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NORTHERN PROGRAMS of ENVIRONMENT CANADA

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ADVISORY GROUP
AUGUST 1ST. 1972

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NORTHERN PROGRAMS OF
ENVIRONMENT CANADA

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NORTHERN PROGRAMS OF
ENVIRONMENT CANADA

INTRODUCTION

The Departmental Task Force on an Arctic Environmental Institute was set up in 1971 to review related problems in the Arctic region, to assess Departmental programs and activities, and to report to Senior Management on the needs for a Departmental Institute or Centre for Arctic research. In response to the report by the Task Force, the Departmental Management Committee agreed, among other decisions, to establish a Northern Program Advisory Group (NPAG) which would have a responsibility *to make an overview, on a long-term basis, of the total demands in the North that could be made on the Department; the purpose of the overview to be to establish a Departmental position for the Seminar on Guidelines for Scientific Activities in Northern Canada to be held in October.* For this overview, the Arctic was defined as *the area north of 60 degrees North except for the extension required below this parallel for programs and activities that have an influence on the south, particularly watershed areas.*

The Northern Program Advisory Group met June 29, 1972, under the Chairmanship of Dr. F. Kenneth Hare, Director General of the Research Coordination Directorate, Policy, Planning and Research Service. It was agreed at the meeting that the NPAG, in order to meet its responsibilities, should have at hand a comprehensive assessment of activities now being carried out in the North by the Department. Representatives from each of the Services agreed to provide both descriptive and budget data to the Research Coordination Directorate for this purpose. This document is intended to summarize this information.

The primary purpose of this document is to provide a representation of the Departmental Northern Program on an aggregate basis; indicating the weight of effort committed to the various dimensions of responsibilities that fall to the Department of the Environment. To achieve this result in a concise and convenient manner, a simple computer inventory system has been used. The results are presented and discussed in the body of this report; detailed information is contained in the Appendix.

DEPARTMENTAL PROGRAM

The Objective of the Department of the Environment is described generally as follows:

"To promote and undertake programs designed to protect and enhance the quality of the environment, and the management and sustained economic utilization of the aquatic, forest and wildlife resources of the nation."

This Objective applies to the North as it does to all Canada. The Department supports Northern environmental and resource programs that range from studies of bowhead whales to the operation of Arctic weather stations; from studies initiated to assess the impact of the proposed Mackenzie Valley Pipeline to the long-range studies of Arctic ice; from analytical services to the territorial governments to regulatory programs for wildlife management. Perhaps the most striking feature of the Department's Northern Program is the diversity of skills, activities and resource responsibilities involved. It provides components in a spectrum of activities that relate to the management of water, land, atmospheric and living resources of the North. The programs are necessarily interactive and co-operative, often requiring closer working relationships with other departments or governments than with other Services.

All the Operational Services are involved in the Northern Program. The Atmospheric Environment Service has the largest effort by virtue of the Northern stations in the weather forecasting system. The Marine Sciences Branch of the Water Management Service has a large undertaking in oceanography and hydrography. The Department is strongly committed to support for the Northern Pipelines Study. Fisheries and wildlife management are long-standing responsibilities encompassed in the Department while new initiatives in other aspects of environmental management are just now getting underway within the Environmental Protection Service.

The total program of Environment Canada directed north of 60 degrees of latitude amounts to \$13.4 million for 1972-73 and 500 man years of effort. Of the total Departmental budget, 5.7 per cent is committed in the North, with 39 per cent of the area of Canada and 0.2 per cent of the population.

Atmospheric Environment Service

The purpose of the Atmospheric Environment Service, relative to northern Canada, flows directly from its objectives:

1. To contribute effectively to the improvement of the national economy, the enhancement of the environment, and the raising of the quality of life through the full application of atmospheric and ice information.

2. To advance knowledge of the nature and behaviour of the atmosphere and ice in Canadian waters in fields which will contribute to the long-term improvement of national economic, environmental and social conditions.
3. To promote Canada's national atmospheric interests in its international dimension.

The Atmospheric Environment Service has an extensive program in Northern Canada that relates to the responsibilities of the former Canadian Meteorological Service to provide information, consultation and research on weather, climate, sea-state and ice in navigable waters. The budget for this program now exceeds \$7 million annually, with the Ministry of Transport accepting responsibility for 66 percent of the cost. There are 227 man years involved in manning the weather stations and carrying out activities such as research, forecasting and support functions. As well, a number of weather stations are operated directly by the Ministry of Transport, and by International Telephone and Telegraph Arctic Services Incorporated at the DEW Line stations. There are 95 meteorological observing stations in Northern Canada which provide basic meteorologic and upper air data.

The Northern weather stations are integral parts of the national weather forecasting system. Much of the program in the North therefore does not have a specifically Northern focus; rather it supports a national system through which the North and all regions benefit from more reliable weather forecasts. Meteorological services in the form of aviation, general public, and marine shipping forecasts are provided on a routine and request basis from Edmonton and made available in the North by radio using Ministry of Transport and Canadian Broadcasting Corporation facilities.

The level of knowledge and understanding of Arctic atmospheric conditions and the meteorological support services in the North have increased steadily over the past 30 years, but remains below that for Southern Canada. The AES has set as one of its goals *to have in operation by 1980 observational, archival, and prediction systems which effectively meet the expanding needs for information and consultation on weather, climate and air-quality in Northern Canada.* During the next five-year period it is planned:

- to increase the frequency of observation from existing stations and to establish new stations;
- to improve communications generally, and to evaluate the feasibility of utilizing communication satellites as a relay for remote automatic stations;
- to expand the forecast services to include new user areas, airports and activities.

In addition, to provide assistance to operational programs in the North the AES plans to expand its climatological services to include:

- comprehensive regional climatologies for the Mackenzie River Valley and Beaufort Sea regions, relationship between topography, climate and snow cover, and the impact of land form and ground cover variations on local climate;
- site selection studies for a variety of air strips, harbours, towns and mines, and an Arctic Airport Handbook of selected site climatologies which will be published by 1975.

Responsibility for providing ice information services for navigable waters in the Arctic is a continuing function of the AES. Current operational activities related to ice include:

- aerial ice observations during the navigation season;
- ice-observing personnel on board Canadian ice breakers;
- ice observing personnel accompanying northern patrols on Argus aircraft;
- the program of Ice Forecasting Central in Ottawa which puts out regular forecasts of ice movements and conditions in northern waters, and provides consultation to shipping interests and other agencies.

It is expected that requirements for ice services will expand rapidly as well during the next five years. In order to meet these needs it is planned:

- to expand the ice reconnaissance programme to an all-weather all-year round activity;
- to establish a national ice archival centre and to publish an ice atlas for the Canadian Arctic by 1974.

Atmospheric pollution is a new dimension among the activities of the AES. The capacity of the Arctic atmosphere to absorb, transport and disperse pollutants differs from that at more southern latitudes. The AES plans to increase its knowledge and understanding of these atmospheric conditions to a level that will enable it:

- to meet the expanding needs of government control agencies, industry and public for information, consultation and advice on air quality;
- to provide an advisory service on the potential impact of human activities on the atmospheric environment and the climatic consequences of projects involving major environmental alterations.

Water Management Service

The Water Management Service has the responsibility of improving the quality, management and use of inland and marine water resources. Related programs in Northern Canada embrace a great number of activities directed towards both the fresh water and the salt water areas.

The Northern budget for 1972-73 is estimated at nearly \$3 million and 148 man-years of which more than 60 percent is directed to the salt water area. In addition, the Marine Sciences Directorate is provided ship support by the Ministry of Transport which would add more than \$1 million if charges were made to the Department of the Environment.

Inland Waters Directorate

Northern activities are sponsored by three Branches, Water Planning and Operations, Water Quality, and Water Resources. The two last branches have extensive hydrologic projects related to the Environmental-Social Program, Northern Pipelines. National programs carried out at Canada Center for Inland Waters have northern implications, but are not particularly directed towards that region.

Water Planning and Operations Branch is mainly involved with the development of comprehensive basin management plans under the province/territories Canada consultative committees.

Water Quality Branch operates 55 water quality stations as part of the National Water Quality Network, and another 22 under the Mackenzie Valley Pipeline studies. The Branch co-operates closely with INA on the Mine Waste Surveillance Network on sample analysis and on special projects.

Water Resources Branch operates 89 hydrometric stations as part of the National Hydrometric Network and 13 tidal stations. An extensive research program relates to snow and ice problems including glaciers, lake and river ice, the interaction between snow/ice and oil and groundwater phenomena in Arctic regions. The use of remote sensing techniques, including the use of ERTS imagery for hydrologic purposes is investigated and the Branch participates in the AIDJEX project.

The Marine Sciences program in the Arctic has two main components: studies of the physical characteristics of the Arctic waters and sea ice; and the provision of survey data for charting Arctic waters. These activities increasingly are becoming important as a result of expanding Arctic petroleum exploration.

Frozen sea research is carried on from the Pacific Region facilities at Victoria, and includes both laboratory experiments and field work in the Arctic directed towards a better understanding of the growth, decay and other physical characteristics of sea ice.

The types of studies carried out by oceanographic research groups include investigations of storm surges and the heat budget in Hudson Bay, tidal propagation through the Northwest Passage, circulation in James Bay, and exploitation of tidal power in Ungava Bay. Work is underway to update the oceanography of the Arctic Island area using existing data. A tidal model has been developed for Hudson Straits and wave climate studies have been carried out in the Beaufort Sea in support of an engineering feasibility study to build a supertanker port at Herschel Island.

The Canadian Hydrographic Service has carried out surveys in the Arctic for many years and data from its surveys provide the basis for all Arctic charts. Hydrographers aboard Canadian Coast Guard icebreakers are surveying Viscount Melville Sound and key harbours in response to the increasing activity of oil exploration in the north. This year work has been started on a modern survey of James Bay using Coast Guard icebreaker support. The hydro-electric developments taking place in that area have stimulated marine traffic and made it essential to improve the charts. Other surveys are being carried out in the Beaufort Sea and the Mackenzie River delta.

Hydrographers and oceanographers have been active with the Polar Continental Shelf Project of the Department of Energy, Mines and Resources since its formation in 1960. Helicopters have been used to obtain through-the-ice soundings of the continental shelf off the Arctic Islands and in the Beaufort Sea. During the summer, hovercraft have surveyed possible ports near potential oilfield sites. The data collected on this project has placed the Water Management Service in a front line position to meet the demands to be created by oil exploration in that area.

A specific item of interest is the re-charting of the Canadian Arctic on a metric standard. This project should be completed by 1979.

Lands, Forests and Wildlife Service

The major component of the Lands, Forests and Wildlife Service in Northern Canada is the Canadian Wildlife Service. The Objective of the Wildlife Service related to the North is *to ensure the preservation and wise use of wildlife resources and their habitats under federal jurisdiction and to support the Territories in their efforts to achieve the same objective.* Programs towards this Objective are carried out with a budget of \$1.4 million and 39 man-years.

The CWS discharges statutory obligations under the Migratory Birds Convention Act, conducts research and surveys related to wildlife and their habitats, provides assistance and advice to the territorial governments for the management of game and fur mammals, and conducts research and studies to provide a better understanding of Arctic ecosystems and the impact of resource development activities. The Western Region Program is centered at Edmonton and the Eastern Region Program at Ottawa; with district officers at Whitehorse and Yellowknife and field stations at Fort Smith and Inuvik. In addition to the work from fixed bases, field parties work in Arctic environments in both summer and winter to study polar bears, caribou, Dall sheep, muskoxen, waterfowl and other species.

The role of the CWS takes an increased importance with the prospect of industrial development and new transportation arteries in the Arctic. The migratory pattern of the caribou, for example, could be disrupted by a pipeline or pipeline construction along the Mackenzie Valley. Typical of the studies and surveys conducted to evaluate and protect wildlife include:

- evaluation of population sizes, distribution and movements;
- identification of key habitats to be protected from destructive land uses;
- determination of species composition and productivity of forage stands;
- assessment of seasonal food habits and characteristics of habitats.

This information provides a scientific basis for carrying out responsibilities related to migratory birds, to advise the Territorial Governments in the management of game and fur-bearing animals, and to help prevent damage to wildlife by industrial development and transportation in the North.

The Lands, Forests and Wildlife Service is providing co-ordination for the research under the Environmental-Social Program, Northern Pipelines. The Canadian Forestry Service is also participating in two related research projects. These activities add to a program of about \$0.4 million and 14 man years.

The two Northern studies of the Canadian Forest Service are:

- a program of the Forest Management Institute to describe and map vegetation in the corridor area of a possible Mackenzie Valley pipeline;
- a terrain sensitivity study of the pipeline corridor to assess the relationship between land, vegetation and permafrost.

These studies will be particularly relevant for the development of land-use regulations in the Territories and will assist locating a pipeline from the Arctic.

The Lands, Forests and Wildlife Service also is supporting the Northern Pipeline project in the Lands Directorate by developing Land Use Information Map Series for the Mackenzie Valley and for the Southern Yukon. The Land Use Information Maps integrate a wide range of data on renewable resources and related activities. These will assist:

- administration of the Land Use Regulations under the Territorial Lands Act;
- regional planning, land-use planning and land management in the North;
- evaluation of alternative proposals for pipelines and other industrial projects.

The Service contributes approximately \$100,000 and 13 man years to this project, while an additional \$250,000 in financial support has been obtained from the Arctic Land Use Research Program of the Department of Indian and Northern Affairs.

The Canadian Forestry Service has traditionally assisted INA and the territorial governments in the areas of forest mapping and inventory, forest management and in problems of controlling forest fires, insects and diseases.*

* The cost of these latter activities has not been incorporated in the figures and tables of this report. They have averaged about 4 man-years and \$50,000 - \$75,000 annually. In addition, the CFS has contributed \$60,000 on an ad hoc basis to the IBP Tundra Project on Devon Island in 1972.

Fisheries Service

Fish have long been considered one of the major renewable resources in the Yukon and the Northwest Territories. The program of the Fisheries Service is directed at management of the fisheries, and related research on fish and marine mammals. The Fisheries Service Program in the Arctic is approximately \$1.3 million annually and a commitment of 59 man years.

The Resource Development Branch of the Fisheries Service has responsibilities:

- *to conduct programs directed at the more efficient management of the sport and commercial fisheries;*
- *to play a co-ordinating role in territorial programs;*
- *to develop a thorough knowledge of the aquatic resources of the North so that the impact of future industrial developments can be accurately assessed and evaluated.*

The program to meet these objectives is directed from Vancouver in the Western Arctic and from Winnipeg for the Eastern Arctic. The fisheries operation in the Western Arctic has expanded rapidly in the last few years, particularly to carry out fishery resource studies in the Northern Yukon and the Mackenzie River Valley in view of the proposed pipeline development. Also in the Eastern Arctic, increasing emphasis is being given to fisheries management programs.

