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APPENDIX A SCOPE OF SERVICES

This contract covers the second year of a three-year effort to develop a regional strategy. The first year consisted of developing processes to initiate the following tasks: issue identification, regional goals formulation, organization development, detailed work-planning, community education, and formulation of the planning process itself. The second year will focus on 1) identification of communities' preferred development locations and policies, and 2) the continued development of a regional strategy based on goals, priorities, policies and plans identified earlier. The third year will be completion of the plans, preparation of an implementation agenda, and review by communities.

The second year will apply the first year's goals, survey results, and planning process to the preparation of generalized community land use plans, and will relate these in a regional context, based upon regional goals, issues and policies.

I. Community Development Plan

Since the strategy is an early step in the long-range planning program of the region, much detailed development planning will take place in future years. All communities will be started this year. Products this year will be maps and texts showing preferred and feasible locations of future land uses and facilities in both the municipality and surrounding lands.

At least two sets of meetings will be held in each village. Community meetings will be conducted with the NANA Lands Department to review each district's economic development potential. These meetings will be with the city and IRA councils, staff and public to discuss:

1. Potential growth rates and patterns
2. Local development issues and housing and capital facility needs.
3. Local data collection needs.
4. Preferred development locations
5. Planning Process
6. A program for further local planning and implementation.

As a prelude to further planning, technical assistance will be provided to City and IRA staff by Mauneluk or coordinated through Mauneluk for the following:

1. Agency responsibilities and contact persons.
2. Identification of data needed for local planning and how to acquire it.
3. How to use the information for improved development planning.
4. Setting up consolidated record systems for land use maps, facility as-built plans, and other useful development data.

Products of the community meetings will be:

1. Local Issues List for each community.
2. A Status Report for each community, including map and text on preferred land uses and facility locations.
3. Carrying capacity of local facilities and selected resources.

Plans will be based where possible, on available data such as:

1. Flood plain location
2. Topography
3. Potential erosion areas
4. Land status and tenure
5. Soils and permafrost
6. Access
7. Proximity to utilities
8. Other data, as suggested in original scope-of-services.

This will result in preferred development plans which are based upon data that is available prior to plan preparation. Several communities are lacking basic data, such as soil surveys, so local decisions in those communities will have to be made on the basis of secondary data, such as PHS geologist reports, where available. It is assumed that further planning assistance will be provided to those communities under separate projects at a later date to make more complete use of new data.

II. Data Collection

Arrangements will be finalized with agencies for collecting or providing the following:

1. Soil surveys for all villages in FY-80 (except Kotzebue, Kobuk, and Deering, which already have surveys.)
2. Gravel resource maps
3. Land ownership maps
4. Topographic orthophoto quads
6. Vegetation assessment

Data used in other recent studies will also be examined, such as that collected on economic development, facilities, population, physical characteristics, and regional transportation costs for the Western Arctic Transportation Study.

Housing needs will be inventoried by examining appropriate authorities or sources, such as application records for the BIA Housing Improvement Program, and HUD Housing. Projections of future housing and facility needs will be based on population projections.

III. Projections

Projections will be prepared during FY-80 for the following:

1. Alternative scenarios of economic development.
2. Population growth due to natural demographic increase.
3. Population in-migration due to economic development.
4. Needs assessments.

Population projections will be sub-contracted to a consultant with experience both in the NANA Region and in technical forecasts related to recent developments in Alaska. Prior to consultant work, Mauneluk will:

1. Gather and organize existing data.
2. Sort population into age and sex categories.
3. Review other population forecasts for the region.
4. Develop procedures for a village-by-village census by the school district. (U.S. Census results will not be available until 1981.)

The consultant will then conduct the calculations of future population growth.

The consultant may also be asked to calculate facility and service needs. This is dependent upon the availability of standards suitable for emerging local policies on facility needs, appropriate technology, alternative energy sources, and other factors affecting service standards.

IV. Strategy Formulation

Agencies will be coordinated through three task forces--1) Lands 2) Facilities, and 3) Health/Education/Social Services. These task forces will engage in a joint review process, and assist in preparation of materials for the regional planning process.

Participating agencies will be asked to:

1. Review local goals and policies.
2. Review local problem statements.
3. Review community plans.
4. Develop evaluation criteria for projects.
5. Evaluate project proposals for consistency.
6. Analyze alternative means of overcoming barriers to achieving needs of the region's population. For example:
 - a. Financial barriers (by joint funding and other means)
 - b. Institutional barriers (by guidelines flexibility etc.)
 - c. Economic barriers (by infrastructure, market development, training, and education programs.)
 - d. Regulatory restrictions (by adjusting regulations or introducing legislative changes.)
7. Assist in "scoping" of potential impact problems.
8. Contribute available data.
9. Assist in preparation of background material which would be useful in a regional plan.
10. Jointly develop an implementation agenda.

The joint review process and implementation agenda will carry over into the third year.

The implementation agenda, prepared by each task force, will be a prioritized list and sequence of;

- 1) Study needs,
- 2) facility construction
- 3) funding priorities
- 4) new programs, and
- 5) Identified legislative and/or regulation changes, as appropriate.

The joint agency approach is expected to improve agency understanding of local problems, bring to bear agency expertise, and encourage agreement and further cooperation. Communities will review all products of task force efforts.

Agencies will be able to review project proposals through the A-95 Clearinghouse after consistent evaluation criteria have been set. To facilitate this review process, Mauneluk agrees to:

1. Send the State Clearinghouse a list of Strategy participants.
2. Develop a list of key words to be used by the Clearinghouse in a proposal title which may indicate that certain communities need to receive copies. (e.g., Kivalina-Red Dog, Wuik, Chukchi Sea OCS, Cape Thompson)
3. Assist communities to prepare comments for A-95 proposals, to improve local capability to respond.

V. Management System

The management system started in the first year will be continued and updated. Products will be:

1. Master Schedule of all proposed capital projects; also eventually research projects
2. Project Inventory
3. Program Directory
4. Regional Accounts on capacity and condition of village utilities, based on available information.

A procedure shall be developed for annual updating/and review by affected entities.

VI. Implementation Mechanisms

Investigation of implementation mechanisms will include:

1. Close work with the Coastal Resource Service Area Board.
2. Informal review at Mauneluk of local or regional entities which could assume certain program delivery responsibilities.
3. Investigate the establishment of the NANA Region as a planning service area.

Budget

The budget allocations for this second year effort are as follows:

<u>Total Budget</u>	<u>State Share</u>	<u>Local Match</u>
\$ 87,790	\$ 58,820	\$ 28,970

Of this total of \$87,790, one-third (33%) or \$28,970 will be provided by Mauneluk Association as local match. The amount of match provided as contractual shall be specified by written contracts or memoranda of understanding, indicating schedules and final products expected. These contracts or memoranda shall be submitted for Department review prior to execution.

Progress Report

The final product of this year's program will be a progress report detailing tasks undertaken, work elements completed and status of work started that is expected to carry over into the next year. The relationship between the first year's work and this year's shall be succinctly and thoroughly described. A work program for FY81 shall be developed and incorporated into the progress report.

The progress report shall address the major tasks as identified previously in the work program:

- I. Community Development Plans
- II. Data Collection
- III. Projections
- IV. Strategy Formulation
- V. Management System
- VI. Implementation Mechanisms

Separate reports or studies produced in conjunction with the regional strategy shall be referenced in the progress report and, where appropriate, included with it as appendices. Key maps produced (individual or composite, whichever is more useful) shall be included in the progress report, either full size or reduced, as appropriate and as funding permits.

A draft of the progress report shall be submitted to the Department for review by May 9, 1980. Written comments shall be returned by May 23, 1980. The camera-ready copy shall be submitted for review by June 6, 1980; written comments shall be returned by June 13, 1980. The progress report shall be printed, in quantity by June 30, 1980. A total of 350 progress reports, including appendices, shall be printed, of which 250 shall be provided the Department. Two sets of blueines and one set of mylar reproducibles of maps produced shall also be provided the Department.

Mauneluk's Mission Assn.

The NANA region has expressed considerable interest in developing a regional planning strategy as the next logical step in a planning process. Building largely upon information presented in the Northwest Alaska Community Profiles, a proposal was made for Department assistance in developing a regional planning strategy. Following is a work program responsive to this proposal and designed to produce a prototype for regional strategies in Alaska.

The issues seen by regional officials as central to the regional strategy concern the environmental carrying capacity of the NANA region and its inherent affects on the patterns of development, the necessity for identifying and analyzing alternatives to transportation systems and public facilities and an accurate assessment of the present socio-economic characteristics of the region's population. This information, together with appropriate forecasts of population and economic indices, will provide the framework for specific community development plans, including, where appropriate, relocation plans.

Development of the regional strategy will proceed in conjunction with the separate work elements described above. Key to the successful integration, and ultimate implementation, of these efforts through the regional strategy is the necessary coordination of the various public and private entities with responsibilities in the NANA region. Thus, on a regional basis, substantial effort will be directed towards identifying those entities, delineating their capabilities and missions, and specifying roles and avenues of coordination. Successful implementation of the regional strategy will rely heavily upon the commitments of these varied actors to coordinate their programs with each other and the regional strategy.

The regional strategy will be carried out by Mauneluk Association, the regional non-profit corporation. Funding under this grant will be partially used to hire a Senior Planner-level (Range 19A) professional planner with experience in rural Alaska and in regional planning. This planner will be employed by Mauneluk. The tasks to be accomplished are as specified in the following outline:

1. Identification of Regional Goals

Regional goals, as identified by residents of the NANA region, will be articulated for the following:

- A. Housing and Capital Improvements
- B. Transportation
- C. Economic Development
- D. Community Development

The Alaska Public Forum will be instrumental in this goals formulation process.

17. Community Development Plans

Basic to the preparation of community development plans is the identification and collection of the data requisite for meaningful plan preparation. Therefore, the following information, at a minimum, needs to be collected and appropriate sources of expertise and funding identified:

- A. Water quality, quantity and location
- B. Soils & Permafrost
- C. Floodplains
- D. Microclimates
- E. Subsistence activity patterns
- F. Topography
- G. Erosion

Initially, this information will be gathered for the existing developed and adjacent developable areas, on as detailed a basis as possible. This information will also be collected on a regional basis to enable identification of additional developable sites for future community expansion or relocation. For this latter effort, the following additional information at a minimum is required:

- H. Vegetation
- I. Transportation routes, existing and potential
- J. Fish and wildlife habitats and migration routes
- K. Airport sites
- L. Geology
- M. Land ownership
- N. Valid mining claims and patents

In addition, current socioeconomic information is necessary to establish existing community and regional characteristics and provide a basis for reasonable projections. At a minimum, the following information, as well as sources of assistance, are needed:

- A. Population
- B. Age, sex, family size, birth and death rates
- C. Health statistics
- D. Income characteristics
 1. Individual/family
 2. Seasonality
 3. Cash vs. subsistence; dependency upon either
- E. Employment characteristics
 1. Labor force
 2. Staffing levels
 3. Number of full and part-time employees
 4. Seasonality
 5. Unemployed

To the greatest extent possible the above information will be collected so as to represent historical trends over as long a period as practical, from which reasonable projections will be made through 1990.

The purpose for collecting this information is twofold -- to determine the environmental carrying capacity of the region and to enable identification of suitable development sites and types of development. Once this is accomplished, regional and community development plans can be formulated.

Community development plans will address the following issues:

- A. Alternative development patterns
- B. Potential growth
- C. Capital facilities needs
 1. Evaluation of alternatives (e.g., water and sewer systems, transportation systems)
- D. Housing needs
- E. Economic development
- F. Socioeconomic and cultural characteristics and trends
 1. Local needs and desires
 2. Standard of living

III. Development and Coordination of Key Actors

Recognizing that a multitude of public and private entities exist and function within the NAIA region with varying missions and capabilities, a key aspect of the regional strategy will be to identify appropriate sources of assistance and coordinate them to facilitate delivery of services in accordance with local and regional plans. To this end a program will be initiated to establish an information base for the following:

- A. Public Entities
 1. Identification of these with a potential or existing regional role
 - a. Mission
 - b. Technical assistance
 - c. Financial assistance
 2. Program requirements and overlaps
 - a. Application requirements
 - b. Lead time
 - c. Jurisdiction
 - d. Budget cycles (e.g., CFB)
 - e. Flexibility
 - f. Federal/state/local program characteristics
 3. Coordinator
 - a. Financial leverage
 - b. Coordination of program
 - c. Identification of key personnel
 - d. Identification of key organizations

- B. Private Entities
 - 1. Identification of roles
 - a. Utilities
 - b. Transportation
 - c. Industrial
 - 2. Operating characteristics
 - a. Programs
 - b. Lead time
 - c. Accessibility
 - d. Employment characteristics and needs
 - e. Budget cycles
 - f. Seasonality
 - 3. Coordination
 - a. Scheduling of projects
 - b. Recognition of local plans/priorities
 - c. Local hire
- C. Regional and Local Corporations
 - 1. Leadership roles
 - 2. Financial capabilities
 - 3. Development programs
 - 4. Technical assistance
- D. Local Governments
 - 1. Capabilities
 - 2. Fiscal capacities

2. Development of Regional Strategy

This process will of necessity be a dynamic one, changing in response to community development plans, varying conditions and priorities. It must also be flexible enough to incorporate variations in public and private programs. Major regional issues for which policies will be developed include, but are not limited to, the following:

- A. Housing and Capital Improvements
 - 1. NANA Regional Housing Authority programs
 - 2. Water and sewer facilities
 - 3. Other utilities
 - 4. Educational facilities
 - 5. Health care
 - 6. State housing assistance programs
- B. Transportation
 - 1. State and Federal Capital Improvements Programs
 - 2. Alternative modes
 - 3. Economic and operating characteristics
 - 4. Effects on community development
 - 5. Western/Arctic Region Transportation Study
- C. Economic Development
 - 1. Resource development
 - 2. Regional and Village development programs
 - 3. State and Federal centers
 - 4. State and Federal facilities work
 - 5. State and Federal economic assistance and capital

D. Community development

1. Desirable patterns
2. Population growth and employment
3. Responsiveness to environmental carrying capacity

It must be recognized that the regional strategy will reflect and incorporate policies specific to individual local conditions and needs as expressed in community development plans.

