|--|---|-----------------------------------|--|
| <input type="checkbox"/> Alberta       | <input type="checkbox"/> British Columbia | <input type="checkbox"/> Manitoba | <input type="checkbox"/> New Brunswick |
| <input type="checkbox"/> Newfoundland  | <input type="checkbox"/> Nova Scotia      | <input type="checkbox"/> NWT      | <input type="checkbox"/> Ontario       |
| <input type="checkbox"/> PEI           | <input type="checkbox"/> Saskatchewan     | <input type="checkbox"/> Quebec   | <input type="checkbox"/> Yukon         |
| <input type="checkbox"/> United States | <input type="checkbox"/> Other: _____     |                                   |  |

**SURVEY OF NWT RESEARCH ACTIVITIES CONDUCTED IN 1993 (continued)**

**Q6. What licences, permits and reviews did your research project require? (Check all that applied to your project)**

Research Licence/Permit:

- NWT Archaeologists Permit (Prince of Wales Northern Heritage Centre)
- NWT Scientists Licence (Science Institute of the NWT)
- NWT Wildlife Permit (GNWT Department of Renewable Resources)
- Research Permit in National Park (Parks Canada)
- Research Permit in Migratory Bird Sanctuary or Wildlife Area (Canadian Wildlife Service)
- Scientific Licence: Fish and Marine Mammals (Department of Fisheries and Oceans)
- Other: \_\_\_\_\_

Land Use or Access Permit and/or Environmental Review:

- Environmental Impact Assessment (please specify):  
Federal Review (EARP)  Inuvialuit Review (Environmental Impact Screening)
- Land Use Permit: Federal Crown Lands (Department of Indian and Northern Affairs)
- Land Use Permit: Private Lands within Aboriginal Land Claims (please specify):  
Inuvialuit  Gwich'in  Nunavut
- Land Use Permit: Territorial Lands (GNWT Municipal and Community Affairs)
- Migratory Bird Sanctuary Permit (Canadian Wildlife Service)
- Other: \_\_\_\_\_

Collection or Banding/Tagging Permit:

- Bird Banding Permit (Canadian Wildlife Service)
- Collection Permit (Canadian Wildlife Service)
- Forestry Permit (GNWT Department of Renewable Resources)
- Other: \_\_\_\_\_

Miscellaneous Permits or Licences:

- Certificate of Health Permit (Veterinary)
- Cultural Property Export Permit
- Import/Export Permit for Animals (CITES Management Authority)
- Firearms Acquisition Permit
- Habitat Disturbance or Explosives Licence (Department of Fisheries and Oceans)
- Medical Licence (GNWT Department of Safety and Public Services)
- Radio Permit (Department of Communications)
- Other: \_\_\_\_\_

**Q7. How many individuals participated in your research activities while you collected data in the NWT? (Include yourself, all staff, volunteers, NWT and non-NWT residents, etc., who were in the NWT in 1993)**

total # individuals who visited the NWT in 1993 = \_\_\_\_\_

**SURVEY OF NWT RESEARCH ACTIVITIES CONDUCTED IN 1993 (continued)**

**Q8. How many individuals of your research team did not visit the NWT during 1993? (e.g., support staff, laboratory staff, etc.)**

total # individuals who did not visit the NWT in 1993 =     

**Q9. Provide the number of individuals associated with your project in each of the following types of positions and estimate the total number of days that individuals stayed in the NWT: (e.g., 5 individuals X 4 days (each) = 20 days)**

Researchers:      # of Paid Researchers:              Total # of days in the NWT:          
                          # of Volunteers:                              Total # of days in the NWT:        

Assistant/Technician (formal involvement in research activities):

                         # of Paid Employees:              Total # of days in the NWT:          
                          # of Volunteers:                              Total # of days in the NWT:        

Camp Manager (no formal involvement in research activities; duties may include cook, camp maintenance, equipment repair, etc.):

                         # of Paid Employees:              Total # of days in the NWT:          
                          # of Volunteers:                              Total # of days in the NWT:        

Bear Monitor (exclusive duties):

                         # of Paid Employees:              Total # of days in the NWT:          
                          # of Volunteers:                              Total # of days in the NWT:        

Translator (exclusive duties):

                         # of Paid Employees:              Total # of days in the NWT:          
                          # of Volunteers:                              Total # of days in the NWT:        

Other (Please specify):

                         # of Paid \_\_\_\_\_:              Total # of days in the NWT:          
                          # of Volunteer \_\_\_\_\_:              Total # of days in the NWT:

SURVEY OF NWT RESEARCH ACTIVITIES CONDUCTED IN 1993 (continued)

SECTION 2: INFORMATION ABOUT ECONOMICS

Q10. Did you involve NWT residents in your research activities?