The fisheries management activities underway or being initiated in the North are exemplified by the following:

- an investigation of new fish harvesting methods;
- an assessment of the effect of fishing on the stock of lake trout and whitefish in the Yukon;
- an investigation of the prospect for developing a winter recreational ice fishery;
- a study of the effect of mining operations at Yellowknife and at Great Bear Lake on the aquatic resources;
- a bio-engineering study of Aichihik Lake in connection with a proposed hydro-electric development;
- a study of the effect of hydro turbines on the downstream movement of migrating Chinook salmon fry at the Whitehorse and Mayo Dams;

- studies of the effect of northern geophysical exploration for petroleum deposits on the aquatic resources.

The Freshwater Institute at Winnipeg is the research arm for the Service concerned with freshwater fisheries and the aquatic environment of the Northwest Territories. The Institute plans to conduct research of the following nature:

- to assess the aquatic ecology of the Mackenzie River Valley, including predictions concerning the ecological effect of increased silt loads and oil spills that might be associated with an oil pipeline;
- to measure the influence of new harvesting methods on fish stocks in Northern waters;
- to survey the limnology of the Yellowknife area with emphasis on the effect of mine wastes;
- to continue to investigate the limnology of Great Slave Lake as a foundation for judgement on commercial and sports fisheries management.

Research related to marine and anadromous fish and marine mammals in the Canadian North is centered at the Arctic Biological Station, Ste Anne de Bellevue, Quebec. Although a vast geographical area is involved, the Station is relatively small; committing only 17 man years for the current period. The program provides biological assessment of the fisheries resource which is used to develop Northern fisheries, both commercial and recreation; conducts studies related to marine mammals including seal, walrus and whale populations; and develops data on limnology and biological oceanography.

Environmental Protection Service

The role of the Environmental Protection Service in the North is to solve environmental problems and to develop procedures, codes and regulations. The EPS will work closely with the Department of Indian Affairs and Northern Development, which has responsibility for administering certain controlling legislation, to carry through action-oriented programs to deal with pollution in the North. Most of these problems result from technological and industrial developments and frequently have overlapping and interrelated water pollution, air pollution, soil pollution and solid waste disposal dimensions. The EPS is also concerned with broad ecological problems, such as those posed by bioactive substances and heavy metals, which typically can not be classified as air, water or soil problems, but are total environmental problems where substances move through the ecosystem between organisms and environmental elements.

The main focus for EPS program in the North will be the Northwest Region office at Edmonton. This office is currently being set up and staffed to develop emission standards, surveillance and inspection programs, control regulations, and to implement emergency procedures to deal with oil spills or other environmental crises. As well, the EPS provides chemical analysis of samples from northern locations in laboratory facilities at Edmonton and Winnipeg. These facilities were brought to the EPS from National Health and Welfare when the Department of the Environment was set up.

The program of the EPS in the North is now small, about \$200,000 for the current year, but is expected to expand rapidly to meet the needs arising from expanding petroleum exploration and industrial development.

SUMMARY - DEPARTMENTAL PROGRAM

			<i>SERVICE TOTALS</i>	
	<i>Program Budget</i>	<i>Totals Man</i>	<i>Budget</i>	<i>Man</i>
	<i>\$000's</i>	<i>Years</i>	<i>\$000's</i>	<i>Years</i>
AES			7,032	227
Quebec Region	520	24		
Central Region	1,810	55		
Western Region	1,874	116		
Meteorological Application	107	6		
Ice Division	2,721	26		
WMS			2,992	148
Glaciology	375	19		
Water Survey of Canada	475	22		
Hydrology Research	32	3		
Water Quality	250	4		
Mackenzie Delta Hydrography	151	3		
Parizeau-Beaufort Hydrography	310	16		
Eastern Arctic Hydrography	73	3		
Viscount Melville Sd. Hydrography	252	6		
Polar Shelf Project	65	4		
James Bay Hydrography	350	16		
Beaufort-Baffin Oceanography	419	42		
Frozen Sea Research	240	10		
LFWS			1,869	66
Canadian Wildlife Service	1,361	39		
Mackenzie Valley, Forestry	412	14		
Land Use Information Maps	96	13		
FS			1,313	59
Fisheries management	650	26		
Arctic Biological Station	333	17		
Freshwater Institute	330	16		
EPS			209	8
Northwest Region	100	1		
Analytical Services	109	7		
DOE TOTAL			13,415	508

CO-ORDINATION OF NORTHERN PROGRAMS

The Department of Indian Affairs and Northern Development has responsibility to integrate the activities of Federal departments and agencies in Northern Canada. The legislative responsibility is given by the Government Organization Act which says (among other things) that the Department of Indian Affairs and Northern Development shall:

- *co-ordinate the activities in the Northwest Territories and the Yukon Territory of the several departments, branches and agencies of the Government of Canada;*
- *undertake, promote or recommend measures for the further economic and political development of the Northwest Territories and the Yukon Territory; and*
- *foster, through scientific investigation and technology, knowledge of the Canadian north and of the means of dealing with conditions related to its further development.*

The primary vehicle for coordination is the Advisory Committee on Northern Development (ACND), which has carried out this role for almost two decades. The ACND has as its terms of reference:

"To advise the government on questions of policy relating to civilian and military undertakings in Northern Canada and to provide for the effective co-ordination of all government activities in that area".

The ACND is represented at the Deputy Minister level, and operates through a number of sub-committees with specialist representation from the departments concerned. The main sub-committees are:

- the Sub-Committee on Coordination;
- the Transportation Sub-Committee;
- the Scientific and Technology Sub-Committee;
- the Sub-Committee on Northern Communications.

The Scientific and Technology Sub-Committee is sponsoring the Mont Gabriel Seminar on "Guidelines for Scientific Activities in Northern Canada". The purpose of the seminar has been stated: *"to assist with developing guidelines and priorities for scientific activities in Northern Canada that would enhance programs related to the people, the environment, renewable resources and non-renewable resources in that order of importance."* One of the six main topics of the Seminar is the Natural Environment. This is the subject area for which the Northern Program Advisory Group is recommending a Departmental position and advising Dr. Hare as the author invited to contribute the background paper on "The Natural Environment of the Canadian North."

The overall objectives, priorities and strategies for Federal programs in the North during the decade of the 70's have been expressed by the Minister of Indian Affairs and Northern Development in his report to the Standing Committee on 28 March 1972. In summary, the Federal Objectives for the North are:

Objectives:

1. *To further the evolution of government in the Northern Territories.*
2. *To provide for a higher standard of living, quality of life and equality of opportunity for northern residents by methods which are compatible with their own preferences and aspirations.*
3. *To realize the potential contribution of the Northern Territories to the social and cultural development of Canada.*
4. *To encourage viable economic development within regions of the Northern Territories so as to realize their potential contributions to the national economy and the material well-being of Canadians.*
5. *To maintain Canadian sovereignty and security in the North.*
6. *To maintain and enhance the northern environment with due consideration to economic and social development.*
7. *To develop fully the leisure and recreational opportunities in Northern Territories.*

The weight of emphasis in pursuit of the seven Objectives has shifted in the past two decades *from defence to people programs, to resource development to ecological problems.* To pursue the Objectives during the 70's, in the face of the new and often uncertain issues that will arise, will require a blending of social and economic programs which shift emphasis, and financial commitments, to meet new circumstances: the social and environmental impact of resource development, the adjustment to petroleum discoveries, the effect of new transportation technologies, external influences such as the state of the Canadian economy, and at all times the need to provide employment and opportunities for the native peoples.

The strategy for the 70's articulated by the Minister of Indian Affairs and Northern Development refers to the urgent needs of the native people, natural constraints in the North, the other priorities and limitations, and sets out Priorities in the North for the next decade as follows:

Priorities:

1. *To give rapid effect to the agreed guidelines for social improvement.*
2. *To maintain and enhance the natural environment, through such means as intensifying ecological research, establishing national parks, ensuring wildlife conservation.*
3. *To encourage and stimulate the development of renewable resources, light industries and tourism, particularly those which create job and economic opportunities for native northerners.*
4. *To encourage and assist strategic projects in the development of non-renewable resources and in which joint participation by government and private interests is generally desirable.*
5. *To provide necessary support for other non-renewable resource projects of recognized benefit to northern residents and Canadians generally.*

In this document, the total program of Environment Canada has been assessed and aggregated in terms of both the Objectives and the Priorities for the North. The commitment of the Department in each area is presented on the charts following.

The allocation of the Departmental program to the Northern Objectives has been based on an assessment of each program. This required subjective interpretation. The weather observation stations in the North, for example, are part of a national weather forecasting network that contributes to national rather than specifically northern goals. This program is shown under a separate Objective described as "National Network". However, the weather forecasting network supports in some way each of the seven Objectives for the North. Although the final dollar allocations are influenced by the interpretation of the focus of each program, the result is generally descriptive of the total Departmental effort in the North.

ENVIRONMENT CANADA

Commitment to Northern Objectives

IAND
Co-ordination

DOE
Program

2. Quality of Life

\$60,000

4. Economic
Development

\$5,277,000

5. Sovereignty

\$135,000

6. Environment

\$4,626,000

7. Recreation

\$ 49,000

8. National
Network

\$3,267,000

AES



WMS



LFWS



FS



EPS

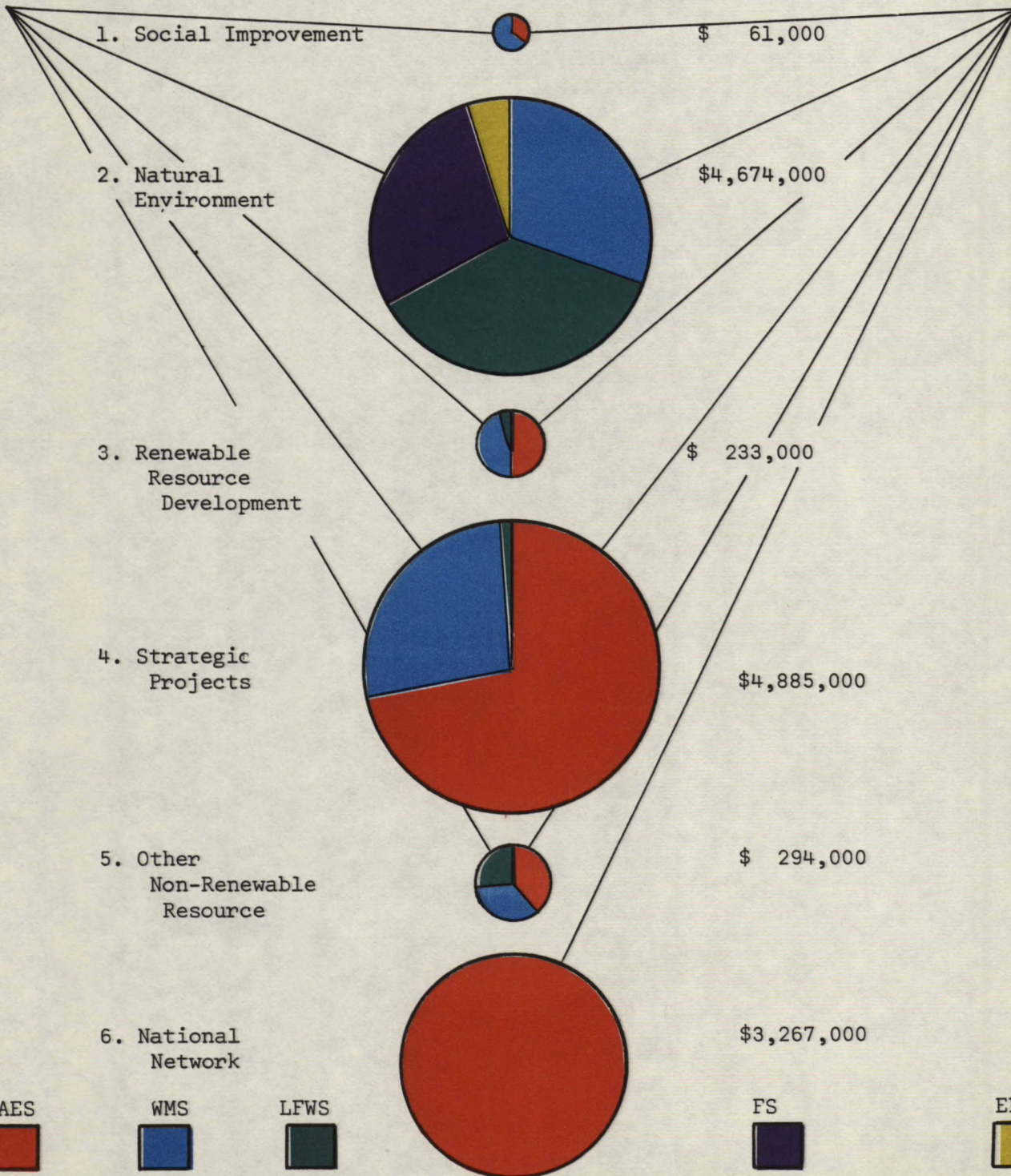


ENVIRONMENT CANADA

Northern Priorities for the 70's

IAND
Co-ordination

DOE
Program



PROGRAM ANALYSIS

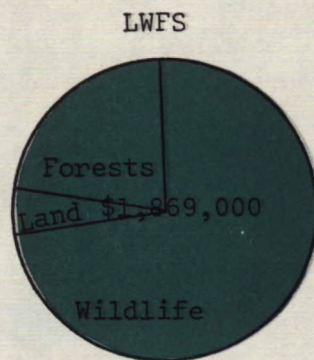
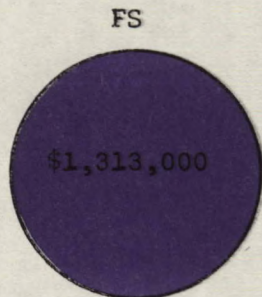
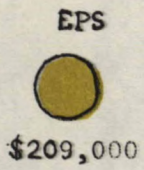
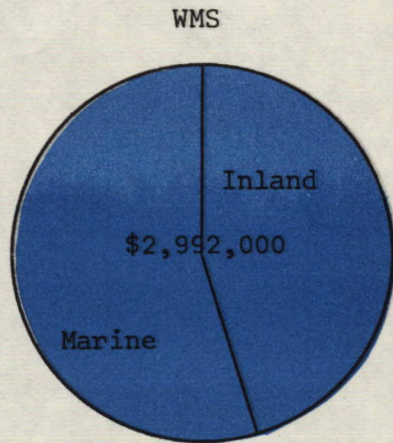
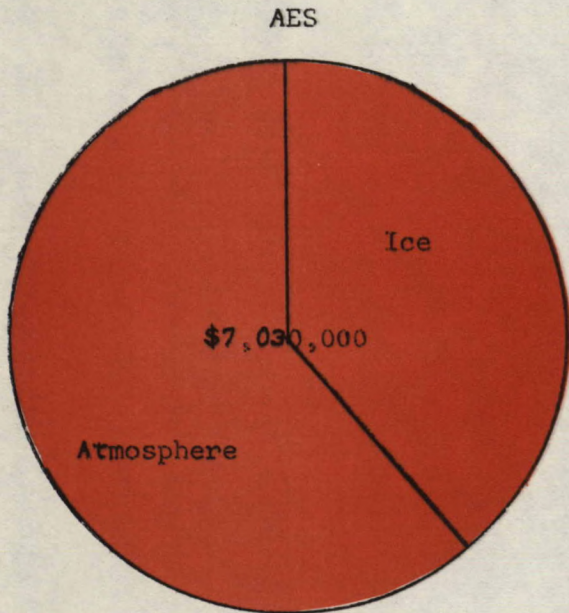
The scope of the Departmental program in Northern Canada is presented on seven charts which display the aggregate information in a condensed, visual format. This data is assembled from the information sheets in the Appendix.