To assist in the formulation of the regional strategy, a steering committee will be established to provide policy direction to the staff planner(s) hired to develop the strategy. This steering committee will be composed of the appropriate regional officials from NANA Regional Corporation, Mauneluk Association and the Northwest Arctic school district, a staff planner from the Department of Community and Regional Affairs, a representative of the Division of Policy Development and Planning, Office of the Governor, and an independent professional knowledgeable in regional planning processes and the Alaskan arctic.

Throughout the regional strategy process, a program of local involvement through public workshops and hearings will be carried out. Representatives of public and private entities will also be encouraged to attend at the appropriate opportunities; other meetings will be held for residents only. At least one meeting a year will be conducted in each village to review and critique the progress of the strategy and propose revisions. The Alaska Public Forum will assist in developing and implementing a public involvement program.

Three-Year Work Program

It is recognized that adequate development and fulfillment of the regional strategy will take longer than the time remaining in FY '78. A three-year program more realistically allows for the creation of a responsive and meaningful program for the development of the NANA region. In recognition of this, and the time remaining in FY'78 of the work to be accomplished under this contract will represent a portion of the previously outlined work program. It is not expected that all of the needed data will be collected, nor all of the necessary coordination between responsible entities be effected, but significant strides in identification and dialogue should be realized. Tasks begun during FY '78, as outlined in specific, detailed work programs, will be as follows:

1. Identification of needed data
2. Categorizing sources of technical and financial assistance for all needed information
3. Delineation of regional goals
4. Identification of regional and local issues, needs and priorities
5. Collection of existing environmental and socioeconomic data
6. Initiation of dialogue between public and private entities
7. Identification of the appropriate
8. Development of a regional strategy

8. Commencement of coordination and joint development of ongoing and potential programs identified as being crucial to the regional strategy (Western/Arctic Region Transportation Study, State Power and Economic Development Study)
9. Organization of the steering committee and hiring of staff to carry out the regional strategy
10. Delineation of roles of regional and local corporations and governments
11. Beginning exploration of alternatives in transportation, capital facilities, community development, delivery of goods and services and regional growth
12. Development of citizen and agency participation program
13. Development of a detailed work program and budget for FY '79 - FY '80.

Products and Review Procedures

The final product of the regional strategy will be a document outlining regional development policies and, as developed, specific community development plans. This document will also contain an assessment and inventory of environmental and socioeconomic data applicable to the regional policies. Projections of population and economic factors will be made and presented.

The regional strategy will also be a process, establishing a mechanism for continued coordination of public and private entities active in the Region. Inherent in this process also is the periodic internal review and revision, as needed, of the strategy itself and its component parts.

For purposes of this contract, the final product will be a progress report, that, at a minimum, contains the following:

1. Regional policies and goals;
2. Summary of the data collected, results of the data analysis and a discussion of data gaps and proposed methods to acquire needed data;
3. A discussion of the procedures proposed and established to contact public and private entities and the means by which their activities in the NANA region will be coordinated;
4. A list of those public and private entities engaged in activities in the NANA region, their program responsibilities, funding levels and eligibility criteria, contact persons and results of initial dialogs;
5. Priority lists of: needed and/or scheduled projects in the region community development plans, data and projections;
6. Identification and discussion of issues and needs, on a regional and local basis.
7. In concert with the Alaska Public Forum, a description of the public involvement program, including a goals formulation

and a list of the alternatives of the project to be used in exploring alternatives in transportation systems, capital facilities,

community development patterns, regional growth, and other identified issues of concern;

9. A detailed work program for FY'79.

Two copies of a preliminary draft of the progress report shall be submitted to the Department for review by November 15, 1978. The Department will provide review comments within two weeks. A final draft ready for printing shall be prepared and reviewed by the Department by December 15, 1978. A total of 350 copies shall be printed, of which 250 shall be provided the Department. If maps are produced, four complete sets of blueprints and one set of mylar reproducible will also be provided the Department.

STATE OF ALASKA

DEPT. OF COMMUNITY & REGIONAL AFFAIRS

DIVISION OF COMMUNITY PLANNING

JAY S. HAMMOND, GOVERNOR

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ANCHORAGE, ALASKA 99501

We are pleased to provide you with the enclosed progress report for the first year of the NANA regional strategy. This progress report summarizes activities undertaken during the past year, identifies key issues to be addressed in the regional strategy and proposes a management framework within which the regional strategy will evolve over the next several years.

Attached as appendices to the progress report are several reports produced in conjunction with the regional strategy. The Alaska Public Forum conducted a survey in the NANA region to elicit resident attitudes about several issues of local and regional significance, including subsistence, employment and community ties. The resulting information was used to develop goals and objectives for the regional strategy. An index and bibliography of existing information on the NANA region was developed to provide a single reference source and a focal point for future data collection and research efforts in the NANA region.

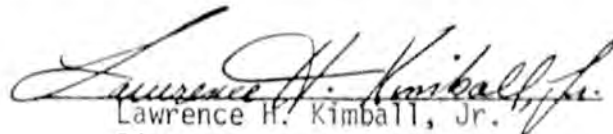
The first year of the regional strategy was highlighted by the cooperation and assistance of a number of individuals, governmental agencies and other public and private entities. Such cooperation is central to the entire regional strategy concept; successful development of the strategy will depend upon continued cooperation from all individuals, agencies and organizations with responsibilities in the NANA region.

We trust you will find the enclosed information useful. We encourage your application of these materials should you have the opportunity to work in or near the NANA region. We stand ready to assist you in your efforts and to provide additional information if requested. It is our firm conviction that open dialogue and free interchange of ideas will prove mutually beneficial to all concerned.

It is also important to note that the regional strategy was conceived as an ongoing, dynamic process. This progress report marks more the beginning of the second year's effort than the end of the first. Enclosed with this letter is the work program for the second year of the regional strategy. We encourage your use of it and your response to it. Please feel free to contact either Mauneluk Association or the Division of Community Planning for further information. We are appreciative of those whose past assistance has been valuable to this important effort and look forward to continued assistance in our future endeavors.



Dennis Tiepelman
President
Mauneluk Association



Lawrence H. Kimball, Jr.
Director
Division of Community Planning

PLEASE NOTE: THE FOLLOWING PAGES WERE TREATED
AS A UNIT IN THE ORIGINAL DOCUMENT.

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NANA REGIONAL STRATEGY FIRST YEAR PROGRESS REPORT

	<u>PAGE</u>
INTRODUCTION	1
BACKGROUND	5
OUTLINE OF PROGRESS	7
DETAILED DISCUSSION	
Regional Goals Formulation	8
Issues Identification	18
Data Base Identification	21
Program Inventory	23
Organization Development	33
Process Formulation	40
Community Information & Education	46
Data Collection Agreements	47
Carrying Capacity	48
APPENDICES	
Survey Results Summary	
Bibliography and Index Information on the NANA Region	
Past Facility Priorities	
Selected Responses From Program Inventory	



MEMBER VILLAGES

Ambler, Buckland, Deering, Kiava, Kivalina, Kobuk, Kotzebue, Noatak, Noorvik, Selawik, Shungnak

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The preparation of this progress report was financed in part through a comprehensive planning grant from the Department of Housing and Urban Development, under the provisions of Section 701 of the Housing Act of 1954, as amended, and the Division of Community Planning, Department of Community and Regional Affairs of the State of Alaska.

June, 1979

PROGRESS REPORT
NANA REGIONAL STRATEGY

INTRODUCTION

The NANA Regional Strategy is a cooperative effort between the Federal, State, local governments, and private corporations to formulate an overall management program for the NANA Region. The management program will provide a guide for planning, construction, and delivery of programs and facilities for community development, economic development, transportation, and land management. The project may soon include health, education, and social services. To the extent that these last three (3) involve construction of facilities and land, they will already be involved.

The Regional Strategy will provide:

1. A coordination mechanism.
2. Facility programming assistance.
3. Regional development policies.
4. A continuing planning process.
5. Projections.
6. A set of projects appropriate for and consistent with local needs and conditions.

In short, the Regional Strategy will provide a mechanism to tie together the programs in the region, including Coastal Management, so that projects are formulated as an integrated set, consistent with the goals, objectives, and policies of the region. For the NANA Region, this would mean a package

of programs and projects which would promote regional self-sufficiency, subsistence protection, facilities within local ability to pay life cycle costs, local training and employment in appropriate sectors, and protection of future options.

Feasibility of the process will depend on as little deviation as possible from established procedures and mechanisms.

Implementation will require continuing coordination between agencies and communities. Coordination will be provided by Mauneluk, whose role will be to provide a central coordination point, prepare supporting information such as projections, help villages prepare long-term management plans, consolidate and distribute agency planning and programming information, establish agreements and commitments, and coordinate preparation of the final document. Coordination will also be through the A-95 Clearinghouse. Federal and State agencies will be expected to continue present planning efforts, submit requested information, comment on proposals, and participate in task force planning sessions. Communities will be expected to comment on proposals, prepare community land-use and facility plans with technical assistance and review the final strategy document.

The products of the strategy will include the following:

1. Summaries of existing information.
2. Data gaps.
3. Long-term projections and scenarios.
4. Maps of preferred development locations.
5. Upgraded data base.
6. A master schedule of proposed projects.
7. Lists of development issues.
8. An implementation agenda.

The implementation agenda will include recommended agency and community actions for a several year period. The implementation agenda will include a prioritized list and sequence for:

1. Facility construction.
2. Regulation changes.
3. Allocation changes.
4. Program changes.
5. Future studies.
6. Joint funding opportunities.
7. Proposed legislation.

Recommendations will be based on needs assessments and priority lists developed with the communities earlier in the process. The recommendations for meeting the needs will be based on comments from communities and agencies. A board of communities will be able to clarify the character and the extent of problems and provide local policy guidance.

Benefits of participation by agencies will be 1) improved information sharing, 2) economies of scale, 3) improved administrative efficiency, 4) targeted service delivery, and 5) accelerated permitting. For communities, the strategy provides 1) improved access to State and Federal planning and decision making processes, 2) influence on decisions, 3) an organized approach. Eventually these opportunities could lead to expanded program allocations, improved technical assistance, and improved effectiveness of programs.

Experience to date has demonstrated that most agencies are willing to cooperate. The Department of the Interior has incorporated subsistence policies into its land management regulations, the Public Health Service has opened up its facility design process to greater public involvement and new ideas, and the Alaska Public Forum has helped formulate a neutral

set of goals, accurately reflecting the attitudes and positions observed by residents at the public meetings.

The U.S. Soil Conservation Service has offered to provide soil surveys to every community in the region within a single year, including assessments of engineering and land use suitability. The Bureau of Indian Affairs (BIA) has provided cooperative study money to the U.S. Forest Service for a forest inventory and assessment which could become the foundation for further community development projects. The U.S. Fish and Wildlife Service has cooperated in reviewing with the Bureau of Land Management (BLM) the availability of timber on the proposed Selawik National Wildlife Refuge for local harvesting for log homes in Selawik. Economic development projects such as timber harvesting, distribution, and milling could be fostered by use of NANA lands and funding of mills by the Economic Development Administration (EDA). Secondary effects of such programs will help achieve goals of regional self-sufficiency by substituting wood for oil in household heating, provide employment opportunities, reduce imports of lumber and labor from outside the region, and reduce the costs of materials for future development projects.

The NANA Lands Department is providing land planners to accompany the Regional Strategy staff to over twenty (20) community meetings, so communities can plan land management to meet goals of local economic development, community population growth and facility needs, and subsistence protection. Assistance will be provided by NANA in preparation of resource maps on land ownership and gravel resources. NANA will also establish consistent procedures for gravel removal, purchasing, and usage for community development projects. Gravel shortage is a limiting factor for development projects such as transportation, community buildings,

housing projects, and water and sewer. The Department of Transportation & Public Facilities (DOT/PF) is contributing financially to help with such work. DOT/PF is also considering other means of obtaining gravel to help on development projects.

Other agencies have offered to make similar efforts to adjust policies, accelerate schedules, and increase allocations. The willingness demonstrated by agencies to adjust their programs to fit with the regional strategy is an affirmation of the feasibility of a cooperative approach. If the rest of the project continues with this kind of cooperation, substantial benefits will be achieved. So far it appears probable that future cooperation will even exceed original expectations in some categories. There have been some difficulties in communication among the twenty (20) agencies and eleven (11) communities, but we expect these to be worked out during the course of the project.

BACKGROUND

The NANA Region is the area covered by the Northwest Alaska Native Association. The region includes the drainage of the Noatak, Kobuk, Selawik, Buckland, and Wulik Rivers; the western Brooks Range, and the Seward Peninsula to Cape Espenberg on the Chukchi Sea. The region extends to the North Slope Borough boundary between Kivalina and Point Hope.

Eleven (11) communities exist in the NANA Region. Most are almost entirely Inupiat Eskimo. The communities are each isolated, connected only by air service by light plane to Kotzebue. Kotzebue is the regional transportation center and has a white population comprising 15% of the community. Until recently, townsite land management decisions were made

by a federal trustee.

Most people rely on a combination of part-time seasonal employment, commercial fishing, subsistence hunting and fishing, and governmental transfer payments. This makes the role of Federal and State development and land management decisions of crucial significance to the well-being of the regions residents.