\_\_ Yes                      \_\_ No

Q11. If you answered 'Yes' to Question 10, please provide information on the types of positions that NWT residents held and estimate the total number of days that individuals were involved: (e.g., 5 individuals X 4 days (each) = 20 days)

Researchers:      # of Paid Researchers:    \_\_      Total # of days in the NWT:    \_\_  
   # of Volunteers:            \_\_      Total # of days in the NWT:    \_\_

Assistant/Technician (formal involvement in research activities):

   # of Paid Employees:    \_\_      Total # of days in the NWT:    \_\_  
   # of Volunteers:            \_\_      Total # of days in the NWT:    \_\_

Camp Manager (no formal involvement in research activities; duties may include cook, camp maintenance, equipment repair, etc.):

   # of Paid Employees:    \_\_      Total # of days in the NWT:    \_\_  
   # of Volunteers:            \_\_      Total # of days in the NWT:    \_\_

Bear Monitor (exclusive duties):

   # of Paid Employees:    \_\_      Total # of days in the NWT:    \_\_  
   # of Volunteers:            \_\_      Total # of days in the NWT:    \_\_

Translator (exclusive duties):

   # of Paid Employees:    \_\_      Total # of days in the NWT:    \_\_  
   # of Volunteers:            \_\_      Total # of days in the NWT:    \_\_

Other (Please specify):

   # of Paid \_\_\_\_\_:    \_\_      Total # of days in the NWT:    \_\_  
   # of Volunteer \_\_\_\_\_:    \_\_      Total # of days in the NWT:    \_\_

Q12. Estimate the daily wage provided to NWT employees who participated in your project: (Use the position descriptions of Question 11; please attach additional information if necessary)

Researcher:      \$ \_\_\_\_ per day (average)      Assistant/Technician:    \$ \_\_\_\_ per day (average)  
Camp Manager: \$ \_\_\_\_ per day (average)      Bear Monitor:            \$ \_\_\_\_ per day (average)  
Translator:      \$ \_\_\_\_ per day (average)      Other: \_\_\_\_\_ \$ \_\_\_\_ per day (average)



**SURVEY OF NWT RESEARCH ACTIVITIES CONDUCTED IN 1993 (continued)**

**Q13. Provide cost estimates on services which you purchased from the NWT private sector (e.g., individuals, groups, communities and/or companies) for your 1993 research activities? Please note: do not include services purchased from or provided by either the territorial or federal governments. Government services are addressed in Question 14**

<u>Travel:</u>	Airplane:	Scheduled	\$ _____	Charter	\$ _____
	Helicopter:	Charter	\$ _____	Other	\$ _____
	Car:	Rental	\$ _____	Taxi	\$ _____
	Boat:	Rental	\$ _____	Other	\$ _____

<u>Lodgings:</u>	Hotel/Motel	\$ _____	
	Private	\$ _____	
	Other	\$ _____	( _____ )

<u>Food:</u>	Groceries	\$ _____
	Bought Meals	\$ _____

<u>Misc.:</u>	Storage Space	\$ _____	
	Office Space	\$ _____	
	Field Equipment	\$ _____	
	Communication	\$ _____	
	Other	\$ _____	( _____ )

**Q14. Provide cost estimates on services which you purchased from or were donated by territorial and/or federal government agencies.**

<u>Travel:</u>	Airplane:	Scheduled	\$ _____	Charter	\$ _____
	Helicopter:	Charter	\$ _____	Other	\$ _____
	Car:	Rental	\$ _____	Taxi	\$ _____
	Boat:	Rental	\$ _____	Other	\$ _____

<u>Lodgings:</u>	Hotel/Motel	\$ _____	
	Private	\$ _____	
	Other	\$ _____	( _____ )

<u>Food:</u>	Groceries	\$ _____
	Bought Meals	\$ _____

<u>Misc.:</u>	Storage Space	\$ _____	
	Office Space	\$ _____	
	Field Equipment	\$ _____	
	Communication	\$ _____	
	Other	\$ _____	( _____ )

**SURVEY OF NWT RESEARCH ACTIVITIES CONDUCTED IN 1993 (continued)**

**Q15. How much financial support did you receive to conduct your 1993 research activities? (Estimate total amounts for each category)**