The data presented on the charts is for the budget year 1972-73. The weight of emphasis by Service, by Discipline, and by Type of Facility is illustrated on pie diagrams. The commitment to different resource sectors is shown on a graph, separated into environmental quality programs, renewable resource programs, and programs that directly support non-renewable resource development and transportation in the North. A similar graph for Activities shows the weight given to each type of function.

The Program Matrix has two axis: "Resource Areas" and "Management Functions". The Resource Areas are as shown on the preceding bar graph. The Management Functions describe the various facets of resource management carried out by the Department in the North. The Northern Program of Environment Canada is allocated in this matrix to illustrate the distribution of effort to the various dimensions of environmental and resource management.

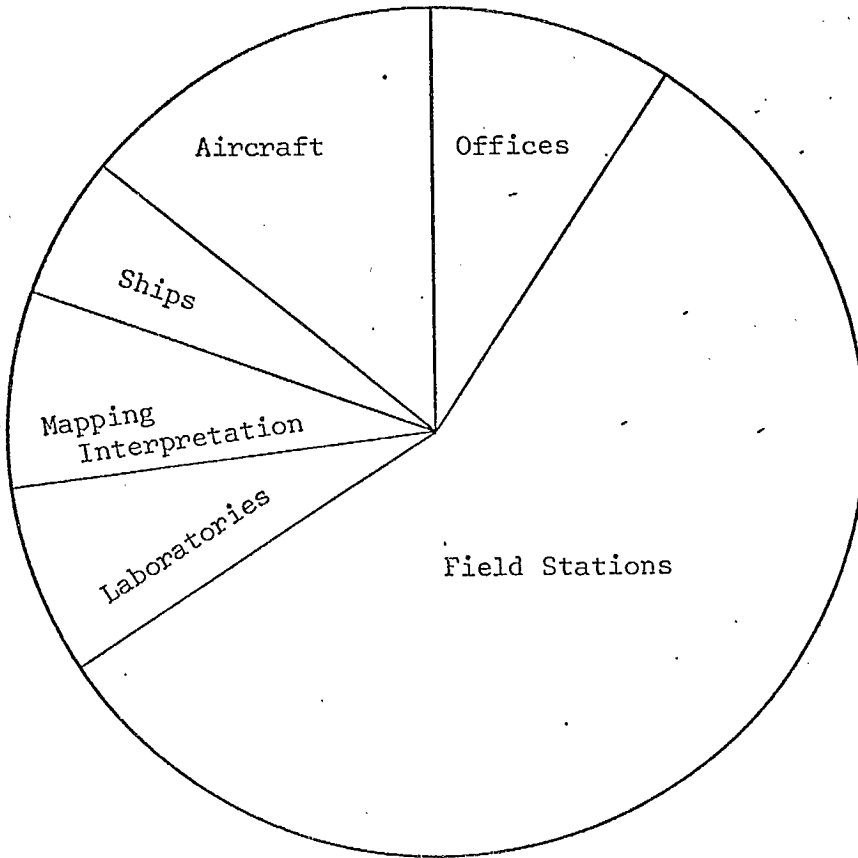
The final chart shows the "Results" - the output from the expenditure.

ENVIRONMENT CANADA
Northern Program by Service



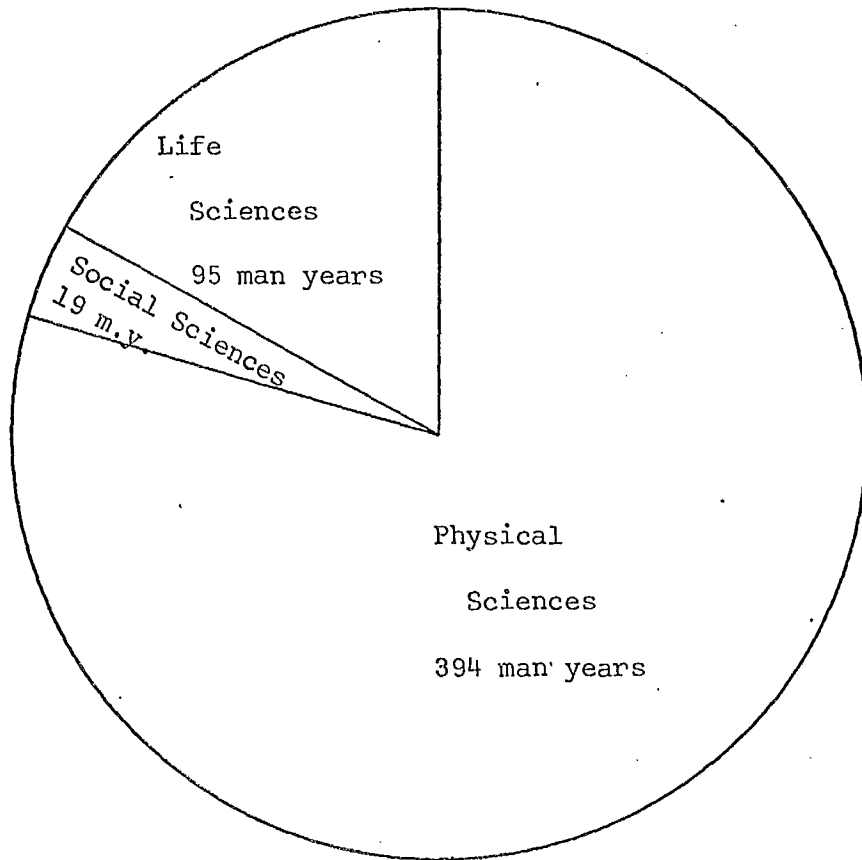
ENVIRONMENT CANADA

Northern Program by Type of Facility



Total \$13,415,000

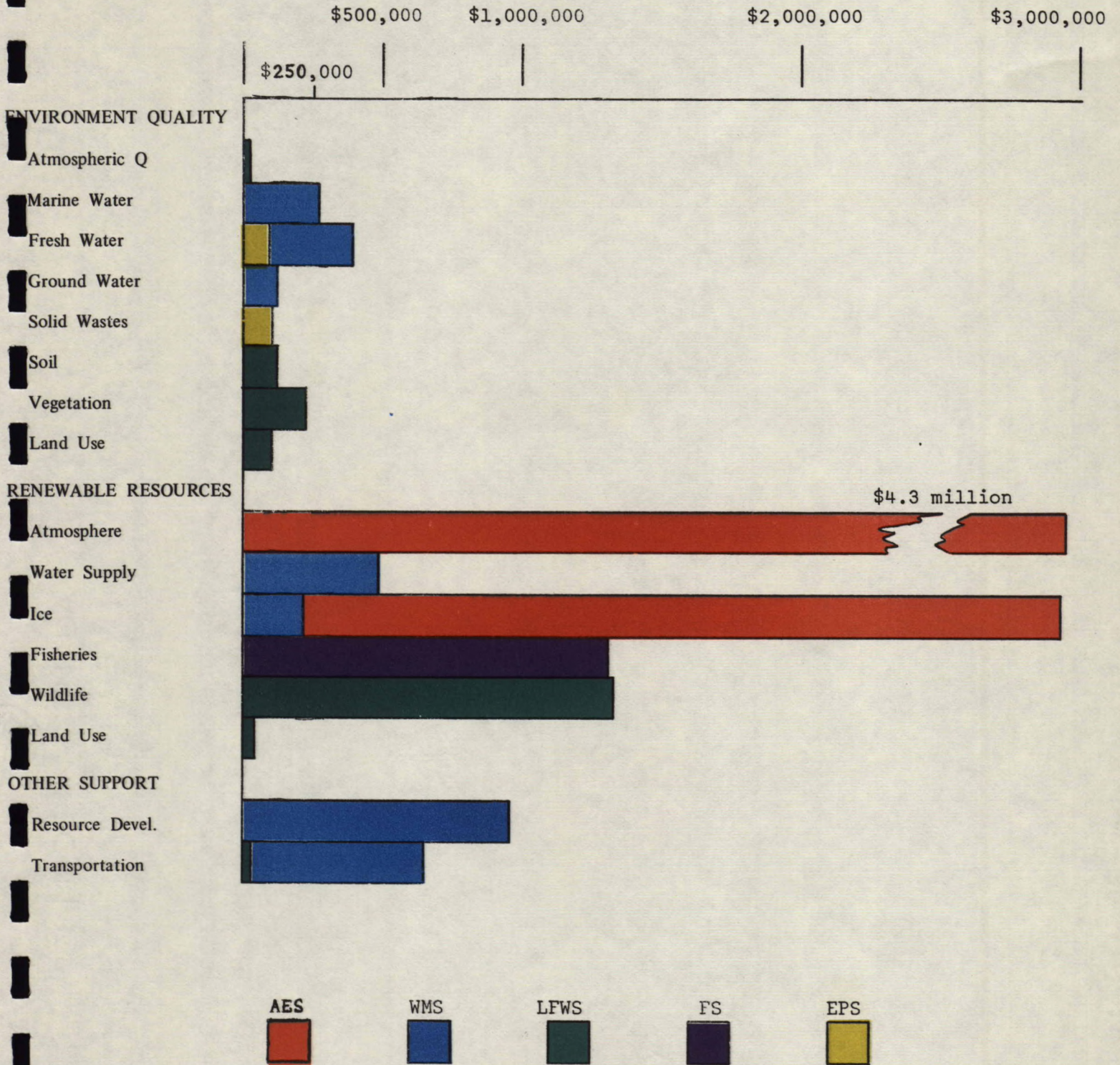
ENVIRONMENT CANADA
Northern Program by Discipline



Total 508 man years

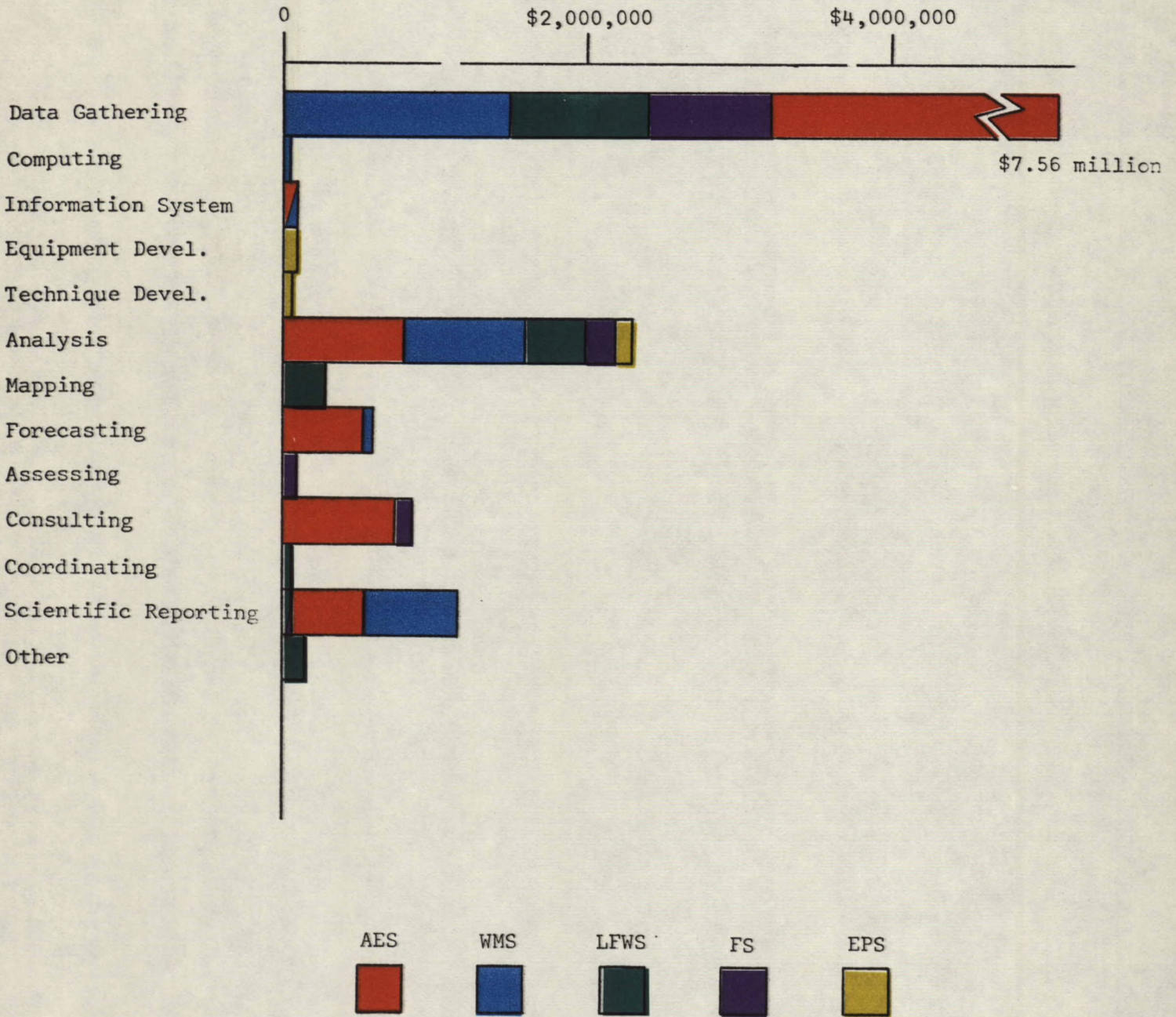
ENVIRONMENT CANADA

Northern Program by Resource Area



ENVIRONMENT CANADA

Northern Program by Activity



ENVIRONMENT CANADA

Northern Program Matrix

RESOURCE AREA	MANAGEMENT FUNCTION										
	Administration	Data Acquisition	Research	Assessment	Forecasting	Monitoring	Planning	Negotiating	Support	Archiving	Education

ENVIRONMENT QUALITY

Atmospheric					11							
Marine Water		71	159	30								
Fresh Water	0.4	117	16			173	0.8		75			1.2
Ground Water		12	96	12								
Solid Wastes			60				20					20
Soil	0.4	80		33			0.8					1.2
Vegetation	0.2	155		66			0.4					0.6
Land Use	0.2	64					0.4					0.6

RENEWABLE RESOURCES

Atmosphere		3270	55	0.3	750	0.6				11		230
Water Supply	0.2	480		0.3		0.3	0.4			0.9		0.6
Ice		1987	69	280	408	16				145		
Fisheries		190	898			47		24	82		24	48
Wildlife	20	1.6	296	272			20	5	748			1.2
Land Use	0.2	28		12			0.4					0.6

OTHER SUPPORT

Resource Devel.		450	186	343								
Transportation	2	326	25	300			4					6

Numbers represent \$000's in budget year 1972-73

ENVIRONMENT CANADA

Northern Program Results

General Information	52%
Scientific Information	30%
Direct Support	16%
Advances in Technology	1%
Policy Advice	1%

APPENDIX



APPENDIX INDEX

Catalogue of National Northern Goals

Catalogue of Federal Priorities in the North

Science Inventory System

AES	Quebec Region	022
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AES	Ice Division	020
WMS	Glaciology - NWT	198
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WMS	Water Survey of Canada	194
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FS	Fisheries Operations - Vancouver	095
FS	Fisheries Operations - Winnipeg	094
FS	Arctic Biological Station	092
FS	Freshwater Institute	093
EPS	Northwest Region	041
EPS	Analytical Laboratory - Edmonton	042
EPS	Analytical Laboratory - Winnipeg	043

CATALOGUE OF NATIONAL NORTHERN GOALS

SISEC
CODE

FURTHER THE EVOLUTION OF GOVERNMENT IN THE NORTHERN TERRITORIES

- 601 - territorial government;
- 602 - federal-territorial relations;
- 603 - territorial-provincial relations;
- 604 - interdepartmental co-ordination.