Six (6) monuments or refuges are proposed for the region -- Gates of the Arctic, Noatak National Preserve, Kobuk Valley National Monument, Selawik National Wildlife Refuge, Cape Krusenstern National Monument, and Bering Land Bridge National Monument. The land management agencies of these lands are the National Park Service and the Fish & Wildlife Service. The combined lands managed by the State and Federal government will constitute almost two-thirds (2/3) of the region's land base, so their local hire policies on concessions and subsistence will affect the economy of the region. Economic development must take place on the NANA lands and State and Federal lands if the regions social and economic condition is not to stagnate and the residents go on permanent welfare.

Most agencies recognize the need to take the responsibility of some development and training to the extent agency policies will allow.

Social development will follow goals of local control and self-determination, which will require substantial training and technical assistance to upgrade local management capability.

Other agencies in facility and service delivery programs are interested in improving their programs, mostly through more coordinated capital facility programming.

As a result of meetings of NANA and Mauneluk over the past several years with communities in the NANA Region, regional leaders requested from

the Governor region-wide planning assistance. The Governor's Office obtained assistance from the U.S. Department of Housing and Urban Development, for funding a work plan developed by the State Department of Community & Regional Affairs - Division of Community Planning. Maunleuk was contracted to coordinate the development of the plan.

Formulation of a new kind of planning program has required considerable time for designing a process by which a strategic plan would be prepared and capital facilities programming coordinated. Therefore, the bulk of the first year's efforts were spent formulating a feasible process for coordinating so many agencies, trying alternative mechanisms, discussing acceptable approaches with community and regional leaders, gathering background information, and identifying existing activities which could be forged into a strategy.

This progress report describes the work of the year and some of the frustrations, and provides samples of some of the intermediate products. Much of the text describes the structure and process for work during the second and third years, as these are important results that need to be distributed to as many agencies and communities as possible.

OUTLINE

The first year of the Regional Strategy consisted of work on the following:

1. Regional goals formulation.
2. Issues identification.
3. Data base identification.
4. Program inventory.

5. Organization development.
6. Process formulation.
7. Community information and education.
8. Data collection agreements.
9. Research on carrying capacity as a management concept.

Early this year, the Governor's Division of Policy Development & Planning sent the original workplan which was developed by the Department of Community and Regional Affairs to all agencies having potential programs in the region. An orientation meeting was held in Kotzebue to provide agencies with an overview of the project. The purpose was to have them hear the local and regional interpretations of past and pending community development problems, and to exchange information on programs.

Prior to the meeting, agencies were sent questionnaires asking for lists of programs, projects, data being collected, facilities being constructed, public participation schedules, and data distribution formats. The responses were limited in depth and scope.

The meeting was followed by activity by Community and Regional Affairs, Mauneluk Association, NANA Regional Corporation, and others in organizing and contracting imminent work and hiring a project planner.

1. Regional Goals Formulation

A survey was conducted in the Fall and Winter of 1978 to determine the goals and objectives of the region's residents relating to development. The purposes of the survey were to 1) develop a basis for identification of regional goals, and 2) develop a data base useful to the agencies operating in the region. A consolidated approach was used with an inter-agency panel, to ensure that just one (1) survey was conducted rather than the usual flood of surveys.

The Alaska Public Forum, an arm of the Governor's Office, was contacted to help with a goals setting process and to administer the survey. The interagency panel mentioned above was involved in the writing and final review of the survey questionnaire.

The survey was administered to three-hundred and fifty-five (355) residents in the eleven (11) communities in the region. Results of the survey were distributed to several agencies in hard copy with reference copy being retained on file at the Mauneluk Association office in Kotzebue. The entire set of results is on computer storage at the University of Alaska in Fairbanks, with the Institute for Social and Economic Research. Access to the survey data is possible by contacting Mauneluk Association for a copy of the original questionnaire and coordinating the project with the region.

At a series of community meetings, residents were told of the outcome of that survey. The meetings also provided the occasion to obtain additional issue information. Some of the original survey questions were re-asked in order to determine if they had been understood by the community. One such question had to do with the willingness to pay for facilities and service. A game was used to elicit the preferences in each community. Residents were grouped into "households" and given a fixed amount of money approximating the budget of a local household. They were shown a list of available and contemplated services, along with associated costs. Those attending were then asked to determine how they would allocate their money when faced with constraints of insufficient funds.

The exercise was an important research tool because it 1) related costs normally hidden from individuals, costs which are sometimes absorbed by municipalities and agencies; 2) required individuals to make the same

decisions facing municipal councils; and 3) provided a demonstration of the cumulative costs of expanding governmental services. The game was limited in that it did not portray all the costs facing a household nor all the services and programs a community might need. Dosts also have been limited in representing the final costs of facilities. The summary of the entire project is available from Mauneluk Association.

Results of the survey, community meetings, and past planning documents and statements of problems by mayors, councils, and staff were used to formulate statements of goals and objectives. The attached statement of goals and objectives was developed by the Alaska Public Forum and Mauneluk Association and has been tentatively approved by the Steering Committee and regional leaders. These goals and objectives will be submitted as a draft to communities for their review. The goals and objectives will be discussed during community meetings this winter.

DRAFT GOALS AND OBJECTIVES

(Formulated by the Alaska Public Forum and Mauneluk Association)
To be submitted to communities for review.

OVERALL QUALITY OF LIFE GOALS.

1. TO MAINTAIN FREEDOM OF CHOICE IN LIFESTYLE: WHETHER SUBSISTENCE, CASH ECONOMY OR BOTH;
2. TO MAINTAIN THE CULTURE OF THE INUPIAT PEOPLE;
3. TO PROTECT FISH AND GAME RESOURCES FOR SUBSISTENCE USE;
4. TO MAXIMIZE LOCAL CONTROL IN DECISIONS WHICH AFFECT LOCAL PEOPLE;
5. TO INSURE THAT THE COSTS AND BENEFITS OF COMMUNITY OPTIONS ARE PRESENTED TO THE COMMUNITY BEFORE DECISIONS ARE MADE;
6. TO ENCOURAGE THE FULL DEVELOPMENT OF THE HUMAN POTENTIAL OF NANA RESIDENTS;
7. TO IMPROVE COMMUNICATIONS AMONG VILLAGES SO THAT MUTUAL PROBLEMS AND POTENTIAL SOLUTIONS MAY BE SHARED;
8. TO ELIMINATE ALCOHOLISM IN THE REGION.

These goals provide the overall framework for planning in the NANA Region. Subsistence remains a key element in the lives of all communities in the NANA Region. Employment is being perceived as increasingly important to pay for basic goods and services. The survey results and village workshops repeatedly emphasized the desire of individuals, families and villages to pursue both subsistence and cash economy activities. To meet those needs, planning for government programs and development projects must be presented in a manner that allows choices to be clearly identified by each community. Time must be allocated in the planning process to allow adequate public involvement in decision making that affects local people. This includes time:

- a. To assess and to digest information.
- b. To discuss the advantages and disadvantages of various options.
- c. To discuss the consequences of any actions.

COMMUNITY SERVICE GOALS

1. TO PROVIDE FAST AND EFFICIENT MEANS OF LOCATING MISSING PERSONS.

Objective:

- a) Improve the regional system of search and rescue for people in need of aid;
- b) Establish communication links to assure responsive and efficient rescues.

2. TO ENCOURAGE THE ACQUISITION AND USE OF ONLY EFFICIENT AND RELIABLE UTILITIES. THESE UTILITIES SUCH AS WATER, SEWER, AND ELECTRIC GENERATORS, MUST BE APPROPRIATE TO THE ENVIRONMENT, THE NEED, AND VILLAGE ABILITY TO OPERATE AND MAINTAIN THEM.

Objectives:

- a) Allow each community the opportunity to have safe, sanitary waste disposal systems provided within their fiscal means;
- b) Provide electrification at a reasonable cost to users;
- c) Ensure that each community is presented with the cost and complexity of operations and maintenance of all new facilities before they are built.

3. UPGRADE THE QUALITY OF CRIMINAL JUSTICE AND PUBLIC SAFETY SERVICES PROVIDED IN THE NANA VILLAGES.

Objectives:

- a) Explore methods for expansion of jail facilities and local police;
- b) Explore methods to expand local ability to handle firefighting.

TRANSPORTATION GOALS

1. TO PROVIDE A RELIABLE, ALL WEATHER TRANSPORTATION SYSTEM, AT REASONABLE COST IN THE NANA REGION.

Objectives:

- a) Design options to minimize the cost of transporting fuel to villages;
- b) Study the effects of frequency of transportation service on costs of moving goods and people;
- c) Strive to provide a safe, dependable trail network in the region.

2. TO INCREASE THE DEGREE OF SAFETY IN AIR TRANSPORTATION SYSTEMS.

Objectives:

- a) Evaluate the current system for collection and dissemination of weather information from villages;
- b) Explore ways to improve navigation into village air strips;
- c) Provide for adequate, reliable, year round air strip maintenance.

3. TO IMPROVE THE SAFETY AND CONVENIENCE OF TRAVELERS IN THE REGION.

Objectives:

- a) Explore ways to improve the safety of winter travel between villages;
- b) Design options to increase convenience of airplane passengers awaiting flights.

4. INCREASE LOCAL INFLUENCE ON LOCAL TRANSPORTATION DECISIONS.

Objectives:

- a) Ensure that opinions and comments of community people are included in all decisions affecting the region before beginning transportation project;
- b) Encourage government agencies to coordinate their planning with regional organizations such as Mauneluk Association and NANA Regional Corporation.

5. IMPROVE ACCESS TO VILLAGE WASTE DISPOSAL SITE.

EMPLOYMENT GOALS

1. TO PROVIDE EMPLOYMENT OPPORTUNITIES IN THE NANA REGION.

Objectives:

- a) To ensure maximum local hire on development projects in each village;
- b) To minimize conflicts between scheduling the availability of employment opportunities and the pursuit of subsistence activities;
- c) Create employment in seasons when there normally is none;
- d) Encourage the development of employment opportunities which allow periodic return to communities.

2. TO DEVELOP LOCAL TRAINING PROGRAMS FOR REGIONAL EMPLOYMENT OPPORTUNITIES.

Objectives:

- a) Encourage the school district to develop its curriculum in such a manner that High School courses offered are relevant to employment opportunities available;
- b) Provide opportunities for village residents to gain employment skills in their communities;
- c) Assure the provisions of local training programs in any economic development projects in the NANA Region;
- d) Encourage the transfer of traditional skills (e.g., boat and sled building, arctic survival and subsistence skills, customs, crafts, etc.) to young people.

SOCIAL GOALS

1. TO FOSTER A STRONG, HEALTH, COMMUNITY ENVIRONMENT IN THE NANA REGION

Objectives:

- a) To encourage family participation in community activities;
- b) Reduce the dependence on alcohol and drugs;
- c) Increase the level of independence, self-reliance and pride.

2. TO IMPROVE AND MAINTAIN THE HEALTH OF THE NANA PEOPLE.

Objectives:

- a) To minimize disease and health problems through the study of alternatives such as prevention programs;
- b) To provide high quality, locally available health services;
- c) To supply each community with an adequate number of well-trained health aides;
- d) Improve telecommunications between village health aides and medical personnel in Kotzebue.

3. TO ENCOURAGE THE DEVELOPMENT OF THE HIGHEST QUALITY LOCAL GOVERNMENT FOR EACH COMMUNITY IN THE REGION.

Objectives:

- a) To improve local management capabilities;
- b) To maximize cooperation and communication between city administrations and local IRA (traditional) councils;
- c) To maximize public participation in local and regional decisions.

4. TO PROVIDE MEANINGFUL, ENRICHING, EDUCATIONAL OPPORTUNITIES FOR ALL NANA RESIDENTS.

Objectives:

- a) To assure continued communication between the School Board and the village residents on issues such as local needs and curriculum;
- b) To enhance student and teacher motivation towards quality education;
- c) To provide diverse educational opportunities for students and adults.

HOUSING GOALS

1. TO PROVIDE SAFE, EFFICIENT, HOUSING AT REASONABLE COST FOR NANA RESIDENTS.

Objectives:

- a) Secure housing which is energy efficient in design;
- b) Provide flexibility in choice of building materials and fuel source;
- c) For prospective public housing residents, increase information about monthly costs associated with those homes;
- d) Assure that the distribution of low-income housing is equitable among villages in the NANA Region;
- e) Provide new housing to those in most need;
- f) Ensure that comments of local people are included in developing housing projects in their community.

The regional goals and objectives will be used as the basis for regional development policies. Draft development policies will be developed this winter to guide the actions of agencies during the strategy preparation phase, so they follow community preferences.

Regional development policies will be submitted to communities for review, and will be modified as necessary for the final strategy. Policies may change in the future, as goals and objectives change and will be updated as needed.

One example in which the emerging policies have already been applied is in the development of a sewer and water development project for Selawik by the U.S. Public Health Service. The mayor and vice-mayor of Selawik met with the Public Health Service and the State Department of Environmental Conservation staff to express the community's preferences that the life-cycle costs of the system (operation and maintenance) be considered in the design. Mauneluk was invited to attend and incorporate the results into the Regional Strategy.

Selawik residents have noted the high sewer and water costs, and difficult repair problems faced by other communities after they had accepted "free" facilities. Selawik residents said they were willing to forego some of the convenience of expensive and technologically sophisticated systems if they could keep the operation and maintenance costs down, and make sure the system could be repaired locally rather than requiring specialized repair services. Mauneluk help by leading staff support including citing the support of the Regional Strategy project, and advocating that the Public Health Service incorporate Selawik's concerns explicitly into the design process, by establishing them as primary design criteria.

Several alternative design concepts were suggested by Selawik, and the Public Health Service agreed to provide cost projections for each design alternative. A public meeting was set so PHS could explain each option to the community along with the costs and benefits of each. The regional development policies will encourage the use of this planning approach by agencies for meeting community development needs and conditions in this region. The Selawik example by PHS exemplifies a cooperative attitude, flexible design and operation policies, and a public process.

The goals formulation process has been followed up with requests to participating agencies to provide lists of their goals and philosophies. The work of the Alaska Cooperative Land Manager's Task Force coordinated by the Alaska Federation of Natives and the Department of the Interior are helpful in this regard.