Grants, Scholarships: \$ \_\_\_\_\_  
 Salaries: \$ \_\_\_\_\_  
 Agreements/Contracts: \$ \_\_\_\_\_  
 Other: ( \_\_\_\_\_ ) \$ \_\_\_\_\_

**Q16. How were your financial resources spent for your 1993 research activities? (Estimate total amounts for each category)**

Research Design and Background Research: \$ \_\_\_\_\_  
 Licence/Permit Fees: \$ \_\_\_\_\_  
 Community Consultation (travel, materials, etc.): \$ \_\_\_\_\_  
 Data Collection (travel, accommodation, etc.): \$ \_\_\_\_\_  
 Data Analysis (lab work, analyses, write-up): \$ \_\_\_\_\_  
 Publication (translation, printing, etc.): \$ \_\_\_\_\_  
 Other: ( \_\_\_\_\_ ) \$ \_\_\_\_\_

**SECTION 3: INFORMATION ABOUT COMMUNITY INTERACTION**

**Q17. With which NWT community(s) did you interact? (Provide community name(s))**

\_\_\_\_\_

**Q18. With what types of community agency(s) did you interact? (Check appropriate agency(s))**

Hamlet Council/Mayor                       Band Council/Metis Local  
 Hunters' and Trappers' organization     Community Education Council  
 School     Health Centre, Nursing Station or Hospital  
 Other: \_\_\_\_\_

**Q19. How were these community agencies identified to you? (Check appropriate item)**

NWT Department of Renewable Resources     Prince of Wales Northern Heritage Centre)  
 Science Institute of the Northwest Territories     Polar Continental Shelf Project  
 NWT community agency                               Other: \_\_\_\_\_

**Q20. What was the purpose of your interactions with these community agencies and how did you liaise? (Check appropriate items)**

to discuss your proposed research activities:    mail/FAX: \_\_\_\_\_ telephone: \_\_\_\_\_ in person: \_\_\_\_\_  
 to discuss the results of your research:            mail/FAX: \_\_\_\_\_ telephone: \_\_\_\_\_ in person: \_\_\_\_\_  
 to identify local assistance/information:            mail/FAX: \_\_\_\_\_ telephone: \_\_\_\_\_ in person: \_\_\_\_\_  
 other: \_\_\_\_\_:    mail/FAX: \_\_\_\_\_ telephone: \_\_\_\_\_ in person: \_\_\_\_\_

**SURVEY OF NWT RESEARCH ACTIVITIES CONDUCTED IN 1993 (continued)**

**Q21. How have you communicated the results of your 1993 research activities to NWT residents and/or agencies? (Check appropriate items: indicate your proposed method if you have not yet provided this to residents/agencies)**

- papers/reports       videos       seminars/talks       poster displays  
 hands-on experience (eg., site visits, plant/rock identification, exercises, etc.)  
 other: \_\_\_\_\_

**Q22. What types of media do you use to communicate your research to NWT residents and/or agencies? (Check appropriate items)**

	Do you provide copies of these items to the residents/agencies?	
	Yes	No
<input type="checkbox"/> slides	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> videos	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> photographs	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> text	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> other: _____	<input type="checkbox"/>	<input type="checkbox"/>

**SECTION 4: USE OF RESEARCH CENTRES AND STATIONS**

**Q23. Which Research Centres and/or Stations did you use during your 1993 research activities? (Check appropriate items)**

Science Institute Research Centres:       Inuvik       Igloolik  
     Iqaluit       South Slave (Fort Smith)

Polar Continental Shelf Stations:       Resolute       Tuktoyaktuk

Other Stations/Cabins: (Specify agency's name, station location)

\_\_\_\_\_

\_\_\_\_\_

**Q24. What types of services did you use at these Centres and Stations? (Check appropriate items)**

Accommodation       Radio Support       Office Services       Laboratory Services  
 Library       Monitoring Services       Field Equipment       Consultation  
 Firearms       Storage < 6 mnth.       Storage > 6 mnth.

Vehicles: Car/Truck       Boat       Snowmobile       ATV  
 Aircraft: Fixed Wing       Rotor

Other: \_\_\_\_\_

**SURVEY OF NWT RESEARCH ACTIVITIES CONDUCTED IN 1993 (continued)**

**Q25. What services are not presently provided by the Centres and Stations that you would like to see provided?**

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**Your comments are appreciated:**

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**The Department of Renewable Resources, the Prince of Wales Northern Heritage Centre and the Science Institute of the Northwest Territories would like to thank you for your participation in this survey.**

**Please place your completed survey in the provided envelope and return it to the Science Institute by March 18, 1994. Alternatively, please feel free to FAX this survey to the Institute.**