TO PROVIDE FOR A HIGHER STANDARD OF LIVING, QUALITY OF LIFE, AND EQUALITY OF OPPORTUNITY FOR NORTHERN RESIDENTS BY METHODS WHICH ARE COMPATIBLE WITH THEIR OWN PREFERENCES AND ASPIRATIONS.

- 621 - creation of employment opportunities;
- 622 - education;
- 623 - manpower training, mobility and placement;
- 624 - health care;
- 625 - administration of justice;
- 626 - community development;
- 627 - cultural development;
- 628 - social services for the disadvantaged;
- 629 - communications.

TO REALIZE THE POTENTIAL CONTRIBUTION OF THE NORTHERN TERRITORIES TO THE SOCIAL AND CULTURAL DEVELOPMENT OF CANADA

- 641 - encouragement of cultural traditions;
- 642 - cross-cultural communications;
- 643 - participation in national events;
- 644 - encouragement of art forms.

TO ENCOURAGE VIABLE ECONOMIC DEVELOPMENT WITHIN REGIONS OF THE NORTHERN TERRITORIES SO AS TO REALIZE THEIR POTENTIAL CONTRIBUTIONS TO THE NATIONAL ECONOMY AND THE MATERIAL WELL-BEING OF CANADIANS

- 661 - renewable resource development;
- 662 - non-renewable resource development;
- 663 - industrial expansion;
- 664 - processing and manufacturing industries;
- 665 - small business growth;
- 666 - regional planning;

SISEC
CODE

- 667 - manpower development and utilization;
- 668 - development of infrastructures;
- 669 - transportation (road, rail, water, air, etc.);
- 670 - communications;
- 671 - international and inter-regional trade;
- 672 - Canadian control of industrial activity.

TO MAINTAIN CANADIAN SOVEREIGNTY AND SECURITY IN THE NORTH:

- 681 - occupation (residential, military, economic);
- 682 - extension and maintenance of jurisdiction;
- 683 - multi-lateral control outside territorial waters;
- 684 - control of passage;
- 685 - surveillance;
- 686 - Canadian control of industrial activity.

TO MAINTAIN AND ENHANCE THE NORTHERN ENVIRONMENT WITH DUE CONSIDERATION
TO ECONOMIC AND SOCIAL DEVELOPMENT

- 701 - water, land, and air quality
- 702 - aesthetic quality;
- 703 - ecological balance;
- 704 - preservation of fish and wildlife;
- 705 - long-term effects of environmental disturbances.

TO DEVELOP FULLY THE LEISURE AND RECREATIONAL OPPORTUNITIES IN THE
NORTHERN TERRITORIES

- 721 - parks and wilderness areas;
- 722 - migratory wildlife;
- 723 - needs of future generations.

OTHER

- 741 - weather forecasting network

CATALOGUE OF FEDERAL PRIORITIES IN THE NORTH

SISEC
CODE

TO GIVE RAPID EFFECT TO THE AGREED GUIDELINES FOR SOCIAL IMPROVEMENT

- 621 - creation of employment opportunities;
- 622 - education;
- 623 - manpower training, mobility and placement;
- 624 - health care;
- 625 - administration of justice;
- 626 - community development;
- 627 - cultural development;
- 628 - social services for the disadvantaged;
- 629 - communications;
- 641 - encouragement of cultural traditions;
- 642 - cross-cultural communications;
- 643 - participation in national events;
- 644 - encouragement of art forms.

TO MAINTAIN AND ENHANCE THE NATURAL ENVIRONMENT, THROUGH SUCH MEANS AS INTENSIFYING ECOLOGICAL RESEARCH, ESTABLISHING NATIONAL PARKS, ENSURING WILDLIFE CONSERVATION

- 701 - water, land, and air quality;
- 702 - aesthetic quality;
- 703 - ecological balance;
- 704 - preservation of fish and wildlife;
- 705 - long-term effects of environmental disturbances;
- 721 - parks and wilderness areas;
- 722 - migratory wildlife;
- 723 - needs of future generations.

TO ENCOURAGE AND STIMULATE THE DEVELOPMENT OF RENEWABLE RESOURCES, LIGHT INDUSTRIES AND TOURISM, PARTICULARLY THOSE WHICH CREATE JOB AND ECONOMIC OPPORTUNITIES FOR NATIVE NORTHERNERS.

- 661 - renewable resource development;
- 664 - processing and manufacturing industries;
- 665 - small business growth;
- 666 - regional planning;
- 667 - manpower development and utilization.

SISEC
CODE

TO ENCOURAGE AND ASSIST STRATEGIC PROJECTS (KEY TO INCREASED ECONOMIC ACTIVITY IN THE REGION OR TERRITORY WITH SOLID ECONOMIC AND SOCIAL BENEFITS) IN THE DEVELOPMENT OF NON-RENEWABLE RESOURCES AND IN WHICH JOINT PARTICIPATION BY GOVERNMENT AND PRIVATE INTERESTS IS GENERALLY DESIRABLE.

- 669 - transportation (road, rail, water, air, etc.);
- 670 - communications;
- 671 - international and inter-regional trade;
- 672 - Canadian control of industrial activity;
- 681 - occupation (residential, military, economic);
- 682 - extension and maintenance of jurisdiction;
- 683 - multi-lateral control outside territorial waters;
- 684 - control of passage;
- 685 - surveillance;
- 686 - Canadian control of industrial activity.

TO PROVIDE NECESSARY SUPPORT FOR OTHER NON-RENEWABLE RESOURCE PROJECTS OF RECOGNIZED BENEFIT TO NORTHERN RESIDENTS AND CANADIANS GENERALLY

- 662 - non-renewable resource development;
- 663 - industrial expansion;
- 668 - development of infrastructures.

OTHER

- 741 - weather forecasting network.

RECORD NO. - 0129

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION		NAME AND ADDRESS	
DEPARTMENT	- ENVIRONMENT CANADA	ARCTIC-EASTERN		000 REGIONAL DIRECTOR AES DOE	
SERVICE	- ATMOSPHERIC ENVIRONMENT			REGIONAL ADMIN BLDG	
INSTITUTE	- AFS QUEBEC REGION			MONTREAL INT AIRPORT	
				DORVAL	
				QUE	
LOCATION	- QUEBEC	%			
	N.W.T.	020			
		980			
TOWN KEY	- DORVAL			TELEPHONE 514-636-3307	
PROGRAM	ARCTIC	ATMOSPHERE	INFO & CONSULT.	DATA	ADVICE
ATMS					
	YF#	BUDGET		MAN-YEARS	
BUDGET	70-71	000000.0		0000.0	
DATA	71-72	000000.0		0000.0	
(\$000)	72-73	000720.0		0024.0	

	CODE %	CODE %	CODE %	CODE %	CODE %
GOALS	741 000				
	PHYSICAL %	SOCIAL %	LIFE %		
	ATMOSPHERIC SCIENCES 000				

DISCIPLINES

RECORD NO. - 0129

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE	AREAS	RENEWABLE RES. HGHT	%
				ATMOSPHERE	000

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
DATA ACQUISITION	000	GENERAL INFORMATION	000	SAMPLING, DATA GATHERING	000

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
FIELD STATIONS	000	IN-HOUSE CONTRACTS	942 05B	INFORMATION & RESEARCH SERVICES	600
				OTHER FEDERAL DEPARTMENTS	300
				WITHIN DEPARTMENT	100

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
 I.e. 500 = 50.0%; 000 = 100.0%

PREPARED BY:
 BIOMETRICS & COMPUTER SC.BR.

RECORD NO. - 0129

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION		NAME AND ADDRESS	
DEPARTMENT - ENVIRONMENT CANADA		ARCTIC		000	REGIONAL DIRECTOR AFS DDF
SERVICE - ATMOSPHERIC ENVIRONMENT					REVENUE BLDG
INSTITUTE - AFS CENTRAL REGION					391 YORK AVE
					WINNIPEG
					44N
LOCATION - N.W.Y.	000				
TOWN KEY - WINNIPEG					TELEPHONE 204-985-4380
PROGRAM	ATMOSPHERE	INFORMATION	DATA		
ATMS					
	YEAR	BUDGET		MAN-YEARS	
RUDGET	70-71	000000.0		0000.0	
DATA	71-72	000000.0		0000.0	
(\$000)	72-73	001810.0		0055.0	

	CODE %		CODE %		CODE %		CODE %		CODE %
	741	000							
GOALS									
	PHYSICAL	%		SOCIAL	%		LIFE	%	
	ATMOSPHERIC SCIENCES	000							

DISCIPLINES

RECORD NO. - 0120

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE AREAS		RENEWABLE RES. MGMT	%
				ATMOSPHERE	000

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
DATA ACQUISITION	000	GENERAL INFORMATION	000	SAMPLING, DATA GATHERING	000

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
FIELD STATIONS	000	IN-HOUSE CONTRACTS	956 044	INFORMATION & RESEARCH SERVICES	550
				OTHER FEDERAL DEPARTMENTS	300
				WITHIN DEPARTMENT	100
				INTERNATIONAL INVOLVEMENT	050

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
 I.E. 500 = 50.0%, 000 = 100.0%

PREPARED BY:
 BIOMETRICS & COMPUTER SC. BR.

RECORD NO. - 0127

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION	%	NAME AND ADDRESS
DEPARTMENT	- ENVIRONMENT CANADA	ARCTIC - WESTERN	000	REGIONAL DIRECTOR AES DOE
SERVICE	- ATMOSPHERIC ENVIRONMENT			FEDERAL BUILDING
INSTITUTE	- AES WESTERN REGION			9820 107 STREET
				EDMONTON
				ALTA

LOCATION	- ALBERTA	%	250
	YUKON	%	210
	N.W.T.	%	540

TOWN KEY - EDMONTON

TELEPHONE 403-424-0251

PROGRAM	ARCTIC	ATMOSPHERE	INFORMATION	FORECASTING	BRIEFING
AIHS	CONSULTATION	TRENDS	WARNINGS		
BUDGET	YEAR	BUDGET		HAN-YEARS	
DATA	70-71	000000.0		0000.0	
(\$000)	71-72	000000.0		0000.0	
	72-73	001874.0		0116.0	

GOALS	CODE	%	CODE	%	CODE	%	CODE	%	CODE	%
	741	500								
	669	350								
	666	050								
	667	050								
	681	050								

PHYSICAL	%	SOCIAL	%	LIFE	%
ATMOSPHERIC SCIENCES	000				

DISCIPLINES

RECORD NO. - 0127

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE AREAS	
		RENEWABLE RES. MGMT	%
		ATMOSPHERE	000

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
DATA ACQUISITION	500	GENERAL INFORMATION	900	SAMPLING, DATA GATHERING	500
FORECASTING	400	DIRECT SUPPORT	100	ANALYSIS	400
ADVICE	100			CONSULTING	100

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
FIELD STATIONS	000	IN-HOUSE CONTRACTS	052 048	OTHER FEDERAL DEPARTMENTS	400
				INFORMATION & RESEARCH SERVICES	300
				GENERAL INDUSTRY	100
				REGIONAL INVOLVEMENT, PUBLIC, PRIVATE	100
				INTERNATIONAL INVOLVEMENT	050
				WITHIN DEPARTMENT	050

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
I.e. 500 = 50.0%, 000 = 100.0%

PREPARED BY:
BIOMETRICS & COMPUTER SC. GP.

RECORD NO. - 0130

DATE - 25 JUL 72

IDENTIFICATION			REGION OF APPLICATION		NAME AND ADDRESS	
DEPARTMENT - ENVIRONMENT CANADA			ARCTIC	%	000	THOMAS MR M K
SERVICE - ATMOSPHERIC ENVIRONMENT						ACTING DIRECTOR AES
INSTITUTE - AES MET APPLICATIONS BR						METEOLOGICAL APPLIC. BR
						4905 DUFFERIN STREET
						DOWNSVIEW
						ONT
LOCATION - ONTARIO	%	000				
TOWN KEY - DOWNSVIEW						TELEPHONE 416-667-4652
PROGRAM AIMS	ARCTIC	CLIMATOLOGY	METEOROLOGY	DATA	INFORMATION	
	CONSULTATION	ANALYSIS	PUBLICATION	ARCHIVES		
BUDGET	YEAR	BUDGET		MAN-YEARS		
	70-71	000000.0		0000.0		
DATA	71-72	000000.0		0000.0		
(\$000)	72-73	000107.0		0006.0		
GOALS	CODE %	CODE %	CODE %	CODE %	CODE %	
	669 400					
	661 200					
	662 200					
	626 700					
	PHYSICAL %	SOCIAL %	LIFE %			
	PHYSICAL SCIENCES GENERAL 900	SOCIAL SCIENCES GENERAL 050	BIOLOGICAL SCIENCES 050			

DISCIPLINES

RECORD NO. - 0130

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY		RESOURCE AREAS		RENEWABLE RES. MGMT	
	%		%		%
				ATMOSPHERE	000
DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
BASIC RESEARCH	500	GENERAL INFORMATION	500	ANALYSIS	350
ADVICE	400	DIRECT SUPPORT	500	CONSULTING	300
INFORMATION STORAGE	100			SCIENTIFIC REPORTING	200
				INFORMATION SYSTEM DEVELOPMENT	150
TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
H.O. / COORDINATION CENTRE	000	IN-HOUSE	000	INFORMATION & RESEARCH SERVICES	500
				REGIONAL INVOLVEMENT, PUBLIC, PRIVATE	200
				OTHER FEDERAL DEPARTMENTS	200
				INTERNATIONAL INVOLVEMENT	100

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
 1.%, 500 = 50.0%, 000 = 100.0%

PREPARED BY:
 BIOMETRICS & COMPUTER SC.BR.