Mauneluk Association itself has undertaken a review of its organizational goals and is considering a re-organization for better program delivery and planning.

2. Issues Identification

Development issues were identified during public meetings over the last several years. Those issues are derived from residents' statements, planning documents, survey review, and official statements. Planning documents reviewed included those by the State, North Slope Borough, and others, which might indicate development pressures which could infringe on the region from adjacent geographic areas. An example of this is a pipeline which has been suggested for taking the oil from the National Petroleum Reserve across the NANA Region to Nome. The infringement comes with the bisecting of the region's normal transportation and caribou

migration routes. Outer Continental Shelf development and Brooks Range mining are other examples of those development potentials. Mining is the biggest potential economic development in the region and could induce secondary requirements of a deep-water port, a railroad or haul road, one or more new communities, and substantial labor force in-migration.

Many of the development issues are not part of the formal workplan for the Regional Strategy but have been suggested for inclusion by regional residents. The extent of consideration of these issues will depend upon the time available, budgetary and staff supplements, cooperation by participating agencies, and the preferences of the Steering Committee and community review board.

The issues list is being used as a starting point for agency discussion by the task forces. The issues list will be expanded and reorganized to identify cause-effect relationships and sort the issues into topic areas for better analysis and discussion.

One issue area deserves special attention because of its interrelationships with so many other facets of development. That issue is human resource development. Success of almost all other programs is dependent on solving problems of alcoholism and local management capability and to a certain extent, unemployment.

Those three (3) problems are barriers to development and self-determination, and hence, a threat to the effectiveness of public programs in development. Alcoholism limits the stability of the labor force through limited ability of individuals to get and hold jobs. Economic development programs promoting industrial development and natural resource extraction, like mining, are not going to help the majority of residents of the region

until local people can get training, and get and hold jobs created by development. Therefore, the success of economic development programs will be limited until alcoholism is solved.

Local management capability problems will likewise limit the ability of the region's residents to get meaningful jobs, effectively manage utilities, manage municipal affairs or develop basic local businesses to serve village residents' needs. Stability of local government staff could also be improved.

Local management capability has to be a high priority for programs in order to make the public expenditures of time and money in planning programs effective. That may imply a need for agencies to re-order their priorities and perhaps even to restructure their programs or institutional structures.

Land use planning and municipal management at the local level will be limited in effectiveness until these human resource problems are improved. Implementation effectiveness of the strategy itself will be limited unless greater awareness of decision processes and regulatory principles are taught. State agencies should recognize these problems as ceilings on the effectiveness of their programs statewide and work with social service agencies to solve the problems of alcoholism and education to work within their own agency to expand field outreach training programs and consider joint funding arrangements.

Social services can be improved by contracting to local groups for delivery but training projects must become a high priority in programs.

A broad range of options and resources should be examined, possibly through the Regional Strategy task force structure. Mobilizing a combination of agencies in an effort to target specific resources should be the

responsibility of the agencies involved. Examples of agencies already involved in the area are Community & Regional Affairs, Alaska Federation of Natives, regional non-profits, university extensions, and the Community Enterprise Development Corporation. These groups should review their involvement, consider expanding it, and work with local and regional groups such as the school district and university to establish training courses. The university is already considering a program in land management and one in business management, with workshops in communities. Similar programs need to be established in public administration, utility management, and other areas. These areas will be the subject of review and will be outlined in detail by the consortium on secondary and higher education. The Regional Strategy task force on health, education, and social services will be asked to identify the barriers, highlight the problems, and recommend detailed actions in the implementation agenda.

3. Data Base Identification and Updating

To identify the existing data and isolate some of the gaps, a comprehensive search of the literature on physical and environmental resources affecting development locations was conducted. This element was contracted to the Arctic Environmental Information and Data Center and a National Science Foundation resident. They produced the following:

1. Bibliography and Index of Information on the NANA Region
(243 Citations, 38 current research projects.)
2. Wall-sized Display Sheets of Available Maps and Studies
 - a. Documented Subsistence Use Areas and Village Land Selections.
 - b. Historical and Archaeological Sites.
 - c. Climate, Coastal Geology, Soils, and Vegetation Studies.
 - d. Fish & Marine Mammal Distribution.

e. Furbearer Distribution.

f. Seabird and Waterfowl Distribution.

These will be useful for coastal management as well as permit review by agencies.

3. Summary of New Information since the Regional Profiles on a village-by-village basis

4. Summary of Data Gaps (Information Needs on NANA Region Environment

Key literature sources are available at the Mauneluk Association in Kotzebue. Two (2) additional bibliographies are being considered under separate contracts as a result of this project. One will be for educational literature on the region and one for health and social services studies in the region. The studies however, depend on funds coming available.

Eventually, all bibliographies will be put on computer storage at Mauneluk and will be extractable upon request by word processor.

Other important sources of information include the following:

1979 Village Sanitation Facilities Handbook.

1979 Public Facility Inventory by State Department of Transportation and Public Facilities.

1979 Integrated Service Plan for Northwest Arctic School District.

1979 Overall Economic Development Plan.

1979 Tribal Specific Health Plan.

1979 Community Survey by the Alaska Public Forum.

1976 Community Profiles by the Arctic Environmental Information and Data Center.

Data base updating included field-correcting the community profile maps prepared by AEIDC. The profile maps were corrected by local residents, often city council members or city administrators. Corrections included items like major re-routing of sewer lines, water lines, electrical lines,

new buildings, relocated buildings, major erosions, recent major land use changes, etc. This is an ongoing element of the project.

Profile corrections will be used when preparing maps of preferred development locations. The maps will be overlays for existing community profile maps held by agencies. Funds and staff were not made available for this project to re-issue corrected profiles. Overlay maps will be prepared on the basis of community meetings this coming winter. Because of new and updated information, agencies are encouraged to field-check their profiles whenever they anticipate a project for a NANA Region community.

4. Program Inventory

Mauneluk Association is conducting an inventory of planning, construction, and research projects going on in the region. The inventory is being developed in conjunction with a master schedule for capital facility programming. Together they form the basis for a regional management system which will be used for monitoring and coordinating activities. Local agencies and communities can expect to have increased local management capability when additional information is generated about anticipated programs and projects in the region. Copies of the inventory and master schedule will be available to interested and participating agencies.

Progress on the program inventory to date include the following:

- 1) Questionnaires distributed to agencies about projects in the region.
- 2) Presentations made by agencies on overall program purposes at orientation meeting for agency heads.
- 3) Written requests sent out for written products.
- 4) Written requests sent to Mauneluk staff members for goals and objectives, projects, and data needs.

5) Interviews of agency directors and administrators.

The only technique which provided significant information was the personal interview. Interviews consisted of a presentation of the topics listed in the original workplan under "Coordination and Capabilities of Key Actors." These included categories such as technical assistance, mission, lead times, project schedules, etc. Interviews were conducted with the following and will be compiled in the program inventory report:

Public Health Service

Chief, Sanitation Facilities

Chief, Environmental Services

Director, Kotzebue Service Unit

District Engineer, Sanitation Facility Construction

Department of Transportation & Public Facilities

Chief, Planning Section, Division of Facility Procurement

National Park Service

Deputy Director

Administrative Officer

Director of Administrative Services

U.S. Fish & Wildlife Service

Program Analyst, Administrative Services

Refuge Planner for Selawik Refuge

NANA Regional Corporation

President

Special Assistant to the President of the Development Section

Many more have been contacted and have attended meetings but lack of time has limited the number of formal interviews. Each interview took from forty-five (45) minutes to an hour and a half. To conduct interviews with all the participating agencies would be immensely time-consuming so a standardized form is being developed and sent to agencies. Obtaining written comments from agencies is usually difficult. Therefore, attempts to make our future requests clear and specific will be pursued.

For master scheduling, a uniform worksheet has been developed for distribution to participating agencies. The worksheet provides a common format in plotting project schedules. A composite of the schedules will be made to obtain an overview of scheduling patterns. Deadlines for projects will be shown in the final report but most agencies, even in interviews, were reluctant to get into a detailed listing of every project and its deadlines.

Some agencies seem reluctant to divulge the contents of their projects and schedules. They may have fears of becoming committed once a schedule is put on paper in public. Others have expressed problems with costs of projects going up after public announcements due to speculations on land around a site, or sudden increases in prices of materials, or reduced ability to negotiate low bid prices. Others do not seem to know what their own agency is doing. These comments have come from a wide variety of agencies, not necessarily any of the groups interviewed. Some agencies whose operations and planning are dependent on the outcome of D-2 legislation are not able to make any projections, plans, or commitments due to the uncertainty of programs, funding and land status.

Another widely used reason for agency reluctance is the federal budget process. Most referred to the federal budget process as their

primary planning deadline. Most technical and financial assistance requests need to be submitted by the deadline for the federal budget process.

This element of the work program is perhaps the most time consuming and the least productive so far. Another staff position should be funded for some of the more time-intensive work or a different method of interview used. An alternative would be expansion of agency cooperation in returning responses. Some of the more useful written responses are attached on the following pages. We hope that future responses will follow more closely the depth of detail displayed in these examples.

HUD PROJECTS - NANA REGION

Housing

Housing units reserved for the NANA Regional Housing Authority;
Noorvik - 10 units, Kiana - 15 units, Selawik - 18 units.

Community Development Block Grants

Current or proposed grants:

FY-77

1. Kiana - Rehabilitation of the community center.
\$23,000 - pending closure.
2. Kobuk - Housing winterization program
\$24,100
3. Selawik - Construction of firehause/training center.
\$60,000

FY-78

1. Kivalina - Construction and equiping fire stacion.
\$52,000
2. Noatak - Construction and equiping fire station.
\$82,300

NATIONAL PARK SERVICE

Gates of the Arctic	Vegetation impact baseline investigations.	David J. Cooper, University of Colorado	Underway
Bering Land Bridge	Multidisciplinary survey of the Chukchi-Imuruk (Eering Land Bridge) area.	Dr. Herbert R. Melchior, Cooperative Park Studies Unit, University of Alaska plus eight (8) additional scientist.	Completed
Bering Land Bridge	Socio-Economic Study of Reindeer Herding.	Larry Naylor, et. al., University of Alaska Fairbanks	Completed
Bering Land Bridge	Archaeological survey.	W. Roger Powers, University of Alaska Fairbanks	Field work completed.
Bering Land Bridge	Historical overview.	Melody W. Grauman, NPS	Completed
Seward Peninsula	Tundra disturbance and recovery associated with drilling operations and AVT use in the Cape Espenberg area.	Dr. Charles H. Racine, The Center For Northern Studies.	Completed
Seward Peninsula	The origin and geologic setting of the Maars near Cape Espenberg.	Dr. Robert B. Forbes, Geophysical Institute, University of Alaska	Completed
Seward Peninsula	Archaeological Investigations for 14 (H) of ANSCA.	Kathryn Koutsky and Russell Sackett, University of Alaska, Fairbanks.	In progress.

Northwest Alaska	Home range use, social structure, and habitat selection of the Western Arctic caribou herd.	James L. Davis, and John W. Coady, Alaska Department of Fish & Game.	ADF & G Completed
Arctic Lowlands	Evaluation of ecological and geological sites for recognition as national natural landmarks.	Dr. David F. Murray, Institute of Arctic; Biology, University of Alaska.	Contract Underway. administration transferred to HCRS 5/78.
Interior and Western Alaska	Ecological and geological theme studies for national natural landmarks program.	Dr. Steven B. Young, The Center	Contract Underway. administration transferred to HCRS 5/78.

PRELIMINARY WORK PROGRAM
FOR
REGIONAL WATER PLANNING GUIDES

WATER SECTION, ALASKA DEPARTMENT OF NATURAL RESOURCES

I. PROJECT INITIATION

- A. Define Region.
- B. Contact all organizations active in region.

II. DESCRIPTION OF REGION

- A. Physiographic, Socio-economic and resource inventory.
- B. Water Resources.
 - 1. Climatological data.
 - 2. Hydrological data (surface & ground).
 - a. Inventory of existing information.
 - b. Field investigations.
 - c. Data development and analysis.
 - d. Assessment of data gaps.

III. WATER USES WITHIN REGION

- A. Water Rights.
- B. Community Systems.
- C. Mining and Industrial Uses.
- D. Instream Flows.
 - 1. Anadromous streams.
 - 2. Federal reservations.
 - 3. Native Claims
 - 4. Fish hatcheries.
 - 5. National Park Service Monument facilities.

IV. PROBLEMS AND ISSUES

- A. Statewide
- B. Regional
- C. Local

V. MANAGEMENT GUIDELINES

TRIBAL SPECIFIC HEALTH PLAN OUTLINE

PREAMBLE

- A. Treaties - Legislation.
- B. Culture, Language, Tradition.

I. SCOPE OF PLAN

- A. Purpose of plan.
- B. Timeframe of plan.
- C. People to be served.
- D. Service area covered.
- E. Political and physical map.

II. DESCRIPTIVE DATA ON THE SERVICE AREA

- A. Geography, topography, climate, and seasonal variations.
- B. Transportation.

- 1. Private vehicles.
- 2. Highways, secondary roads.
- 3. Rail transportation.
- 4. Bus service.
- 5. Air.

C. Communication.

- 1. Telephone.
- 2. Radio
- 3. Other.
- 4. CB radio.

- D. Housing Sanitation.
- E. Educational status of service population.
- F. Economic conditions:

- 1. Family income levels.
- 2. Sources of income.
- 3. Per capita income levels.
- 4. Unemployment rates.
- 5. Types of employment.

G. Political structure and relationship.

III. DEMOGRAPHIC AND HEALTH DATA

- A. Age and sex distribution of the population.
- B. Morbidity and mortality.
- C. Major health problems.
- D. Population distribution.
- E. Leading cause of death.
- F. Migration.

TRIBAL SPECIFIC HEALTH PLAN OUTLINE

III. DEMOGRAPHIC AND HEALTH DATA (Continued)

- H. Community relationship.
- I. Industrial or agriculture hazards.
- J. Traditional medicine.

IV. TOTAL HEALTH NEEDS "FOR YOUR TRIBE"

A. Patient Care.

- 1. Hospital care.
- 2. Contract care.
- 3. Emergency Medical Services.
- 4. Patient transportation.
- 5. Extended skill care.

B. Ambulatory Care.

C. Preventative Health and Field Medical Services.
(Community Medical Services)

- 1. Sanitation.
- 2. Dental.
- 3. Public Health Nursing (Community Health Nursing).
- 4. Health Education.
- 5. Mental Health.
- 6. Social Services.
- 7. Public Health Nutrition.
- 8. Optometry.
- 9. Audiology.
- 10. Alcoholism.
- 11. Home Health Care.

D. Tribal Health Programs.

- 1. Implementation of Public Law 93-638.
- 2. Community Health Representative/Community Health Aide.
- 3. Training of Traditional Indian Practitioner.

E. Program Management.

F. Facilities Construction.

V. HEALTH RESOURCES CURRENTLY PROVIDED

VI. UNMET NEEDS.

VII. APPROACH AND PLAN FOR OVERCOMING THE UNMET HEALTH NEEDS

BN/lrg

5. Organization Development

As part of the first year's efforts, an organization structure was developed. The organization chart is shown on the following page.

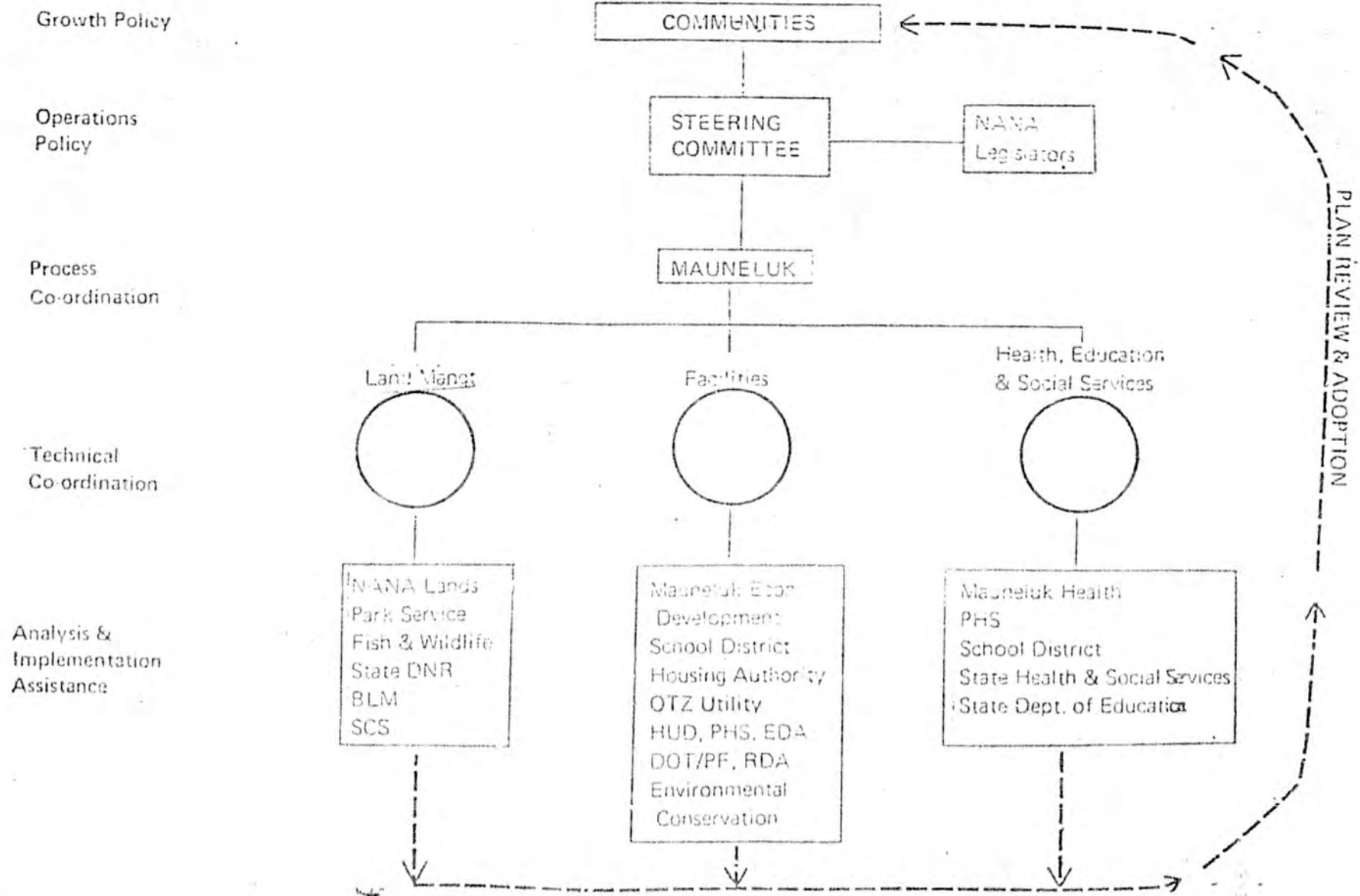
The organization chart was developed with assistance from residents of communities, regional leaders, and a management consultant. At this time, the chart has the tentative approval of the Steering Committee and has been presented to numerous local boards, all the city administrators, and staff of the three (3) regional entities.

The structure is based on initiation of information flows (problem statements, goals, priorities) from the communities, through the region, to the agencies. The return flow to the communities consists of recommendations and technical information provided by the agencies and the regional staff.

Since considerable time spent developing the organization structure, this progress report section provides a detailed description of progress. The communities will be represented by a community review board consisting of mayors from the municipalities. City Administrators will be asked to attend whenever possible to provide technical back-up information to the mayors. The municipalities are represented because they have the authority under Title 29 of the Alaska Statutes for local planning, planning, zoning, service delivery, facility construction and elements of local transportation -- all tools for implementation of the plans at the local level. IRA Councils must also be included in order to ensure coordinated siting and programming of their capital facilities. But because of the size of the board (eleven [11] members) and the powers held by the municipality, IRA Councils will be included during community plan preparation and in policy decisions on management of NANA lands. The main contact point of Maneluk's

NANA DEVELOPMENT STRATEGY

ORGANIZATION FOR REGIONAL PLANNING



assistance in community plan preparation will formally be the municipality but the IRA Council and staff will be encouraged to attend and participate.

The Steering Committee is made up of the chief executive officers of the three (3) regional entities: NANA Regional Corporation, Mauneluk Association, and the Northwest Arctic School District. These are management professionals who are familiar with both the problems in the region and mechanisms for dealing with the problems through corporate and bureaucratic means. The Steering Committee members have a responsibility to ensure that their organization's staff, plans, and policies are consistent with the Regional Strategy to the greatest extent possible. They stand to be in a pivotal position and therefore have the ability to ensure that the strategy components are implementable by their agencies and that their staff and boards will be able to provide consistency with goals and policies.

The Steering Committee has several ex officio members to ensure coordination with the legislative and administrative decision processes at the State level. Ex officio members consist of the legislative delegation from the region, and State and Federal groups involved in design and funding of the strategy.

Legislators have the ability to introduce and support legislative changes recommended by communities and agencies in the implementation agenda. Legislators will also be able to influence the State budgetary allocations to follow Regional Strategy recommendations for capital facility and program priorities. As ex officio members they can also use the Regional Strategy as a reference while in Juneau, and coordinate legislative priorities with the Steering Committee. They can also help

the project assess feasibility of alternatives and obtain cooperation from state agencies.

Other ex officio members of the Steering Committee include the Governor's Office, the Department of Community & Regional Affairs, the U.S. Department of Housing and Urban Development, and an independent planning professional with the University of Alaska. These groups are on the Steering Committee because they helped design and fund the project, can provide advice on useful procedures, and are interested in following the evolution of the planning process developed. But as ex officio members they are non-voting members, and will not directly influence the decisions of the region. These groups represent another potential source of leverage for ensuring compliance with the strategy by State and Federal agencies. Their participation, allocations, and facility construction practices and technical assistance will be important examples for other groups.

Task forces were created to establish coalitions among agencies which have common interests and responsibilities. The initial "working group" had difficulties because of the heterogeneity of the participants and the lack of common interests, so the working group has been recombined into these task forces. It is assumed that State and Federal agencies are committed to providing services and technical assistance to the project for the purpose of strategy formulation.

It is our hope that agencies will take an active role on the task forces by providing professional expertise and judgement in analyzing issues, cause-effect relationships, barriers to goals achievement, and mechanisms for overcoming those barriers. Participation by agencies is expected to bring about greater understanding of the complexities of local and regional issues and alternatives for solving the problems.

The three (3) task forces will be asked to conduct the following activities:

1. Review local policies and goals.
2. Review local problem statements.
3. Review community plans.
4. Develop evaluation criteria for regional review of plans, and projects and programs.
5. Evaluate plans, projects, and programs proposed.
6. Analyze alternative means of overcoming barriers to achieving goals and specific projects.
7. Assist in "scoping" of potential impacts and long-term implications of project alternatives being considered.
8. Assist in preparation of background material which could be useful in a regional plan.
9. Jointly develop an implementation agenda.

The task forces thus provide a forum for structured discussion of issues, and a mechanism for solving the field problems and bureaucratic problems facing the region. If agencies do not choose to participate actively, regional staff will have to provide analysis and recommendations. Since only one (1) planner is funded for the project, that work would fall on that one person, and the product would be correspondingly limited by the lack of input from other agencies. Each task force will have a technical coordinator representing the region.

The Lands Task Force was formed to embark on cooperative land management. This is a follow-through on earlier intentions of the land management agencies to conduct management planning for large ecosystem scale rather than individual monuments or selection areas. The Land Task Force will be asked to follow the same general planning steps as

the other task forces but may continue on to develop a detailed regional land use plan. For purposes of the Regional Strategy, the task force should establish as much as possible the intended uses of large areas of land so that these plans can be passed on to other task forces for transportation and economic development planning. Detailed land use plans can be prepared at a later date. The technical coordinator for the Lands Task Force will be the Director of the NANA Lands Department.

The Facilities Task Force will be asked to follow the same basic planning steps but will focus on issues such as the following:

1. Facility costs.
2. Flexibility of design criteria.
3. Limitations on local ability to pay for facilities.
4. Priorities.
5. Technology suitable to bush communities.
6. Streamlining of permit requirements.
7. Specific opportunities for coordinating facility programming.
8. Arctic construction techniques found useful in the past.

These topics may stray from the focus on strategic planning per se but they relate to the regional development policies on facility construction and will be important topics for demonstrating that flexible approaches to design and construction in this region can be effective. Products will be a set of recommendations on construction programming coordination procedures, a suggested construction schedule, and other items mentioned for all the task forces. The technical coordinator for the Facilities Task Force will be the Economic Development Planner from Mauneluk Association.

The Health/Education/Social Services Task Force will be coordinated by the Director of Programs for the Northwest Arctic School District. That task force will have as starting information, the School District's Integrated Service Plan, the Tribal Specific Health Plan, and the Six (6) Year Capital Facilities Plan for the School District. Joint review of existing problems and solutions will follow the same process as used by other task forces.

The technical coordinators and the Regional Strategy planner will ensure that the task force efforts are coordinated so that important products of each task force reach the other task forces. An example would be the transfer of land management recommendations from the Lands Task Force to the Facilities Task Force for use in transportation planning. Another example would be the transfer of clinic and school construction priorities from the Health/Education/Social Services Task Force to the Lands Task Force; and targeting to communities in which the clinics and schools will be built so that they can reserve sites and easements in the communities. Likewise, the Facilities Task Force would need to receive notice of the proposed construction so that sewer hook-ups, electrical generating capacity and service lines can be planned early and extended to the site.

Mauneluk is developing step-wise procedural guidelines for task force participants and communities on A-95 reviews; will provide some technical assistance to communities; and, will target immediate products to groups needing to receive them. Mauneluk has recently established a Village Assistance Team in the Planning Department consisting of technical assistants with management experience and local government

leadership roles to run the housing planning and management assistance programs.

The structure developed during the first year provides a mechanism for strategy formulation that ensures community participation, professional analysis assistance, and feedback to communities for review. After the Regional Strategy is formulated, the Community Review Board will be able to monitor and evaluate the extent of compliance with the strategy recommendations.

An annual meeting will be held by Mauneluk to keep agencies up to date with progress and problems of the strategy. The structure will provide a long-term forum for on-going analysis and accountability.

6. Process Formulation

Time has been spent with staff and agencies trying to design a process which minimizes the amount of new meetings required and taking advantage of existing structures and programs to the greatest extent possible.

The overall framework for the process is the standard model of the planning process used in most planning literature.

This process will be used to guide the development of community plans, and as a reference for the task forces.

The process has the following major stages:

1. Problem definition.
2. Goals identification.
3. Data collection.
4. Analysis.
5. Identification of Alternatives.
7. Selection of a Plan.
8. Implementation.

This is an idealized process, so most of the steps are not discrete and sequential. Some of the steps are undertaken concurrently.

There is feedback between stages and the process can be repeated and updated. This progress report shows that the strategy project has already moved through parts of the first four (4) stages. We have defined problems, identified goals, begun the data collection on literature (in bibliographies), begun to identify existing programs and projects, and identified several data sources.