RECORD NO. - 0126

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION		NAME AND ADDRESS	
DEPARTMENT - ENVIRONMENT CANADA		ARCTIC		LEGG MR G H	
SERVICE - ATMOSPHERIC ENVIRONMENT			000	CHIEF ICE DIV AES	
INSTITUTE - AES ICE DIVISION				CENTRAL SERVICES DIRECT	
				4905 DUFFERIN STREET	
				DOWNSVIEW	
				ONT	
LOCATION - ONTARIO	%				
ARCTIC	300				
	700				
TOWN KEY - OTT&DOWNSV		TELEPHONE 416-667-4727			
PROGRAM	ICE	MONITORING	CONSULTATION	DATA	INFORMATION
ATMS	ARCHIVES	PUBLICATION	ATLANTIC	ARCTIC	FORECASTING
BUDGET	YEAR	BUDGET	MAN-YEARS		
DATA	70-71	000000.0	0000.0		
(\$000)	71-72	000000.0	0000.0		
	72-73	002721.0	0026.0		

CODE %	CODE %	CODE %	CODE %	CODE %
669 000				

GOALS

PHYSICAL	%	SOCIAL	%	LIFE	%
PHYSICAL SCIENCES GENERAL	000				

DISCIPLINES

RECORD NO. - 0126

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE	AREAS	RENEWABLE RES. MGMT	%
ICF		000			

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
DATA ACQUISITION	700	GENERAL INFORMATION	900	SAMPLING, DATA GATHERING	400
FORECASTING	150	SCI + TECH INFO	050	CONSULTING	200
ASSESSMENT	100	DIRECT SUPPORT	050	FORECASTING	200
INFORMATION STORAGE	050			SCIENTIFIC REPORTING	200

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
H.Q. / COORDINATION CENTRE	300	IN-HOUSE	967	OTHER FEDERAL DEPARTMENTS	900
AIR SURVEILLANCE	700	CONTRACTS	033	INFORMATION & RESEARCH SERVICES	050
				GENERAL INDUSTRY	050

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
I.E., 500 = 50.0%, 000 = 100.0%

PREPARED BY:
BIDMETRICS & COMPUTER SC. BR.

RECORD NO. - 4255

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION	%	NAME AND ADDRESS
DEPARTMENT - ENVIRONMENT CANADA SERVICE - WATER MANAGEMENT INSTITUTE - WATER RESOURCES BRANCH		ARCTIC	000	OMMANNEY HR C S L GLACIOLOGY DIVISION 00E WATER RESOURCES BRANCH OTTAWA ONT
LOCATION	- ONTARIO N.W.T.			OTTAWA K1A 0H3
TOWN KEY	- OTTAWA			TELEPHONE 613-994-9807
PROGRAM AIMS	FIELD-SURVEYS SNOW & ICE	GLACIOLOGY ARCTIC	INVENTORY AES-WATER LINK	PHOTOGRAMMETRY ICE
				RESEARCH WATER RESOURCE
BUDGET DATA (\$000)	YEAR 70-71 71-72 72-73	BUDGET 000000.0 000115.0 000110.0	MAN-YEARS 0000.0 0005.5 0005.5	
GOALS	CODE % 701 450 661 200 669 200 662 100 721 030	CODE % 667 020	CODE %	CODE %

PHYSICAL	%	SOCIAL	%	LIFE	%
PHYSICAL SCIENCES GENERAL 000					

DISCIPLINES

RECORD NO. - 4255

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE	%	AREAS	%
ICE	950			RENEWABLE RES. MGMT	050
				ATMOSPHERE	

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
DATA ACQUISITION	500	SCI & TECH INFO	900	SCIENTIFIC REPORTING	600
BASIC RESEARCH	300	DIRECT SUPPORT	100	INFORMATION SYSTEM DEVELOPMENT	200
MONITORING & SURVEILLANCE	100			SAMPLING, DATA GATHERING	100
INFORMATION STORAGE	050			ANALYSIS	050
ASSESSMENT	050			TECHNIQUE DEVELOPMENT	050

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
OFFICES	550	IN-HOUSE	950	OTHER FEDERAL DEPARTMENTS	400
FIELD STATIONS	250	CONTRACTS	050	INTERNATIONAL INVOLVEMENT	250
MAPPING DRAFTING AIRPHOTO	150			UNIVERSITIES	200
LABORATORIES	050			WITHIN DEPARTMENT	150

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
I.E., 500 = 50.0%, 000 = 100.0%

PREPARED BY:
BIOMETRICS & COMPUTER SC.BR.

RECORD NO. - 4254

DATE - 25 JUL 72

IDENTIFICATION	REGION OF APPLICATION	%	NAME AND ADDRESS
DEPARTMENT - ENVIRONMENT CANADA	ARCTIC	000	DR HANNEY MP C S L
SERVICE - WATER MANAGEMENT			GLACIOLOGY DIVISION DOE
INSTITUTE - WATER RESOURCES BRANCH			WATER RESOURCES BRANCH
			OTTAWA
			ONT
			OTTAWA K1A 0H3
LOCATION - ONTARIO	%		
YUKON	950		
	050		
TOWN KEY - OTTAWAYUKON			TELEPHONE 613-994-9807
PROGRAM	INVENTORY	GLACIOLOGY	AES-WATER LINK
AIMS	SNOW & ICE	WATER RESOURCE	INFO. SYSTEMS
	ICE		ARCHIVES
			ARCTIC
			DATA BANKS
BUDGET	YEAR	BUDGET	MAN-YEARS
DATA	70-71	000000.0	0000.0
(\$000)	71-72	000040.0	0004.0
	72-73	000065.0	0004.0

GOALS	CODE %	CODE %	CODE %	CODE %	CODE %
	561 300	705 050			
	662 200				
	669 200				
	701 150				
	721 100				
	PHYSICAL	%	SOCIAL	%	LIFE
	PHYSICAL SCIENCES GENERAL	000			

DISCIPLINES

RECORD NO. - 4256

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE AREAS	%
ICE	900	RENEWABLE RES. MGMT	100
		WATER SUPPLY	

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
DATA ACQUISITION	750	DIRECT SUPPORT	950	INFORMATION SYSTEM DEVELOPMENT	800
INFORMATION STORAGE	150	SCI + TECH INFO	050	SCIENTIFIC REPORTING	200
MONITORING & SURVEILLANCE	050				
ASSESSMENT	050				

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
MAPPING OFFICES	800	IN-HOUSE CONTRACTS	550	INTERNATIONAL INVOLVEMENT	600
DRAFTING AIRPHOTO	200		450	OTHER FEDERAL DEPARTMENTS	150
				UNIVERSITIES	100
				NON PROFIT INSTITUTE	100
				WITHIN DEPARTMENT	050

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
1.%, 500 = 50.0%, 000 = 100.0%

PREPARED BY:
BIOMETRICS & COMPUTER SC. BR.

RECORD NO. - 4252

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION	%	NAME AND ADDRESS
DEPARTMENT - ENVIRONMENT CANADA		MACKENZIE VALLEY	000	MACKAY MR D K
SERVICE - WATER MANAGEMENT				HYDROLOGIC SCI OIV DOE
INSTITUTE - IWR HYDROLOGICAL SCIENCES DIVISION				OTTAWA
				ONT
LOCATION	- ONTARIO			OTTAWA K1A 0H3
TOWN KEY	- OTTAWA			TELEPHONE 613-994-5047
PROGRAM	HYDROLOGIC SCI.	LIMNOLOGY PHYS.	LAKES	GROUNDWATER
AIMS	PIPELINE	MAPPING	ICE	ENV SOC PRDG
BUDGET	YEAR	BUDGET		MAN-YEARS
DATA	70-71	000000.0		0000.0
(\$0001	71-72	000170.0		0010.0
	72-73	000200.0		0010.0
GOALS	CODE %	CODE %	CODE %	CODE %
	669 250			
	667 250			
	701 200			
	705 150			
	703 150			

PHYSICAL	%	SOCIAL	%	LIFE	%
ENGINEERING SCI GENERAL	000				
DISCIPLINES					

RECORD NO. - 4252

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE AREAS		RENEWABLE RES. MGMT	%
				SUPPORT RES DEV	000

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
DATA ACQUISITION	400	SCI + TECH INFO	500	SCIENTIFIC REPORTING	300
ASSESSMENT	300	DIRECT SUPPORT	500	ANALYSIS	250
BASIC RESEARCH	300			SAMPLING, DATA GATHERING	250
				INSTRUMENT DEVEL	200

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
FIELD STATIONS	000	IN-HOUSE	000	WITHIN DEPARTMENT	600
				UNIVERSITIES	200
				OTHER FEDERAL DEPARTMENTS	200

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
 I.e. 500 = 50.0%, 000 = 100.0%

PREPARED BY:
 BIOMETRICS & COMPUTER SC. BR.

RECORD NO. - 4251

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION		%	NAME AND ADDRESS
DEPARTMENT - ENVIRONMENT CANADA		MACKENZIE VALLEY		000	DAVIES MR K F
SERVICE - WATER MANAGEMENT					WATER SURVEY OF CANADA
INSTITUTE - WATER SURVEY OF CANADA					700 CALGARY POWER BUILDING
					110 12 AVENUE SW
					CALGARY
					ALTA
LOCATION - N.W.T.	%				
	000				
TOWN KEY - CALGARY					TELEPHONE 403-266-1613
PROGRAM AIMS	HYDROMETRICS PIPELINE	FORECASTING ENV SOC PROG	FLOODING	RIVER LEVELS	SEDIMENT SAMPLE
BUDGET	YEAR	BUDGET			MAN-YEARS
DATA	70-71	000000.0			0000.0
(#0001	71-72	000458.0			0022.0
	72-73	000475.0			0022.0

	CODE %	CODE %	CODE %	CODE %	CODE %
	701 000				
GOALS	PHYSICAL %		SOCIAL %		LIFE %
	ENGINEERING SCI GENERAL 000				

DISCIPLINES

RECORD NO. - 4251

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE AREAS	
		RENEWABLE RES. MGMT	%
		WATER SUPPLY	000

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
DATA ACQUISITION	000	GENERAL INFORMATION	000	SAMPLING+DATA GATHERING FORECASTING	950 050

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
FIELD STATIONS	000	IN-HOUSE	000	WITHIN DEPARTMENT	000

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
 I.E. 500 = 50.0%, 000 = 100.0%

PREPARED BY
 BIOMETRICS & COMPUTER SC. BR.

RECORD NO. - 4254

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION	%	NAME AND ADDRESS
DEPARTMENT - ENVIRONMENT CANADA		MACKENZIE VALLEY	000	DELORME DR L D
SERVICE - WATER MANAGEMENT				WMS DDE
INSTITUTE - WATER RESOURCES BRANCH				3303 33RD STREET NW
				CALGARY
				ALTA
LOCATION - ALBERTA	%			
N.W.T.	700			
	300			
TOWN KEY - CALGARYNWT				TELEPHONE 403-284-2251
PROGRAM AIMS	AQUATIC ECOLOGY	CHEM. ANALYSES	DATA BANKS	LAB. & FIELD
	METHODOLOGY DEV	PRAIRIE	POT HOLE	PRAIRIES & NWT
				LAKES
				SEDIMENT SAMPLE
				WATER QUALITY
BUDGET DATA (\$000)	YEAR	BUDGET	MAN-YEARS	
	70-71	000000.0	0000.0	
	71-72	000016.0	0001.3	
	72-73	000032.0	0002.7	

	CODE %	CODE %	CODE %	CODE %	CODE %
	701 000				

GOALS

PHYSICAL	%	SOCIAL	%	LIFE	%
PHYSICAL SCIENCES GENERAL	400			BIOLOGICAL SCIENCES	600

DISCIPLINES

RECORD NO. - 4254

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE AREAS	%
WATER - INLAND	000	RENEWABLE RES. MGMT	

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
BASIC RESEARCH	500	SCI & TECH INFO	000	SAMPLING, DATA GATHERING	500
DATA ACQUISITION	500			COMPUTING	300
				SCIENTIFIC REPORTING	200

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
FIELD STATIONS	500	IN-HOUSE	500	UNIVERSITIES	600
LABORATORIES	500	CONTRACTS	500	OTHER FEDERAL DEPARTMENTS	300
				INTERNATIONAL INVOLVEMENT	100

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
 i.e. 500 = 50.0%, 000 = 100.0%

PREPARED BY:
 BIOMETRICS & COMPUTER SC. BR.

RECORD NO. - 4252

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION		%	NAME AND ADDRESS
DEPARTMENT	- ENVIRONMENT CANADA	MACKENZIE VALLEY		000	SILLIPHANT MP D R
SERVICE	- WATER MANAGEMENT				WATER QUALITY DIV BDF
INSTITUTE	- IWR WOD PPAIRIE REG WATER QUAL SUBD				309 BENT BLDG
					2505 11TH AVENUE
					REGINA
LOCATION	- SASKATCHEWAN			000	SASK
TOWN KEY	- REGINA				TELEPHONE 306-527-4691
PROGRAM	WATER QUALITY	NETWORK	SAMPLING	CHEMICAL	PHYSICAL
AIMS	ANALYSIS	PESTICIDES	ENV SOC PRG		
	YEAR	BUDGET		MAN-YEARS	
BUDGET	70-71	000000.0		0000.0	
DATA	71-72	000075.0		0004.0	
(\$000)	72-73	000750.0		0004.0	

	CODE %	CODE %	CODE %	CODE %	CODE %
	701 000				
GOALS					
	PHYSICAL	%	SOCIAL	%	LIFE
	ENGINEERING SCI GENERAL	000			%

DISCIPLINES

RECORD NO. - 4253

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	R E S O U R C E	A R E A S	%
			RENEWABLE RES. MGMT	
WATER - INLAND	000			

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
DATA ACQUISITION	400	DIRECT SUPPORT	000	SAMPLING, DATA GATHERING	800
MONITORING & SURVEILLANCE	300			SCIENTIFIC REPORTING	200
SUPPORT SERVICES	300				

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
FIELD STATIONS	800	IN-HOUSE	000	WITHIN DEPARTMENT	800
LABORATORIES	200			OTHER FEDERAL DEPARTMENTS	200

COMMENTS 1 % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
 I.E. 500 = 50.0%, 000 = 100.0%

PREPARED BY:
 BIOMETRICS & COMPUTER SC.BR.

RECORD NO. - 4047

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION	NAME AND ADDRESS
DEPARTMENT - ENVIRONMENT CANADA		ARCTIC - WESTERN	000
SERVICE - WATER MANAGEMENT			BOLTON 4
INSTITUTE - MARINE SCI BR PACIFIC REGION			REGIONAL HYDROGRAPHER
			PACIFIC REGION
			MARINE SCIENCES BRANCH
			512 FEDERAL BLDG VICTORIA
			BC
LOCATION - B.C.	000		
TOWN KEY - VICTORIA			TELEPHONE 604-388-3188
PROGRAM	HYDROGRAPHY	FIELD-SURVEYS	ARCTIC
AIMS	RIVERS(MAJOR)	MACKENZIE DELTA	SHIPPING
			SURVEY & CHARTS
	YEAR	BUDGET	MAN-YEARS
BUDGET	70-71	000000.0	0000.0
DATA	71-72	000120.0	0003.0
(\$000)	72-73	000151.5	0003.0

GOALS	CODE %	CODE %	CODE %	CODE %	CODE %
	660 750				
	705 700				
	679 050				
DISCIPLINES	PHYSICAL %	SOCIAL %	LIFE %		
	CIVIL ENG. & SURVEYING	800			
	OCEAN ENG.	100			
	GEOLOGICAL SCIENCES	100			

RECORD NO. - 4047

DATE - 25 JUL 77

ENVIRONMENTAL QUALITY	RESOURCE	APPEALS	RENEWABLE RES. MGMT	%
			SUPPORT RES DEV	500
			SUPPORT TRANSPORT	500

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
DATA ACQUISITION	500	SCI & TECH INFO	500	SAMPLING, DATA GATHERING	500
ASSESSMENT	500	DIRECT SUPPORT	500	ANALYSIS	500

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
SHIPS & DOCKING FACILITY	750	IN-HOUSE	000	WITHIN DEPARTMENT	500
FIELD STATIONS	250			OTHER FEDERAL DEPARTMENTS	250
				GENERAL INDUSTRY	250

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
I.E. 500 = 50.0%, 000 = 100.0%

PREPARED BY:
BIOMETRICS & COMPUTER SC. BR.