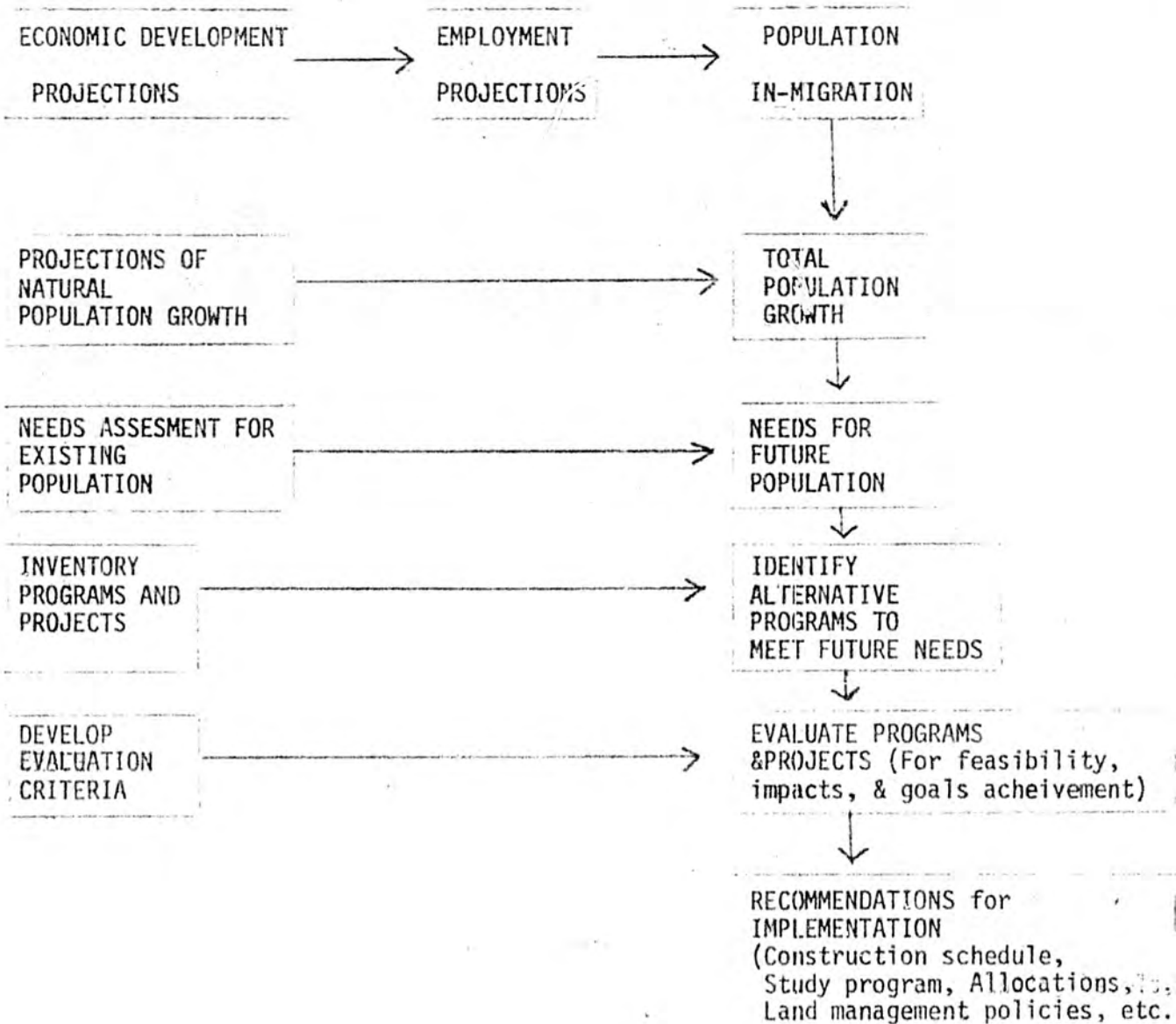
The next stage will be analysis of existing information by staff and task forces.

Existing data will be analyzed by staff and consultants to provide a basis for further development planning. An example is the use of the Overall Economic Development Plan which has already had substantial public input and analysis as the starting point for further analysis of economic development policies and projections. Staff research on alternative future economic development scenarios will be added to the OEDP research to form the foundation for projections of new employment, proportion of labor in migration and population increase due to outside forces.

At the same time, data is being analyzed for projections of natural demographic growth of the existing population. Natural population growth will provide an indication of baseline population levels for which facilities and services will be planned. Further detailed planning for additional growth can be delayed until the probabilities of other economic developments become more clear. The chart on the following pages shows the sequence of information analysis.

One of the advantages to taking a strategic planning approach is that detailed development planning can be forestalled until later, when more

SEQUENCE OF ANALYSIS
FOR REGIONAL STRATEGY PROJECT



accurate assumptions can be developed, based on evolving market conditions, regulatory policies, and land status changes. In the NANA Region for example, land status depends on D-2 which should be resolved next year. The Alaska Native Land Claims Settlement Act (ANSCA) land reconveyances and mineral exploration studies will be completed in the next few years. Right now, the world price of copper is holding down the feasibility of mineral extraction operations. The Western Arctic Transportation study findings and rapidly emerging energy policies will affect the feasibility of coal, oil, gas, and construction projects. As these changes occur, the effects on population growth and facility demands can be studied in greater detail in later studies.

The analysis phase includes both data analysis by regional staff and conceptual issues analysis by the task forces. The task forces will be asked to conduct an organized investigation of barriers to development, types, location, and timing of development projects, and economic, physical, and administrative constraints.

The joint review approach will also be used in the following stages: "Identification of Alternatives" and "Evaluation of Alternatives." After alternatives are identified by each task force, they will be evaluated according to criteria developed earlier. Evaluation criteria for policies, programs, and projects will include financial, administrative, and political feasibility. The legality, infrastructure availability, environmental impacts, social impacts, goals achievement, and long-term implications will also be examined.

If the joint review approach does not meet cooperation by the agencies

or communication difficulties are overwhelming, regional staff may have to conduct the work. However, the purpose of putting all this effort into the process is to provide public legitimacy to the findings of the task forces, to maximize the rationality and breadth of alternatives considered and to include agencies in the project.

Impact analysis for each project will be similar to the "scoping" of survey issues approach used by the Bureau of Land Management (BLM) Outer Continental Shelf (OCS) office.

Evaluation of projects is partially based on the extent to which individual projects contribute to the accomplishment of multiple goals. Each project will be evaluated for goals achievement and other factors before it is selected for inclusion in the strategy. By assessing the degree to which a project achieves the regional goals and the number of multiple goals achieved, all the projects are tied back to this first year's work. The projects proposed in the final package should therefore constitute a group which is well-screened, will have minimum impacts and will have maximum benefits in achieving the various goals. It should be an integrated hierarchy of goals, objectives, policies, programs, and projects.



The package should therefore be internally consistent (without major incompatibilities between projects and goals).

The rationality and understanding achieved by extensive participation by agencies should provide greater support by those agencies at later dates, as each of the previously studied projects is submitted for funding and permitting. Poorly conceived or muddled projects, especially those which are consistent with regional goals, agency regulations, and acceptable impact levels should be screened out early.

This should help to eliminate incompatible projects before they get so far underway that they are carried forward under their own momentum rather than rationality and public value.

Once criteria are set to guide the agency reviews, joint meetings may not be needed very often. The A-95 Clearinghouse will provide distribution of proposals to agencies and communities so that the only times meetings would be required is in the cases of controversial proposals.

The State Clearinghouse Coordinator has agreed to provide distribution of proposals to all agencies, State and Federal, who are participating on the NANA Regional Strategy. This should provide some incentive for Federal agencies, many of whom do not presently receive notice of proposals. Mauneluk will provide a list of agencies participating actively so that they can receive those benefits. Central offices of each agency will be asked to send proposals to their representative participating in the Regional Strategy affecting the NANA Region.

Mauneluk will also assist communities to prepare comments on significant proposals affecting the communities. This should improve

local management capability by developing awareness and skills for formal communications with the Clearinghouse. Eventually, an element of the process will be a regional clearinghouse. In support of this approach, Mauneluk is providing the above-mentioned service to communities, and providing reference and data services to agencies.

After the strategy is completed the Clearinghouse Coordinator should be able to compare a given proposal with the goals, policies, and projects in the final document. Further comments may be warranted but most questions on local preferences should be available.

7. Community Information & Education

Announcement of the Regional Strategy project was made during community meetings conducted by the Alaska Public Forum in each of the eleven (11) villages. However, in Kotzebue, while trying to obtain local match, it was discovered that understanding of the project was severely limited. Subsequently, presentations were made to all the regional boards, commissions, and staff. A total of eighteen (18) presentations were made in the villages and Kotzebue. One presentation was to the assembled city administrators and IRA administrators from every village.

The City of Kotzebue decided after two (2) presentations to contribute to the local match. The City negotiated in return a fixed amount of time to be provided by the Regional Strategy planner to the Planning Commission of the City of Kotzebue. The role of the Regional Strategy planner in these meetings is not to be staff to the City but to be available for advice on workplan development, factors to consider, and resources which can be sought for technical and financial assistance from the State

and Federal governments. The time spent working with the Planning Commission can be justified in that approximately half of the region's residents live in Kotzebue.

Much more time was spent in public education and information than was anticipated at the detriment of the schedule for other activities. However, the time spent is considered by Mauneluk to be important to the public acceptance and cooperation on the project and will have its payoff in long-term implementation.

Some time was also spent on considering the usefulness and feasibility of media coverage by radio, video, and local television interviews with regional leaders. Initial investigations have been made on the possibility of a slide-show or film on the region, its problems, and the alternatives available. The film or slide-show would provide a useful public participation and information tool, as well as a product which could be used outside the region and state for public information on the strategy and the region.

8. Data Collection Agreements

Efforts to commit agencies to participation include the formalization of agreements for data collection and programs. The examples mentioned in the first section on progress results are representative of the results. Soil surveys, forest assessments, gravel resource maps, land ownership maps, and other products useful for implementation will be outputs of the first years efforts. Other projects committed this year include a preliminary census to be conducted by the school district this fall to update population figures and a consultant contract to calculate population projections under various economic development scenarios.

Interagency cooperation has been exemplified by efforts by the State Department of Natural Resources Water Management Section in Anchorage which is formulating water planning guides for the region. Field reconnaissance water sampling was conducted on the Kobuk River and tributaries by an interagency team. During the study design phase of the project, coordination was kept up with the strategy project through offers by the Department of Natural Resources to collect data for other agencies projects. An outline of the water planning project was distributed at a working group meeting and several extensive phone conversations were held with various participants to coordinate efforts. Logistics were coordinated with Mauneluk and a detailed study design was submitted just prior to the field work. The Department of Natural Resources Water Section will base water demand projections on population and economic development projections to be made by the Regional Strategy staff and consultants next winter. Results will be passed out to all strategy participants for whom water planning guides will be helpful.

9. Carrying Capacity as a Regional Management Concept

An additional element of the strategy requiring time during the first year was research on the application of carrying capacity concepts to regional planning. Working with the National Science Foundation resident, a preliminary background paper was written reviewing the literature on carrying capacity, and the application to community situations. A copy of the paper is being rewritten now for distribution to the Steering Committee.

Potential exists for using the concept to determine temporary

limits on the growth rates and magnitudes of communities before substantial public investment is needed to relieve the strain on community resources. The approach may be applied in communities in which limiting factors such as gravel shortages, water shortages, financing ceilings, and lack of public investments are limiting further growth.

The carrying capacity approach may be useful in designing data collection programs. If the program is designed early enough with the appropriate measures, indicators can be collected from the beginning of the project for each village. The amount of surplus housing, unused sewer hookups, excess electrical generating capacity, and buildable land space available, are examples of such measures.

The effort is focused at a comparison of resource supply and demand to provide an early warning system for potential shortfalls. This approach will be of benefit in highlighting the need for early management attention to engineering, administrative, land use, and relocation alternatives.

Regional accounts for each village were started, which summarizes available data for each of the categories, so that managers and agencies will have a display of critical problems and impending shortfalls due to population growth.

STATE PROJECTS PROGRAMMED THROUGH
THE DIVISION OF FACILITY PROCUREMENT & POLICY
DEPARTMENT OF TRANSPORTATION

(Anticipated for construction in the next several years.)

Ambler Elementary School Remodel	\$ 890,000
Kotzebue Voc. Ed. & Gym Facility	4,500,000
Noatak High School	2,410,000
Noorvik Elementary School Remodel	1,135,000
Noorvik High School	945,000
Selawik Elementary School Remodel	875,000
Selawik High School	590,000
Kotzebue A.A.F.A.	2,337,000
Kotzebue Court Addition	298,000
Ambler High School Phase II (85% Complete)	456,125
Kotzebue Hatchery	5,000,000
Health Facilities at:	
Shungnak	100,000
Kivalina	100,000
Kobuk	100,000
Buckland	100,000
Ambler	100,000
School Facilities and equipment at Kiana	200,000
Maintenance Storage Buildings at:	
Noorvik	100,000
Kiana	100,000
Shungnak	100,000

COMMUNITY PROJECTS MATRIX - PLEASE PRINT IN BLACK INK OR USE TYPEWRITER

FORM FOR PROJECTS LISTED IN
CURRENT YEAR: 1978

FORM 2

Mauneluk Association/Nana Region
Name of Community

(A) PRIOR- ITY	(B) PROJECT DESCRIPTION AND PURPOSE	(C) TYPE OF PROJECT	(D) FUNDING SOURCES	(E) AMOUNT FROM EACH SOURCE	(F) DATE OF COM- PLETION	(G) WHEN WILL YOU APPLY FOR THESE FUNDS? WHAT PROBLEMS, IF ANY, ARE YOU HAVING WITH FUNDING?
1.	Gravel source - Kotzebue, Noorvik	Planning	BIA	\$ 10,000		
2.	Sno-go repair shop - Deering	Const.	EDA	\$ 66,000		February 1979
3.	Boat building/storage facility - Kotzebue	Const.	EDA	\$300,000		February 1979
4.	Heavy equipment - Buckland, Noorvik, Kiana	Const.	?			Contract available to utilize equip- ment for local project. Private financing to be pursued.
5.	Solid waste disposal - Selawik, Kiana, Kivalina, Shungnak, Noorvik, Buckland OTZ	Const./ Imp.	HUD, CBDG or USDA			April 1979
6.	Airport improvement - Buckland, Shungnak, Kivalina, Deering, Noatak, Noorvik	Const.	Fed. AA			Mid-1979
7.	Warm-up shelters airport - Kiana, Kivalina, Selawik, Ambler, Shungnak, Noatak	Const.	State DOT Private	\$ 10,000 10,000	May '79	
8.	Erosion Control - Noatak	Planning	?			Identification of funding agency.
9.	Firehouse - Noatak, Kivalina	Const.	HUD	\$130,000	Summer 1979	
10.	Bridge - Selawik	Const.	State DOT	\$2.5 Mil.	?	Bonding approved in State general election. Design to commence.

ADDITIONAL INFORMATION - (any CURRENT problems encountered by your community in obtaining funding):

EXPLANATION OF CODES

- (A) PRIORITY: Number 1 is your first priority project for this year, number 2 is second priority, etc.
- (B) PROJECT DESCRIPTION AND PURPOSE: Please name and describe the project and tell briefly how the community will make use of it.
- (C) TYPE OF PROJECT: Service, construction, improvement, personnel, planning. Select one of these which best identifies the project.
- (D) FUNDING SOURCES: What agency(s) or program(s)?
- (E) AMOUNT FROM EACH SOURCE: Please specify.
- (F) DATE OF COMPLETION: Please estimate.
- (G) WHEN WILL YOU APPLY? PROBLEMS?

Bob Knoll

SIGNATURE

EDA Planner

TITLE

Mauneluk Association

ORGANIZATION

January 22, 1979

DATE

Mauneluk Association/Nana Region
Name of Community

(A) PRIOR- ITY	(B) PROJECT DESCRIPTION AND PURPOSE	(C) TYPE OF PROJECT	(D) FUNDING SOURCES	(E) AMOUNT FROM EACH SOURCE	(F) DATE OF COM- PLETION	(G) WHEN WILL YOU APPLY FOR THESE FUNDS? WHAT PROBLEMS, IF ANY, ARE YOU HAVING WITH FUNDING?
11.	Regional forestry industry for local consumption.	Planning				When research finished.
12.	Water & sewer - Selawik	Planning Stage				
13.	New housing - Selawik, Noorvik, Kotzebue	Const.	HUD Nana Reg. Hst. Authority.	\$2.5 Mil.	?	Bids were too high - project being re-evaluated.

ADDITIONAL INFORMATION -- (any CURRENT problems encountered by your community in obtaining funding):
 The priority rating is extremely difficult to assign due to the autonomy of each village; so I grouped them by project category. In-
 dividual priorities may be extracted from OEDP.

EXPLANATION OF CODES

- (A) PRIORITY: Number 1 is your first priority project for this year, number 2 is second priority, etc.
- (B) PROJECT DESCRIPTION AND PURPOSE: Please name and describe the project and tell briefly how the community will make use of it.
- (C) TYPE OF PROJECT: Service, construction, improvement, personnel, planning. Select one of these which best identifies the project.
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- (E) AMOUNT FROM EACH SOURCE: Please specify.
- (F) DATE OF COMPLETION: Please estimate.
- (G) WHEN WILL YOU APPLY? PROBLEMS?

 Bob Knoll
 SIGNATURE

 EDA Planner
 TITLE

 Mauneluk Association
 ORGANIZATION

 January 22, 1979.
 DATE

PLEASE NOTE: THE PRECEDING PAGES WERE TREATED
AS A UNIT IN THE ORIGINAL DOCUMENT.

PLEASE NOTE: THE FOLLOWING PAGES WERE TREATED
AS A UNIT IN THE ORIGINAL DOCUMENT.

**BIBLIOGRAPHY AND INDEX OF INFORMATION
ON THE NANA REGION**

by

**Lynne Zeitlin Hale
Public Service Science Resident**

and

**Information Services
Arctic Environmental Information and Data Center**

Prepared for Mauneluk Association

Kotzebue, Alaska

April 1979

**Arctic Environmental Information and Data Center
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707 A Street
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**This publication was supported by Mauneluk Association
and National Science Foundation Grant OSS 78-2092**

BIBLIOGRAPHY AND INDEX OF INFORMATION
ON THE NANA REGION

The preparation of this document was financed in part through a comprehensive planning grant from the Department of Housing and Urban Development, under the provisions of Section 701 of the Housing Act of 1954, as amended, and the Division of Community Planning, Department of Community and Regional Affairs of the State of Alaska, the NANA Corporation, and the Mauneluk Association July 1979.

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ACKNOWLEDGEMENTS

This bibliography was compiled with the help of numerous people. Bert Greist and Walter Sampson of the NANA Regional Corporation Land Department indexed their collection of maps and documents; Jeff Smith and Bob Knoll of Mauneluk Association provided access to their collections; and numerous state and federal agencies provided citations and documents on the NANA region.

TABLE OF CONTENTS

INTRODUCTION	1
SECTION I: MASTER BIBLIOGRAPHY.	3
1.0 General References.	4
<u>The Physical Environment</u>	
2.0 Climate	6
3.0 Geology	8
3.1 Soils.	14
3.2 Permafrost	--
3.3 Geologic Hazards	16
3.4 Minerals and Fossil Fuel	18
4.0 Freshwater Resources.	20
5.0 Marine Resources.	24
5.1 Marine Geology	25
5.2 Physical Oceanography.	28
5.3 Chemical Oceanography.	30
<u>The Biotic Environment</u>	
6.0 Biotic Communities.	31
6.1 Terrestrial Vegetation	33
6.2 Aquatic Vegetation	36
6.3 Terrestrial Animals.	37
6.3.1 Caribou	42
6.3.2 Reindeer.	46
6.4 Aquatic Animals.	50
6.4.1 Freshwater and Anadromous Fish.	53
6.4.2 Marine Fish	56
6.4.3 Marine Mammals.	59
6.5 Birds.	63
<u>The Human Environment</u>	
7.0 Socio-Cultural Resources.	68
8.0 Planning Studies.	74
9.0 Health Studies.	78
10.0 Maps.	79

SECTION II: AUTHOR INDEX 84

SECTION III: GEOGRAPHIC INDEX 102

 U.S.G.S. Quadrangles 103

 Villages 110

 Other Locations 113

SECTION IV: KEYWORD INDEX 117

SECTION V: SOURCE LOCATION 133

INTRODUCTION

This bibliography and index was compiled to provide increased access to information on the environment and resources of the NANA region. It is organized to facilitate the use of existing knowledge in the development of new plans and programs for the region. The bibliography includes references to published documents, mapped information, and current research.

Section I is the master bibliography, which is divided into ten chapters by broad subject area. Each entry has a unique accession number which identifies it in all indexes. Accession numbers for current research have a "9" preceding the document number; e.g. 6.40901. All entries in Section I include a complete bibliographic citation.

Section II is an alphabetical author index. For each citation the primary author plus additional co-authors, truncated title (current research titles are printed in capital letters) and accession number are listed. Personal authors are listed alphabetically by their last name; corporate authors (such as a society, institution, government department, etc.) are interfiled alphabetically with the personal authors. Each accession number listed for an author refers back to a citation in the master bibliography (Section I).

Section III is a geographic index. Bibliographic entries that contain information on USGS Quadrangles (1:250,000), villages, and other key locations are listed by accession number. Each accession number listed for a geographic location refers back to a citation in the master bibliography (Section I).

Section IV is a keyword index. Keywords were assigned using a list developed by AEIDC, Mauneluk, and NANA staff. All keywords are listed alphabetically with the accession numbers of citations containing relevant information. Again, each accession number refers back to a citation in the master bibliography (Section I).

Section V is a source location index. This index shows where the citations included in the bibliography can be found. If a document is available within the NANA Region (either at the NANA Regional Corporation or Mauneluk Association offices) no other source is listed. AEIDC and the Alaska Resources Library are the source locations for the majority of documents not available within the region.

This bibliography, while comprehensive, is not complete. New information is continually being published about the NANA region, and researchers, whose interests are focused, will undoubtedly find additional pertinent references. Our search for information focused on the NANA region's natural resources. Information sources on such topics as human health, the region's early history, and archaeology were not extensively researched.

The Bibliography and index of information on the NANA Region was organized to allow easy updating. New documents can be added by assigning them accession numbers in the appropriate chapter. Any additional references that are found by users of this document should be sent to Mauneluk Association Planning Department, P. O. Box 256, Kotzebue, Alaska 99752.

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MASTER BIBLIOGRAPHY

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CHAPTER 3.0
GENERAL GEOLOGY

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- 3.00002 Dall, William H. 1881. Notes on Alaska and the vicinity of Bering Strait. American Journal of Science. 21:104-111.
- 3.00003 Hopkins, David M. 1959. History of Imuruk Lake, Seward Peninsula, Alaska. Bulletin of the Geological Society of America. 70:1033-1046.
- 3.00004 Herreid, Gordon. 1966. The geology and geochemistry of the Inmachuk River map area, Seward Peninsula, Alaska. Alaska Div. of Mines and Minerals. Geologic Report 23. 25 pp.
- 3.00005 Patton, William W. 1973. Reconnaissance geology of the northern Yukon-Koyukuk province, Alaska. U.S. Geological Survey. Professional Paper 774-A. Shorter contributions to general geology. 17 pp.
- 3.00006 Sainsbury, C. L. 1967. Upper Pleistocene features in the Bering Strait area. Pages D203-D213 in Geological Survey research, 1967. U.S. Geological Survey. Professional Paper 575-D.

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- 3.00008 Miller, Thomas P., William W. Patton, and Marvin A. Lamphere. 1966. Preliminary report on a plutonic belt in west-central Alaska. Pages D158-D162 in Geological Survey research, 1966. U.S. Geological Survey. Professional Paper 550-D.
- 3.00009 Miller, Thomas P. 1972. Potassium-rich alkaline intrusive rocks of western Alaska. *Bulletin of the Geological Society of America*. 83:2111-2128.
- 3.00010 McCulloch, David S., and David M. Hopkins. 1966. Evidence for an early recent warm interval in northwestern Alaska. *Bulletin of the Geological Society of America*. 77:1089-1108.
- 3.00011 Hopkins, David M., and F. S. MacNeil. 1960. A marine fauna probably of late Pliocene age near Kivalina, Alaska. Pages B339-B342 in V.E. McKelvey, ed. U.S. Geological Survey. Professional Paper 400-B.
- 3.00012 Gates, George O., and George Gryc. 1963. Structure and tectonic history of Alaska. Pages 264-277 in O.E. Childs and B.W. Beebe, eds. *Backbone of the Americas--tectonic history from pole to pole*. Proceedings of the 46th Annual Meeting of the American Association of Petroleum Geologists, Denver, CO. 1961. A.A.P.G. Memoir 2.
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- 3.00014 Quackenbush, L. S. 1943. Notes on Alaskan mammoth expeditions of 1907 and 1908. Bulletin of the American Museum of Natural History. 54:87-130.
- 3.00015 Miller, Thomas P., Ivan Barnes, and William W. Patton. 1975. Geologic setting and chemical characteristics of hot springs in west-central Alaska. U.S. Geological Survey. Journal of Research. 3(2):149-162.
- 3.00016 Hershey, Oscar H. 1909. The ancient Kobuk Glacier of Alaska. Journal of Geology. 17:83-91.
- 3.00017 Hopkins, David M. 1972. The paleogeography and climatic history of Beringia during late Cenozoic time. Inter-Nord. 12:121-145.
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- 3.00019 Hopkins, David M. 1959. Cenozoic history of the Bering land bridge. Science. 129(3362):1519-1528.
- 3.00020 Porsild, A. E. 1938. Earth mounds in unglaciated arctic northwestern Alaska. Geographical Review. 28:46-58.
- 3.00021 Fernald, Arthur T. 1953. Active sand dunes in the Kobuk River valley, northwestern Alaska. Bulletin of the Geological Society of America. 64(12/2):1421-1422.

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- 3.00023 Dutro, J. Thomas 1953. Stratigraphy and paleontology of the Noatak and associated formations, Brooks Range, Alaska. *Bulletin of the Geological Society of America*. 64(12/2): 1415.
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- 3.00025 Mendenhall, Walter C. 1902. Reconnaissance from Fort Hamlin to Kotzebue Sound, Alaska, by way of Dall, Kanuti, Allen, and Kowak Rivers. U.S. Geological Survey. *Professional Paper 10*. 68 pp.
- 3.00026 Smith, Philip S. 1911. The Alatna-Noatak Region. Pages 315-338 in A. H. Brooks, et al. *Mineral resources of Alaska, report on progress of investigations in 1911*. U.S. Geological Survey. *Bulletin 520*.
- 3.00027 Smith, Philip S. 1913. The Noatak-Kobuk Region, Alaska. U.S. Geological Survey. *Bulletin 536*. 16 pp.
- 3.00028 Hopkins, David M. 1967. The Bering land bridge. Stanford University Press, Stanford, CA. 495 pp.
- 3.00029 Miller, Thomas P. 1970. Petrology of the plutonic rocks of west-central Alaska. U.S. Geological Survey. *Open-File Report 71-210*. 132 pp.

- 3.00030 Barnes, David F., and Irvin L. Tailleir. 1970. Preliminary interpretation of geophysical data from the lower Noatak River basin, Alaska. U.S. Geological Survey. Open-File Report 70-18. 15 pp.
- 3.00031 Nava, Joseph A., and Peter R. Morrison. 1974. A note on hot springs in the interior of Alaska. *Arctic*. 27(3):241-243.
- 3.00032 Colinvaux, Paul A. 1964. The environment of the Bering land bridge. *Ecological Monographs*. 34(3):297-329.
- 3.00033 Forbes, R. B. 1978. The origin and geologic setting of the moors near Cape Espenberg, Alaska. Geophysical Institute, University of Alaska, Fairbanks. 34 pp.
- 3.00034 Smith, Philip S., and J. B. Mertie. 1930. Geology and mineral resources of northwestern Alaska. U.S. Geological Survey. Bulletin 815. 351 pp.