RECORD NO. - 4056

DATE - 25 JUL 72

DEPARTMENT - ENVIRONMENT CANADA	REGION OF APPLICATION	%	NAME AND ADDRESS
SERVICE - WATER MANAGEMENT	ARCTIC - WESTERN	000	BOLTON M
INSTITUTE - MARINE SCI BR PACIFIC REGION			REGIONAL HYDROGRAPHER
			PACIFIC REGION
			MARINE SCI BR
			512 FEDERAL BLDG VICTORIA
			BC
LOCATION - B.C.		%	
		000	
TOWN KEY - VICTORIA			TELEPHONE 604-388-3188
PROGRAM	ARCTIC	BASIN STUDIES	CONTINENT SHELF
AIRMS	ICE	MARINE SCIENCE	SHIPPING
			FIELD-SURVEYS
			HYDROGRAPHY
			SURVEY & CHARTS
			PAC.ARCT.NAVG R
BUDGET	YEAR	BUDGET	MAN-YEARS
DATA	70-71	000200.0	0016.0
(4000)	71-72	000290.0	0016.0
	72-73	000210.0	0016.0

GOALS	CODE %	CODE %	CODE %	CODE %	CODE %
	649 900				
	620 050				
	60 050				

DISCIPLINES	PHYSICAL	%	SOCIAL	%	LIFE	%
	CIVIL ENG. & SURVEYING	900				
	GEOLOGICAL SCIENCES	100				
	OCEAN ENG.	100				

RECORD NO. - 4066

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE AREAS	%
		RENEWABLE RES. MGMT	
		SUPPORT RES DEV	500
		SUPPORT TRANSPORT	500

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
DATA ACQUISITION	500	SCI + TECH INFO	750	SAMPLING, DATA GATHERING	500
ASSESSMENT	500	DIRECT SUPPORT	250	ANALYSIS	500

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
SHIPS & DOCKING FACILITY	500	IN-HOUSE	000	INFORMATION & RESEARCH SERVICES	500
MAPPING DRAFTING AIRPHOTO	500			OTHER FEDERAL DEPARTMENTS	250
				GENERAL INDUSTRY	250

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
 I.E. 500 = 50.0%, 000 = 100.0%

PREPARED BY:
 BIOMETRICS & COMPUTER SC. BR.

RECORD NO. - 4045

DATE - 25 JUL 72

IDENTIFICATION			REGION OF APPLICATION		NAME AND ADDRESS	
DEPARTMENT	- ENVIRONMENT CANADA		ARCTIC-EASTERN		000	
SERVICE	- WATER MANAGEMENT				MELANSON R C	
INSTITUTE	- MSB ATLANTIC OCEANOGRAPHIC LAB				REGIONAL HYDROGRAPHER	
					ATLANTIC REGION	
					BEDFORD INSTITUTE	
					DARTMOUTH	
					NS	
LOCATION	- NOVA SCOTIA 000					
TOWN KEY	- DARTMOUTH				TELEPHONE 902-426-3497	
PROGRAM	HYDROGRAPHY	FIELD-SURVEYS	D.D.T.	ARCTIC	MARINE SCIENCE	
AIMS	SHIPPING	SURVEY & CHARTS				
BUDGET	YEAR	BUDGET			MAN-YEARS	
DATA	70-71	000062.0			0003.0	
(\$000)	71-72	000047.0			0003.0	
	72-73	000072.5			0003.0	
GOALS	CODE %	CODE %	CODE %	CODE %	CODE %	
	669 900					
	629 050					
	601 050					
DISCIPLINES	PHYSICAL %		SOCIAL %		LIFE %	
	CIVIL ENG. & SURVEYING	800				
	OCEAN ENG.	100				
	GEOLOGICAL SCIENCES	100				

RECORD NO. - 4045

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY		RESOURCE AREAS		RENEWABLE RES. MGMT	
				SUPPORT RES DEV	500
				SUPPORT TRANSPORT	500
DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
DATA ACQUISITION	500	DIRECT SUPPORT	750	SAMPLING, DATA GATHERING	500
ASSESSMENT	500	SCI & TECH INFO	250	ANALYSIS	500
TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
SHIPS & DOCKING FACILITY	500	IN-HOUSE	000	INFORMATION & RESEARCH SERVICES	500
MAPPING DRAFTING AIRPHOTO	500			GENERAL INDUSTRY	250
				OTHER FEDERAL DEPARTMENTS	250

COMMENTS : % APPLICATION IS CORRECT TO ONE DECIMAL PLACE
 1.7, 500 = 50.0%, 000 = 100.0%

PREPARED BY:
 BIOMETRICS & COMPUTER SC. BR.

RECORD NO. - 4043

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION	%	NAME AND ADDRESS
DEPARTMENT	- ENVIRONMENT CANADA	ARCTIC-EASTERN	000	MELANSON R C
SERVICE	- WATER MANAGEMENT			REGIONAL HYDROGRAPHER
INSTITUTE	- MSB ATLANTIC OCEANOGRAPHIC LAB			ATLANTIC REGION
				BEDFORD INSTITUTE
				DARTMOUTH
				NS
LOCATION	- NOVA SCOTIA			
TOWN KEY	- DARTMOUTH			TELEPHONE 902-426-3497
PRDGRAM	HYDROGRAPHY	FIELD-SURVEYS	D.O.T.	ARCTIC
AIMS	SHIPPING	SURVEY & CHARTS		MARINE SCIENCE
BUDGET	YFAR	BUDGET	MAN-YEARS	
DATA	70-71	000062.0	0003.0	
(\$000)	71-72	000219.0	0006.0	
	72-73	000252.5	0006.0	

	CODE %	CODE %	CODE %	CODE %	CODE %
GOALS	669 900				
	629 050				
	681 050				

	PHYSICAL	%	SOCIAL	%	LIFE	%
DISCIPLINES	CIVIL ENG. & SURVEYING	800				
	GEOLOGICAL SCIENCES	100				
	OCEAN ENG.	100				

RECORD NO. - 4043

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE AREAS	
		RENEWABLE RES. MGMT	%
		SUPPORT RES DEV	500
		SUPPORT TRANSPORT	500

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
DATA ACQUISITION	500	SCI + TECH INFO	750	SAMPLING, DATA GATHERING	500
ASSESSMENT	500	DIRECT SUPPORT	250	ANALYSIS	500

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
SHIPS & DOCKING FACILITY	500	IN-HOUSE	000	INFORMATION & RESEARCH SERVICES	500
MAPPING DRAFTING AIRPHOTO	500			GENERAL INDUSTRY	250
				OTHER FEDERAL DEPARTMENTS	250

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
 i.e. 500 = 50.0%, 000 = 100.0%

PREPARED BY:
 BIOMETRICS & COMPUTER SC. DP.

RECORD NO. - 4042

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION		NAME AND ADDRESS	
DEPARTMENT - ENVIRONMENT CANADA		ARCTIC		000 MCCULLOCH T D W	
SERVICE - WATER MANAGEMENT				DIRECTOR	
INSTITUTE - CCIR BURLINGTON				CENTRAL REGION	
				MARINE SCI BR CCIR	
				BURLINGTON	
				ONT	
LOCATION - ONTARIO					
				TELEPHONE 416-639-4339	
TOWN KEY - BURLINGTON					
PROGRAM		BASIN STUDIES		FIELD-SURVEYS	
AIMS		CONTINENT SHELF		HYDROGRAPHY	
		MARINE SCIENCE		SURVEY & CHARTS	
BUDGET				MAN-YEARS	
70-71		000055.0		0004.0	
71-72		000060.0		0004.0	
(1900)		000065.0		0004.0	
GOALS		CODE %		CODE %	
		669 800			
		681 150			
		662 050			
DISCIPLINES		PHYSICAL %		SOCIAL %	
		CIVIL ENG & SURVEYING 800		LIFE %	
		THEOP 200			

RECORD NO. - 4042

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY		RESOURCE AREAS		RENEWABLE RES. MGMT	
				SUPPORT RES DEV 500	
				SUPPORT TRANSPORT 500	
DIMENSIONS OF MANAGEMENT		RESULT		TYPE OF ACTIVITY	
DATA ACQUISITION		SCI + TECH INFO		SAMPLING, DATA GATHERING	
ASSESSMENT		DIRECT SUPPORT		ANALYSIS	
500		900		500	
500		100		500	
TYPE OF FACILITY		LOCUS OF ACTIVITY		PRINCIPLE RELATIONSHIPS	
FIELD STATIONS		IN-HOUSE		OTHER FEDERAL DEPARTMENTS	
000		000		GENERAL INDUSTRY	
				800	
				200	

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
 I.e. 500 = 50.0%, 000 = 100.0%

PREPARED BY:
 BIOMETRICS & COMPUTER SC. BR.

RECORD NO. - 4041

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION	%	NAME AND ADDRESS
DEPARTMENT	- ENVIRONMENT CANADA	ARCTIC-EASTERN	000	MCCULLOCH T D W
SERVICE	- WATER MANAGEMENT			DIRECTOR
INSTITUTE	- CCIM BURLINGTON			CENTRAL REGION
				MARINE SCI BR CCIM
				BURLINGTON
				ONT
LOCATION	- ONTARIO		000	
TOWN KEY	- BURLINGTON			TELEPHONE 416-639-4339
PROGRAM	ARCTIC	BAYS		CIRCULATION-MIX
AIMS	JAMES BAY PROJ.	MARINE SCIENCE		O.C.N.T.
				HYDROGRAPHY
				SURVEY & CHARTS
				SHIPPING
BUDGET	YEAR	BUDGET		MAN-YEARS
DATA	70-71	000000.0		0000.0
	71-72	000000.0		0000.0
(\$000)	72-73	000350.0		0016.0

GOALS	CODE %	CODE %	CODE %	CODE %	CODE %
	669 900				
	705 100				

DISCIPLINES	PHYSICAL	%	SOCIAL	%	LIFE	%
	CIVIL ENG. & SURVEYING	800				
	PHYSICAL OCEANOGRAPHY	100				
	OTHER	100				

RECORD NO. - 4041

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE AREAS	%
WATER - MARINE	100	RENEWABLE RES. MGMT	
		SUPPORT TRANSPORT	500
		SUPPORT RES DEV	400

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
DATA ACQUISITION	500	DIRECT SUPPORT	750	SAMPLING, DATA GATHERING	500
ASSESSMENT	500	SCI + TECH INFO	250	ANALYSIS	500

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
SHIPS & DOCKING FACILITY	500	IN-HOUSE	000	INFORMATION & RESEARCH SERVICES	500
MAPPING DRAFTING AIRPHOTO	500			GENERAL INDUSTRY	250
				OTHER FEDERAL DEPARTMENTS	250

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
 I.E. 500 = 50.0%, 000 = 100.0%

PREPARED BY:
 BIOMETRICS & COMPUTER SC.BR.

RECORD NO. - 4044

DATE - 25 JUL 72

IDENTIFICATION	REGION OF APPLICATION	%	NAME AND ADDRESS
DEPARTMENT - ENVIRONMENT CANADA	ARCTIC	000	DIRECTOR ADL
SERVICE - WATER MANAGEMENT			BEDFORD INSTITUTE
INSTITUTE - MSB ATLANTIC OCEANOGRAPHIC LAB			DARTMOUTH
			NS
LOCATION - NOVA SCOTIA		000	
TOWN KEY - DARTMOUTH			TELEPHONE 902-426-3492
PROGRAM AIMS	OCEANOGRAPHY LAB. & FIELD	GLACIOLOGY MARINE SCIENCE	SEDIMENT SAMPLE ARCTIC
			CHEMICAL OCEANY SAMPLING
BUDGET YEAR	BUDGET		MAN-YEARS
70-71	000429.0		0042.0
71-72	000412.8		0042.0
72-73	000418.8		0042.0

GOALS	CODE %	CODE %	CODE %	CODE %	CODE %
	701 900				
	661 100				

DISCIPLINES	PHYSICAL	%	SOCIAL	%	LIFE	%
	PHYSICAL OCEANOGRAPHY	600				
	GEOLOGICAL SCIENCES	200				
	BIOLOGICAL OCEANOGRAPHY	200				

RECORD NO. - 4044

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE AREAS	RENEWABLE RES. MGMT	%
WATER + MARINE	250		SUPPORT RES DEV	500
ICE	150		SUPPORT TRANSPORT	100

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
BASIC RESEARCH	600	SCI + TECH INFO	700	SCIENTIFIC REPORTING	600
DATA ACQUISITION	400	DIRECT SUPPORT	300	ANALYSIS	200
				SAMPLING, DATA GATHERING	200

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
LABORATORIES	400	IN-HOUSE	000	INFORMATION & RESEARCH SERVICES	500
SHIPS & DOCKING FACILITY	400			OTHER FEDERAL DEPARTMENTS	200
				WITHIN DEPARTMENT	200
				GENERAL INDUSTRY	100

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
 I.E., 500 = 50.0%, 000 = 100.0%

PREPARED BY:
 BIOMETRICS & COMPUTER SC.BR.

RECORD NO. - 4040

DATE - 25 JUL 72

DEPARTMENT - ENVIRONMENT CANADA	IDENTIFICATION	REGION OF APPLICATION	%	NAME AND ADDRESS
SERVICE - WATER MANAGEMENT		ARCTIC	000	LEWIS L
INSTITUTE - MARINE SCI BR PACIFIC REGION				MARINE SCIENCES BRANCH
				PACIFIC REGION
				FEDERAL BLDG
				VICTORIA
				BC
LOCATION - B.C.	%			
	000			
TOWN KEY - VICTORIA				TELEPHONE 604-389-3293
PROGRAM	AIR-SEA INTERAC	ARCTIC		CLIMATOLOGY
AIMS	GLACIOLOGY	ICE & COLD RES.	CIRCULATION-MIX	DYNAMICAL
			LAB. & FIELD	MARINE SCIENCE
RUDGET	YEAR	BUDGET	MAN-YEARS	
DATA	70-71	000213.0	0010.0	
180001	71-72	000225.0	0010.0	
	72-73	000240.0	0010.0	

GOALS	CODE %	CODE %	CODE %	CODE %	CODE %
	669 500				
	662 100				
	661 100				
	701 100				
	705 100				
	PHYSICAL	%	SOCIAL	%	LIFE
	PHYSICS	750			
	OCEAN ENG.	250			
DISCIPLINES					

RECORD NO. - 4040

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE	AREAS	RENEWABLE RES. MGMT	%
GROUNDWATER	500				
WATER - MARINE	500				

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
BASIC RESEARCH	800	SCI + TECH INFO	800	SCIENTIFIC REPORTING	800
ASSESSMENT	100	DIRECT SUPPORT	200	ANALYSIS	100
DATA ACQUISITION	100			SAMPLING, DATA GATHERING	100

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
LABORATORIES	600	IN-HOUSE	000	INFORMATION & RESEARCH SERVICES	500
FIELD STATIONS	400			UNIVERSITIES	250
				OTHER FEDERAL DEPARTMENTS	250

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
I.E. 500 = 50.0%, 000 = 100.0%

PREPARED BY:
BIOMETRICS & COMPUTER SC. BR.

RECORD NO. - 3302

DATE - 25 JUL 72

IDENTIFICATION	REGION OF APPLICATION	%	NAME AND ADDRESS
DEPARTMENT - ENVIRONMENT CANADA	ARCTIC-EASTERN	000	CWS EASTERN REGIONAL HQ
SERVICE - LANDS, FORESTS AND WILDLIFE			2721 HIGHWAY 31
INSTITUTE - CWS EASTERN REGIONAL HQ OTTAWA ONT			OTTAWA
			ONT
LOCATION - ONTARIO		000	
TOWN KEY - OTTAWA			TELEPHONE 613-992-2380
PROGRAM	WILDLIFE	APCTIC	RESEARCH & DEV.
ATMS	MIGRATORY BIRDS	MNT & NAT PARKS	INDUST. IMPACT
			MANAGEMENT
			EASTERN NEEDS
			LIASON
			COORDINATION
RUGDET	YEAR	BUDGET	MAN-YEARS
DATA	70-71	000000.0	0000.0
(\$000)	71-72	000000.0	0000.0
	72-73	000300.0	0012.4

CODE %	CODE %	CODE %	CODE %	CODE %	CODE %
704	000				
GOALS					
	PHYSICAL	%	SOCIAL	%	LIFE
					BIOLOGICAL SCIENCES
					000
DISCIPLINES					

RECORD NO. - 3302

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE AREAS	%
		RENEWABLE RES. HGMT	
		WILDLIFE	000

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
SUPPORT SERVICES	550	DIRECT SUPPORT	560	SAMPLING, DATA GATHERING	700
BASIC RESEARCH	150	POLICY ADVICE	230	ANALYSIS	200
OTHER	100	SCI & TECH INFO	210	OTHER	100
ASSESSMENT	100				
ADMINISTRATION	050				
PLANNING	050				

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
FIELD STATIONS	000	IN-HOUSE	000	WITHIN DEPARTMENT	200
				UNIVERSITIES	160
				REGIONAL INVOLVEMENT, PUBLIC, PRIVATE	160
				GENERAL INDUSTRY	160
				OTHER FEDERAL DEPARTMENTS	160
				INFORMATION & RESEARCH SERVICES	160

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
 I.E. 500 = 50.0%, 000 = 100.0%

PREPARED BY:
 BIOMETRICS & COMPUTER SC. BR.

RECORD NO. - 3301

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION	%	NAME AND ADDRESS
DEPARTMENT - ENVIRONMENT CANADA		YUKON	050	CMS WESTERN REGIONAL HQ
SERVICE - LANDS, FORESTS AND WILDLIFE		NORTHWEST TERRITORIES	950	5TH FLOOR CENTENNIAL BLDG
INSTITUTE - CMS WESTERN REGIONAL HQ EDMONTON A.				10015 103RD AVENUE
				EDMONTON
				ALTA.
LOCATION - ALBERTA	%			EDMONTON 14
	000			
TOWN KEY - EDMONTON				TELEPHONE 403-429-5811
PROGRAM AIMS	ARCTIC	MIGRATORY BIRDS	WILDLIFE	TOXIC CHEMICALS
	RES. DEV. IMPACT	ADMINISTRATION	ENV SOC PROG	LIMNOLOGY
BUDGET DATA (\$000)	YEAR	BUDGET	MAN-YEARS	
	70-71	000000.0	0000.0	
	71-72	000000.0	0000.0	
	72-73	000971.0	0026.5	

CODE %	CODE %	CODE %	CODE %	CODE %
704 000				

GOALS

PHYSICAL	%	SOCIAL	%	LIFE	%
		SOCIAL SCIENCES GENERAL	190	BIOLOGICAL SCIENCES	810

DISCIPLINES

RECORD NO. - 3301

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE AREAS	RENEWABLE RES. MGMT	%
			WILDLIFE	000

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
SUPPORT SERVICES	550	SCI & TECH INFO	800	SAMPLING, DATA GATHERING	700
BASIC RESEARCH	245	DIRECT SUPPORT	150	ANALYSIS	200
ASSESSMENT	100	POLICY ADVICE	050	OTHER	100
OTHER ENFORCEMENT	100				
	005				

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
FIELD STATIONS	000	IN-HOUSE	000	OTHER FEDERAL DEPARTMENTS	700
				GENERAL INDUSTRY	100
				WITHIN DEPARTMENT	100
				REGIONAL INVOLVEMENT, PUBLIC, PRIVATE	050
				UNIVERSITIES	050

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
I.E. 500 = 50.0%, 000 = 100.0%

PREPARED BY:
BIOMETRICS & COMPUTER SC. BR.

RECORD NO. - 3140

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION	%	NAME AND ADDRESS
DEPARTMENT - ENVIRONMENT CANADA		MACKENZIE VALLEY	000	BICKERSTAFF MR A
SERVICE - LANDS, FORESTS AND WILDLIFE				DIRECTOR
INSTITUTE - CFS FOREST MANAGEMENT INSTITUTE				FOREST MANAGEMENT INST
				MAJESTIC BLDG
				396 COOPER STREET OTTAWA
				ONT OTTAWA K1A 0H3
LOCATION - ONTARIO	%			
	000			
TOWN KEY - OTTAWA				TELEPHONE 613-996-1674
PROGRAM AIMS	FOREST RESOURCE SENSITIVITY EVL	FORESTS ENV SOC PROG	MAPPING	DESCRIBE
				EVALUATION
BUDGET DATA (\$000)	YEAR	BUDGET		MAN-YEARS
	70-71	000000.0		0000.0
	71-72	000000.0		0000.0
	72-73	000196.0		0006.0

GOALS	CODE %	CODE %	CODE %	CODE %	CODE %
	701 400				
	662 400				
	722 200				
		PHYSICAL %	SOCIAL %	LIFE %	
		GEOLOGICAL SCIENCES 400		BIOLOGICAL SCIENCES 400	
		ENVIRONMENTAL SCI GENERAL 200			

DISCIPLINES

RECORD NO. - 3140

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE APPEALS	RENEWABLE RES. MGMT %
VEGETATION	500	LAND USE	200
SOIL POLLUTION	300		
DIMENSIONS OF MANAGEMENT	%	RESULT	%
DATA ACQUISITION	700	SCI + TECH INFO	000
ASSESSMENT	300	ANALYSIS	500
		MAPPING	500
TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%
MAPPING DRAFTING AIRPHOTO	000	IN-HOUSE	000
		PRINCIPLE RELATIONSHIPS	%
		WITHIN DEPARTMENT	000

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
 I.e., 500 = 50.0%, 000 = 100.0%

PREPARED BY:
 BIOMETRICS & COMPUTER SC. BR.

RECORD NO. - 3141

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION	%	NAME AND ADDRESS
DEPARTMENT - ENVIRONMENT CANADA		MACKENZIE VALLEY	000	DRINKWATER MR H H
SERVICE - LANDS, FORESTS AND WILDLIFE				DIRECTOR
INSTITUTE - CFS NORTHERN FOREST RESEARCH CENTRE				NORTHERN FOREST RES CENTR
				5320 122 STREET
				EDMONTON
LOCATION - ALBERTA	%			ALTA EDMONTON 70
	000			
TDWN KEY - EDMONTON				TELEPHONE 403-435-7210
PROGRAM PERMAFROST	VEGETATION	LANDFORMS	SENSITIVITY EVL	MAPPING
AIMS %B.C. ACT	ENV SOC PROG			
BUDGET YEAR ⁰	BUDGET		MAN-YEARS	
DATA 70-71	000000.0		0000.0	
(\$000) 71-72	000000.0		0000.0	
	000175.0		0006.0	

CODE %	CODE %	CODE %	CODE %	CODE %
701 000				

GOALS

PHYSICAL	%	SOCIAL	%	LIFE	%
GEOLOGICAL SCIENCES	400			BIOLOGICAL SCIENCES	400
ENVIRONMENTAL SCI GENERAL	200				

DISCIPLINES

RECORD NO. - 3141

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE AREAS	RENEWABLE RES. MGMT	%
VEGETATION	700			
SOIL POLLUTION	300			

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
DATA ACQUISITION	700	SCI + TECH INFO	000	ANALYSIS	500
ASSESSMENT	300			MAPPING	500

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
MAPPING DRAFTING AIRPHOTO	000	IN-HOUSE	000	WITHIN DEPARTMENT	000

COMMENTS : 1 ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
1, 500 = 50.0%; 000 = 100.0%

PREPARED BY:
BIOMETRICS & COMPUTER SC. BR.

RECORD NO. - 3142

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION		NAME AND ADDRESS	
DEPARTMENT - ENVIRONMENT CANADA		MACKENZIE VALLEY	000	PETERSON DR E B	
SERVICE - LANDS, FORESTS AND WILDLIFE				PROJECT MANAGER	
INSTITUTE - L.F.W. SERVICE GENERAL				NORTHERN PIPELINE STUDY	
				NORTHERN FOREST RESEARCH	
				5320 122 STREET EDMONTON	
				ALTA	
LOCATION - ALBERTA	000				
TOWN KEY - EDMONTON				TELEPHONE 403-435-7216	
PROGRAM AIMS	COORDINATION	CONSULTATION	PIPELINE	ENV SOC PROG	
BUDGET DATA (\$000)	YEAR	BUDGET		MAN-YEARS	
	70-71	000000.0		0000.0	
	71-72	000000.0		0000.0	
	72-73	000041.0		0002.0	

CODE	%	CODE	%	CODE	%	CODE	%	CODE	%		
669	000										
GOALS											
PHYSICAL			%	SOCIAL			%	LIFE			%
PHYSICAL SCIENCES GENERAL			330	SOCIAL SCIENCES GENERAL			330	BIOLOGICAL SCIENCES			340

DISCIPLINES

RECORD NO. - 3142

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	R E S O U R C E A R E A S			
		WATER - INLAND	100	SUPPDRY TRANSPORT	500
		SOIL POLLUTION	100	WILDLIFE	100
		AESTHETICS	050	LAND USE	050
		VEGETATION	050	WATER SUPPLY	050

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
DATA ACQUISITION	400	SCI + TECH INFO	500	COORDINATING	000
ADVICE	300	POLICY ADVICE	300		
PLANNING	200	DIRECT SUPPORT	200		
ADMINISTRATION	100				

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
H.Q. COORDINATION CENTRE	000	IN-HOUSE	000	WITHIN DEPARTMENT	600
				GENERAL INDUSTRY	200
				OTHER FEDERAL DEPARTMENTS	100
				REGIONAL INVOLVEMENT, PUBLIC, PRIVATE	100

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
I.E. 500 = 50.0%, 000 = 100.0%

PREPARED BY:
BIOMETRICS & COMPUTER SC.BR.

RECORD NO. - 3040

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION		NAME AND ADDRESS
DEPARTMENT - ENVIRONMENT CANADA		MACKENZIE VALLEY	000	MAXWELL MR J W
SERVICE - LANDS, FORESTS AND WILDLIFE				CHIEF LAND USE PLANNING
INSTITUTE - LANDS DIRECTORATE	DIRECTORATE			RR LANDS DIR LEWS 00E
				OTTAWA
LOCATION - ONTARIO	% 000			OTTAWA KIA 0H3
TOWN KEY - OTTAWA				TELEPHONE 613-994-9317
PROGRAM AIMS	ENVIRON PROTECTN MAPPING	ENV SOC PROG LAND INVENTORY	HABITATS WILDLIFE	INFORMATION VEGETATION
				LANDUSE PLANNG. PIPELINE
BUDGET DATA (\$000)	YEAR 70-71 71-72 72-73	BUDGET 000000.0 000000.0 000033.0	MAN-YEARS 0000.0 0007.0 0003.0	

GOALS	CODE %	CODE %	CODE %	CODE %	CODE %
	666 250				
	669 250				
	704 200				
	705 200				
	701 100				
DISCIPLINES	PHYSICAL %		SOCIAL %		LIFE %
			ECONOMICS HUMAN GEOGRAPHY	500 500	

RECORD NO. - 3040

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCES	AREAS
LANDUSE	900	RENEWABLE RES. MGMT	%
		SUPPORT RES DEV	100

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
DATA ACQUISITION	000	SCI + TECH INFO	000	MAPPING COORDINATING	900 100

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
MAPPING DRAFTING AIRPHOTO	000	IN-HOUSE	000	OTHER FEDERAL DEPARTMENTS REGIONAL INVOLVEMENT, PUBLIC, PRIVATE	800 200

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
I.E. 500 = 50.0%, 000 = 100.0%

PREPARED BY:
BIOMETRICS & COMPUTER SC. BR.

RECORD NO. - 3041

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION	%	NAME AND ADDRESS
DEPARTMENT - ENVIRONMENT CANADA		YUKON	000	MAXWELL MR J W
SERVICE - LANDS, FORESTS AND WILDLIFE				CHIEF LAND USE PLANNING
INSTITUTE - LANDS DIRECTORATE DIRECTORATE				BR LANDS DIR LFWS DDE
				OTTAWA
				DNT
LOCATION - ONTARIO	%			OTTAWA K1A 0H3
	000			
TOWN KEY - OTTAWA				TELEPHONE 613-994-9317
PROGRAM AIMS	ENVIRON PROTECTN	ENV SOC PRG	HABITATS	IMPACT STATEMENTS
	LANDUSE PLANNG	LAND INVENTORY	WILDLIFE	MAPPING
				INFORMATION
				VEGETATION
BUDGET	YEAR	BUDGET	MAN-YEARS	
DATA	70-71	000000.0	0000.0	
(\$000)	71-72	000000.0	0000.0	
	72-73	000063.3	0010.3	
	CODE %	CODE %	CODE %	CODE %
GOALS	704 400			
	705 400			
	701 200			

	PHYSICAL	%	SOCIAL	%	LIFE	%
			ECONOMICS	500		
			HUMAN GEOGRAPHY	500		

DISCIPLINES

RECORD NO. - 3041

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE	AREAS	
LANDUSE	000		RENEWABLE RES. MGMT	%

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
DATA ACQUISITION	000	SCI + TECH INFO	000	MAPPING COORDINATING	900
					100

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
MAPPING CRAFTING AIRPHOTO	000	IN-HOUSE	000	OTHER FEDERAL DEPARTMENTS	800
				REGIONAL INVOLVEMENT, PUBLIC, PRIVATE	200

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
 I.E. 500 = 50.0%, 000 = 100.0%

PREPARED BY:
 BIDMETRICS & COMPUTER SC. BR.

RECORD NO. - 2203

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION		NAME AND ADDRESS	
DEPARTMENT	- ENVIRONMENT CANADA	NORTHWEST TERRITORIES		000 HATFIELD HR C T	
SERVICE	- FISHERIES			FISHERIES SERVICE DDE	
INSTITUTE	- FISHERIES SERVICE GENERAL			114 GARRY STREET	
				WINNIPEG	
				MAN	
LOCATION	- MANITOBA	100			
	N.W.T.	900			
TOWN KEY	- WINNIPEG			TELEPHONE 204-985-5437	
PROGRAM	FRESHWATER	COMMERCIAL	RECREATION FISH	FISH. MANAGEMNT	STOCK MAINTAIN.
AIMS	FISHR EXPANSION	ENVIRN PROTECTN	CONSULTATION	ECDN RESOUR DEV	ENV SOC PROG
	YEAR	BUDGET		MAN-YEARS	
BUDGET	70-71	000000.0		0000.0	
DATA	71-72	000000.0		0000.0	
(\$000)	72-73	000475.0		0019.0	

	CODE %	CODE %	CODE %	CODE %	CODE %
	704 000				
GOALS					
	PHYSICAL %	SOCIAL %	LIFE %		
	PHYSICAL SCIENCES GENFRAL 100		BIOLOGICAL SCIENCES 900		

DISCIPLINES

RECORD NO. - 2203

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE AREAS	%
		RENEWABLE RES. MGMT	
		FISHERIES - FRESHWTR	000

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
DATA ACQUISITION	400	SCI & TECH INFO	750	SAMPLING, DATA GATHERING	800
BASIC RESEARCH	200	DIRECT SUPPORT	200	SCIENTIFIC REPORTING	100
MONITORING & SURVEILLANCE	100	POLICY ADVICE	050	CONSULTING	050
SUPPORT SERVICES	100			ASSESSING	050
ADVICE	100				
EDUCATION	050				
NEGOTIATION	050				

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
FIELD STATIONS	900	IN-HOUSE	000	INFORMATION & RESEARCH SERVICES	500
LABORATORIES	100			GENERAL INDUSTRY	500

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
 I.E. 500 = 50.0%, 000 = 100.0%

PREPARED BY:
 BIOMETRICS & COMPUTER SC. BR.

RECORD NO. - 2204

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION		NAME AND ADDRESS			
DEPARTMENT	- ENVIRONMENT CANADA	YUKON		000	GIBSON MR A		
SERVICE	- FISHERIES				FISHERIES SERVICE		
INSTITUTE	- FISHERIES SERVICE GENERAL				PACIFIC REGION		
					1090 WEST PENDER STREET		
					VANCOUVER 5		
					BC		
LOCATION	- B.C.	100					
	YUKON	900					
TOWN KEY	- VANCOUVER				TELEPHONE 604-666-3611		
PROGRAM AIMS	AQUATIC ECOLOGY	ASSESSMENT	FISH PDPS.	FISH PRODUCTS	STOCK DYNAMICS		
	WATER QUALITY	SENSITIVITY	EVL. PIPELINE	ENV SOC PROG			
BUDGET	YEAR	BUDGET	EXPENDITURE	VARIANCE	M-YRS ALL.	M-YRS USED	VARIANCE
DATA	70-71	000000.0	000000.0	000000.0	0000.0	0000.0	0000.0
(\$000)	71-72	000000.0	000000.0	000000.0	0000.0	0000.0	0000.0
	72-73	000175.0	000000.0	000175.0	0007.0	0000.0	0007.0

CODE %	CODE %	CODE %	CODE %	CODE %
704 000				
GOALS				
PHYSICAL		SOCIAL		LIFE
PHYSICAL SCIENCES GENERAL 100				BIOLOGICAL SCIENCES 900

DISCIPLINES

RECORD NO. - 2204

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	RESOURCE AREAS	RENEWABLE RES. MGMT
		FISHERIES - FRESHWTR 000

DIMENSIONS OF MANAGEMENT	RESULT	TYPE OF ACTIVITY
BASIC RESEARCH 800	SCI + TECH INFO 750	SAMPLING, DATA GATHERING 800
SUPPORT SERVICES 200	DIRECT SUPPORT 200	ANALYSIS 200
	POLICY ADVICE 050	

TYPE OF FACILITY	LOCUS OF ACTIVITY	PRINCIPLE RELATIONSHIPS
FIELD STATIONS 900	IN-HOUSE 000	INFORMATION & RESEARCH SERVICES 500
H.Q. / COORDINATION CENTRE 100		OTHER FEDERAL DEPARTMENTS 500

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
 I.E. 500 = 50.0%, 000 = 100.0%

PREPARED BY:
 BIOMETRICS & COMPUTER SC. BR.

RECORD NO. - 2201

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION		NAME AND ADDRESS	
DEPARTMENT - ENVIRONMENT CANADA		MANITOBA		000	MANSFIELD DR A W
SERVICE - FISHERIES					ARCTIC BIOL STATION FRB
INSTITUTE - FRB ARCTIC BIOLOGICAL STATION					STE ANNE DE BELLEVUE
					QUIF
LOCATION - QUEBEC	7 000				
TOWN KEY - STE ANNE					TELEPHONE 514-453-3660
PROGRAM	RESEARCH	MARINE MAMMALS	ARCTIC	FUR SEALS	WHALES
AIMS	AQUATIC ECOLOGY	FISH. MANAGMENT	FUTURE FISHS.	CONSULTATION	CONTINENT SHELF
BUDGET	YEAR	BUDGET		MAN-YEARS	
DATA	70-71	000000.0		0000.0	
(\$000)	71-72	000000.0		0000.0	
	72-73	00033.0		0017.0	

	CODE %		CODE %		CODE %		CODE %		CODE %
	704	000							
GOALS									
	PHYSICAL	%	SOCIAL	%	LIFE	%	BIOLOGICAL SCIENCES	000	
DISCIPLINES									

RECORD NO. - 2201

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE	APPEALS	RENEWABLE RES. MGMT.	%
				FISHERIES - FRESHWTR	000

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
BASIC RESEARCH	000	SCI + TECH INFO	000	SAMPLING, DATA GATHERING ANALYSIS	800 200

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
FIELD STATIONS	500	IN-HOUSE	000	INFORMATION & RESEARCH SERVICES	200
LABORATORIES	500			REGIONAL INVOLVEMENT, PUBLIC, PRIVATE	200
				GENERAL INDUSTRY	200
				WITHIN DEPARTMENT	200
				INTERNATIONAL INVOLVEMENT	200

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
I.e. 500 = 50.0%, 000 = 100.0%

PREPARED BY:
BIOMETRICS & COMPUTER SC. BR.

RECORD NO. - 2202

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION		%	NAME AND ADDRESS
DEPARTMENT - ENVIRONMENT CANADA		NORTHWEST TERRITORIES		000	JOHNSON DR W F
SERVICE - FISHERIES					FRESHWATER INST
INSTITUTE - FRB FRESHWATER INSTITUTE WINNIPEG					FISHERIES SERVICE DCE
					501 UNIVERSITY CRESCENT
					WINNIPEG
					MAN
LOCATION - MANITOBA	%				
MANITOBA	000				
	200				
TOWN KEY - WINNIPEG					TELEPHONE 204-269-1420
PROGRAM	FRESHWATER FISH	EUTROPHICATION	REG LIMNOL STUD	LOW-POLL PRODS	MERCURY
AIMS	PESTICIDES	AQUACULTURE	EXPER. FISHERS.	PROD. & PROC. RES	FISH. MANAGEMENT
BUDGET	YEAR	RUDGET		MAN-YEARS	
DATA	70-71	000000.0		0000.0	
	71-72	000000.0		0000.0	
1#0001	72-73	000330.0		0016.0	

CODE %	CODE %	CODE %	CODE %	CODE %
704 000				

GOALS

PHYSICAL	%	SOCIAL	%	LIFE	%
ENVIRONMENTAL SCI GENERAL 150				BIOLOGICAL SCIENCES	850

DISCIPL. INFS

RECORD NO. - 2202

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE AREAS	%
		RENEWABLE RES. MGMT	
		FISHERIES - FRESHWTR	000

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
BASIC RESEARCH	000	SCI + TECH INFO	000	CONSULTING	200
				SAMPLING, DATA GATHERING	200
				ANALYSIS	200
				SCIENTIFIC REPORTING	200
				ASSESSING	200

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
FIELD STATIONS	400	IN-HOUSE	000	INFORMATION & RESEARCH SERVICES	200
LABORATORIES	400			REGIONAL INVOLVEMENT, PUBLIC, PRIVATE	200
H.Q. /COORDINATION CENTRE	200			GENERAL INDUSTRY	200
				WITHIN DEPARTMENT	200
				INTERNATIONAL INVOLVEMENT	200

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
 I.E. 500 = 50.0%, 000 = 100.0%

PREPARED BY:
 BIOMETRICS & COMPUTER SC.BR.

RECORD NO. - 1076

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION	%	NAME AND ADDRESS
DEPARTMENT	- ENVIRONMENT CANADA	ARCTIC	000	GRAINGER MR V W
SERVICE	- ENVIRONMENTAL PROTECTION			EPS 00F
INSTITUTE	- E.P.S. GENERAL			257 FEDERAL BUILDING
				EDMONTON
				ALTA
LOCATION	- P.E.I.			
	ALBERTA			
	YUKON			
	250			
	500			
	250			
TOWN KEY	- EDMONTON			TELEPHONE 403-424-0251
PROGRAM AIMS	DEVELOPMENT OPERATION	WASTE TREATMENT MAINTENANCE	PROCESSES PERMAFROST	ARCTIC ADVICE
				ASSESSMENT ENV SOC PRDG
BUDGET DATA (\$000)	YEAR	BUDGET	MAN-YEARS	
	70-71	000000.0	0000.0	
	71-72	000000.0	0000.0	
	72-73	000100.0	0001.0	

	CODE %	CODE %	CODE %	CODE %	CODE %
	701	000			
GOALS					
	PHYSICAL	%	SOCIAL	%	LIFE
	ENGINEERING SCI GENERAL	000			

DISCIPLINES

RECORD NO. - 1076

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE	A P F A S	RENEWABLE RES. MGMT	%
SOLID WASTES	000				

DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
BASIC RESEARCH	600	PRODUCT DEVELOPMENT	200	EQUIPMENT DEVELOPMENT	700
PLANNING	200	DIRECT SUPPORT	100	TECHNIQUE DEVELOPMENT	300
ADVICE	200				

TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
OFFICES	000	IN-HOUSE CONTRACTS	700	REGIONAL INVOLVEMENT, PUBLIC, PRIVATE	000
			300		

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
 1.0 = 500 = 50.0%; 000 = 100.0%

PREPARED BY:
 MIDMETRICS & COMPUTER SC.BR.

RECORD NO. - 1077

DATE - 25 JUL 72

DEPARTMENT - ENVIRONMENT CANADA	IDENTIFICATION	REGION OF APPLICATION	%	NAME AND ADDRESS
SERVICE - ENVIRONMENTAL PROTECTION		NORTHWEST TERRITORIES	300	
INSTITUTE - PACIFIC GENERAL		GENERAL EASTERN CANADA	700	CHEM BIOL & BACTERIOL LAB
				EPS
				EDMONTON
				ALTA
LOCATION - ALBERTA	%			
	000			
TOWN KEY - EDMONTON				TELEPHONE 403-424-0251
PROGRAM AIMS	AIR QUALITY	WATER QUALITY	ANALYTIC LAB.	SERVICES
	PHYSIOLOGY	BACTERIOLOGICAL		CHEM. ANALYSES
BUDGET DATA (\$000)	YEARS	BUDGET	MAN-YEARS	
	70-71	000000.0	0000.0	
	71-72	000037.0	0000.5	
	72-73	000047.0	0000.5	

GOALS	CODE %	CODE %	CODE %	CODE %	CODE %
	701 000				
	PHYSICAL	%	SOCIAL	%	LIFE
	CHEMISTRY	700			BIOLOGICAL SCIENCES
					300

DISCIPLINES

RECORD NO. - 1077

DATE - 25 JUL 72

ENVIRONMENTAL QUALITY	%	RESOURCE AREAS		RENEWABLE RES. MGMT	%
WATER - INLAND	900				
ATMOSPHERIC	100				
DIMENSIONS OF MANAGEMENT	%	RESULT	%	TYPE OF ACTIVITY	%
MONITORING & SURVEILLANCE	000	DIRECT SUPPORT	000	ANALYSIS	000
TYPE OF FACILITY	%	LOCUS OF ACTIVITY	%	PRINCIPLE RELATIONSHIPS	%
LABORATORIES	000	IN-HOUSE	000	REGIONAL INVOLVEMENT,PUBLIC,PRIVATE	000

COMMENTS : % ALLOCATION IS CORRECT TO ONE DECIMAL PLACE
 I.E. 500 = 50.0%, 000 = 100.0%

PREPARED BY:
 BIOMETRICS & COMPUTER SC. BR.

RECORD NO. - 1078

DATE - 25 JUL 72

IDENTIFICATION		REGION OF APPLICATION		%	NAME AND ADDRESS
DEPARTMENT - ENVIRONMENT CANADA		NORTHWEST TERRITORIES		000	ANALYTICAL CHEMICAL LAB
SERVICE - ENVIRONMENTAL PROTECTION					FPS
INSTITUTE - E.P.S. GENERAL					WINNIPEG
					MAN
LOCATION - MANITOBA	000				
TOWN KEY - WINNIPEG					TELEPHONE 204-985-4051
PROGRAM AIMS	AIR QUALITY BIOLOGY	WATER QUALITY BACTERIOLOGICAL	ANALYTIC LAB.	SERVICES	CHEM. ANALYSIS
BUDGET DATA (\$000)	YEAR 70-71 71-72 72-73	BUDGET 000000.0 000020.0 000042.0		MAN-YEARS 0000.0 0000.5 0002.5	

	CODE %		CODE %		CODE %		CODE %
GOALS	701 000						
	PHYSICAL %		SOCIAL %		LIFE %		
	CHEMISTRY 700				BIOLOGICAL SCIENCES 300		

DISCIPLINES

RECORD NO. - 1078

DATE - 25 JUL 72

	ENVIRONMENTAL QUALITY %	RESOURCE AREAS	RENEWABLE RES. %	464T %
	WATER - INLAND 900			
	ATMOSPHERIC 100			

	DIMENSIONS OF MANAGEMENT %	RESULT %	TYPE OF ACTIVITY %
	MONITORING & SURVEILLANCE 000	DIRECT SUPPORT 000	ANALYSIS 000

	TYPE OF FACILITY %	LOCUS OF ACTIVITY %	PRINCIPLE RELATIONSHIPS %
	LABORATORIES 000	IN-HOUSE 000	REGIONAL INVOLVEMENT, PUBLIC, PRIVATE 000

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120
.E5
N57

Northern programs of Environment
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