CURRENT RESEARCH

3.00901 PALEOMAGNETISM OF LAST 150,000 YR IN ALASKA

Colinvaux, Paul A.
Inst. Polar Studies, Ohio State University
125 South Oval Mall, Columbus, OH 43210

(614)422-6531

1977-1980

Noltmier, Hallan C., Ohio State Univ., Inst. of Polar Studies

National Science Foundation

ARCTIC and NORTHWEST: Imuruk Lake, Whitefish Lake, Akaliokak Lake, and Toolik Lake. To investigate the history of remnant magnetism preserved in the sediments of arctic Alaskan lakes. The study takes advantage of the fact that at high latitudes the history of changes in inclination can be traced in sediment cores which are not oriented in the horizontal plane. The ancient sediments at Imuruk Lake have yielded perhaps the best evidence in sediments for the Blake Event 110,000 BP.

3.00902 ALASKA MINERAL RESOURCES

Mitchell, Jr., Michael
Univ. of Alaska, AEIDC
707 A Street, Anchorage, AK 99501

(907) 279-4523

3/79 to 7/79

Hawley, Chuck C., CCH & Associates

U.S. Bureau of Mines

\$55,000

STATEWIDE: To define, and map at 1:1,000,000 scale, metallic mineral deposit host rock units for Alaska. To perform cost-benefit analyses of development of selected mineral deposits.

CHAPTER 3.1

SOILS

- 3.10001 MacNamara, Edlen E. 1965. Soils of the Howard Pass area, northern Alaska. Ph.D. Thesis. Rutgers State University, New Brunswick, NJ. 31 pp.
- 3.10002 Aitken, George W. 1965. Ground temperature observations, Kotzebue, Alaska. Cold Regions Research and Engineering Laboratory, U.S. Army, Hanover, NH. Technical Report 108. 14 pp.
- 3.10003 Schoephorster, Dale B., and Charles D. Bowen. 1965. Soils of the Kobuk area, Alaska. U.S. Soil Conservation Service. 33 pp.
- 3.10004 Preston, James E., William R. Fibich, Thomas H. George, and Peter C. Scorupl. 1977. Range sites and soils of the Kotzebue Sound area. U.S. Soil Conservation Service. Includes section on snow cover on winter range, by George P. Clagett. 64 pp.
- 3.10005 Furbush, Clarence E. 1971. Soils of the City of Kotzebue. U.S. Soil Conservation Service, Palmer, Ak. 20 pp.
- 3.10006 Hinton, Robert B., and Marvin L. Dixon. 1967. Soils of the Deering area, Alaska. U.S. Soil Conservation Service. 26 pp.

3.10007 Sigafos, Robert S., and David M. Hopkins. 1952. Soil in stability on slopes in regions of perenially frozen ground. Pages 176-192 in Frost Action in Soils: A Symposium. Highway Research Board. Special Report No. 2 (National Research Council Publication 213).

3.10008 Sigafos, Robert S. 1951. Soil instability in tundra vegetation. Ohio Journal of Science. 51(6):281-298.

CHAPTER 3.3
GEOLOGIC HAZARDS

- 3.30001 U.S. Army Corps of Engineers. 1977. Alaskan communities: Flood hazard and pertinent data. Flood Plain Management Services. 186 pp.
- 3.30002 Alaska Dept. of Environmental Conservation. 1976. Coastal processes, terrain, and hazards. Report for Alaska Coastal Management Program. 1 vol.
- 3.30003 Fathauer, Theodore F. 1978. A forecast procedure for coastal floods in Alaska. U.S. National Weather Service, Anchorage, AK. Technical Memorandum NWS AR-23. 27 pp.
- 3.30004 Hopkins, David M. 1977. Coastal processes and coastal erosional hazards to the Cape Krusenstern archaeological site. U.S. Geological Survey. Open-File Report 77-32. 16 pp.
- 3.30005 Finley, S. , J. Riehle, and K. Emmel. 1977. Areas of particular concerns for geologic reasons in the Alaska coastal zone. Div. of Geological and Geophysical Surveys, Alaska Dept. of Natural Resources, Anchorage. Preliminary report. 57 pp. 3 maps.

CURRENT RESEARCH

3.30901 RECONNAISSANCE ENGINEERING GEOLOGY OF CERTAIN COASTAL COMMUNITIES, ALASKA

Yehle, Lynn A.
U.S. Geological Survey
Mail Stop 903, Box 25046, Denver, CO 80225

(303)234-3721

Oct 77-Sep 78

Lemke, Richard W., U.S. Geological Survey

U.S. Geological Survey

SOUTHEAST, SOUTHWEST, and NORTHWEST: To evaluate by reconnaissance field methods, the general geology and the general engineering geology of certain coastal communities for geologic hazards including earthquakes. Field work completed for Haines, Hoonah, Ketchikan, Metlakatla, Petersburg, Sitka, Skagway, Wrangell, and Yakutat; also Barrow, Bethel, Dillingham, Kotzebue, Naknek-King Salmon, Nome, and Unalakleet. U.S. Geological Survey Open-File Reports are available for most of the southeastern Alaska communities.

CHAPTER 3.4

MINERALS AND FOSSIL FUELS

- 3.40001 U.S. Bureau of Mines, Alaska Field Operations Center. 1978. Mineral appraisal of the proposed Kobuk Valley National Park, Alaska: A preliminary comment. Open-File Report 110-78. 31 pp.
- 3.40002 U.S. Bureau of Mines, Alaska Field Operations Center. 1978. Mineral appraisal of the proposed Gates of the Arctic Wilderness National Park, Alaska: A preliminary comment. Open-File Report 109-78. 29 pp.
- 3.40003 Miller, Thomas P. 1976. Hardrock uranium potential in Alaska. U.S. Geological Survey. Open-File Report 76-246. 7 pp.
- 3.40004 Sainsbury, C. L., Travis Hudson, Reuben Kachadoorian, and Thomas Richards. 1970. Geology, mineral deposits, and geochemical and radiometric anomalies, Serpentine Hot Springs area, Seward Peninsula, Alaska. Pages H1-H19 in Contributions to economic geology, 1969. U.S. Geological Survey. Bulletin 1312.
- 3.40005 Dake, H. C. 1945. Alaska jade deposits. *Mineralogist*. 13:328-329.
- 3.40006 Halpern, Joel M. 1953. Arctic jade. *Rocks and Minerals*. 28(5-6):237-242.

- 3.40007 Mulligan, John J. 1957. Examination of Hannum lead prospect, Fairhaven district, Seward Peninsula, Alaska. U.S. Bureau of Mines. Open-File Report 6-65. 12 pp.
- 3.40008 Cathcart, S. H. 1920. Mining in northwestern Alaska. Pages 195-197 in G.C. Martin, ed. Mineral resources of Alaska; report on progress of investigations in 1918. U.S. Geological Survey. Bulletin 712.
- 3.40009 Sainsbury, C. L. 1975. Geology, ore deposits, and mineral potential of the Seward Peninsula, Alaska. U.S. Bureau of Mines. Open-File Report.
- 3.40010 Plahuta, Joseph T. 1978. Geologic map and cross sections of the Red Dog prospect, DeLong Mountains, northwestern Alaska. U.S. Bureau of Mines. Open-File Report No. 65-78. 11 pp.
- 3.40011 U.S. Bureau of Land Management. 1978. Environmental analysis record for WGM/COMINCO mineral exploration program, Red Dog area. Fairbanks District Office. 22 pp.
- 3.40012 Jansons, Uldis , and Robert G. Bottge. 1977. Economic mining feasibility studies of selected mineral deposit types in the western Brooks Range, Alaska. U.S. Bureau of Mines. Open-File Report 128-77.

CHAPTER 4.0
FRESHWATER RESOURCES

- 4.00001 Dingman, S. Lawrence 1973. The water balance in arctic and subarctic regions; annotated bibliography and preliminary assessment. Cold Regions Research and Engineering Laboratory, U.S. Army, Hanover, NH. Special Report 187. 131 pp.
- 4.00002 Cederstrom, D. J. 1961. Origin of a salt-water lens in permafrost at Kotzebue, Alaska. Bulletin of the Geological Society of America. 72:1427-1432.
- 4.00003 Norwood, Gus. 1968. Alaska water resources, a strategic national asset. Paper for presentation at Seminar on the Continental Use of Arctic Flowing Rivers, Pullman, WA. 29 pp.
- 4.00004 Carlson, Robert F., Richard Seifert, and Douglas Kane. 1977. Effects of seasonability and variability of streamflow on nearshore coastal areas. Pages 96-250 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1977. Vol. 14. NOAA. OCSEAP Research unit 111.
- 4.00005 Carlson, Robert F. 1976. Effects of seasonability and variability of streamflow on nearshore coastal areas. Pages 23-74 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, April 1976. Vol. 11. NOAA OCSEAP Research unit 111.

- 4.00006 Williams, John R., and Donald A. Morris. 1974. Water resources of the Kotzebue area, Northwestern Alaska. U.S. Geological Survey and the Alaska Dept. of Natural Resources, Anchorage. Administrative Report. 26 pp.
- 4.00007 CH2M Hill Engineering of Alaska, Inc. 1979. An evaluation of the water and wastewater systems for the city of Kotzebue, Alaska. Unpublished. Draft Report.
- 4.00008 U.S. Geological Survey. 1977. Water resources data for Alaska, water year 1977. Water Data Report AK-77-1.
- 4.00009 Arnow, G. M., and G. L. Hubbs. 1962. Characteristics of surface and ground waters in selected villages of Alaska. Pt. 1. Unpublished. Arctic Health Research Center, Alaska Dept. of Health, Education, and Welfare, Anchorage. 32 pp.
- 4.00010 Alaska Water Study Committee. 1976. Alaska water assessment; state-regional future water and related land problems. (Juneau, AK). 401 pp.
- 4.00011 Still, P. J. 1976. Index of surface water quality records to September 30, 1973, northwest Alaska and Arctic Slope, Alaska. U.S. Geological Survey. Open-File Report. 9 pp. (1 map).
- 4.00012 Feulner, Alvin J., and Robert G. Schupp. 1963. Seasonal changes in the chemical quality of shallow ground water in northwestern Alaska. Pages B189-191 in Short Papers in Geology and Hydrology. U.S. Geological Survey. Professional Paper 475-B.

4.00013 Cederstrom, D. J. 1954. A test well at Kotzebue, Alaska.
U.S. Geological Survey. Open-file Report 215. 15 pp.

CURRENT RESEARCH

4.00901 KOTZEBUE SOUND REGIONAL WATER PLANNING GUIDE

Mack, Steve
Alaska Dept. of Nat. Res., Div. of FL & WM
323 E. 4th Avenue, Anchorage, AK 99501

(907)279-5577

1/79-8/80

Alaska Dept. of Natural Resources

NORTHWEST: Kotzebue Sound. To inventory water resources and water use in the area; to identify issues and conflicts concerning water resources; and to develop water management recommendations for the Kotzebue Sound region.

CHAPTER 5.0

MARINE RESOURCES

- 5.00001 U.S. National Oceanic and Atmospheric Administration. 1978. NODC catalog of OCSEAP data. Part 2; Inventory of digital data by lease area for the Alaska Outer Continental Shelf Environmental Assessment Program. Environmental Data Service, Washington, DC. 72 pp. Compiled by NODC, Data Index Branch.
- 5.00002 Shapiro, Lewis H., and John J. Burns. 1975. Major late winter features of ice in northern Bering and Chukchi Seas as determined from satellite imagery. Geophysical Institute. University of Alaska, Fairbanks. Report No. UAGR-236. Sea Grant Report No. 75-8.
- 5.00003 U.S. National Oceanic and Atmospheric Administration. 1978. NODC catalog of OCSEAP data. Part 1; Distribution of digital data received for the Alaska Outer Continental Shelf Environmental Assessment Program. Environmental Data Service, Washington, DC. 84 pp. Compiled by NODC, Data Index Branch.
- 5.00004 Outer Continental Shelf Environmental Assessment Program. 1978. Environmental assessment of the Alaskan continental shelf. Interim synthesis: Beaufort/Chukchi. Arctic Project Office, NOAA OCSEAP. 362 pp.

CHAPTER 5.1

MARINE GEOLOGY

- 5.10001 Biswas, Niren N., Larry D. Gedney, and P. Huang. 1977. Seismicity studies: (A) Northeast Alaska and (B) Norton and Kotzebue Sounds. Pages 269-315 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1977. Vol. 18. NOAA OCSEAP Research unit 483.
- 5.10002 Barnes, Peter , Erk Reimnitz, and David Drake. 1976. Marine environmental problems in the ice-covered Beaufort Sea shelf and coastal regions. Pages 512-676 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, April 1976. Vol. 12. NOAA OCSEAP Research unit 205.
- 5.10003 Eittreim, Stephen , and Arthur Grantz. 1977. Seismic and tectonic hazards in the Hope Basin and Beaufort Shelf. Pages 226-268 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1977. Vol. 18. NOAA OCSEAP Research unit 432.
- 5.10004 Harrison, W. D., and T. E. Osterkamp. 1977. Subsea permafrost: probing, thermal regime and data analysis. Pages 424-466 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1977. Vol. 17. NOAA OCSEAP Research unit 253.
- 5.10005 Cannon, P. Jan 1977. The environmental geology and geomorphology of the Gulf of Alaska coastal plain and the coastal zone of Kotzebue Sound. Pages 333-345 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1977. Vol. 16. NOAA OCSEAP Research unit 99.

5.10006 McManus, Dean A., and Joe S. Creager. 1965. Bottom sediment data from the continental shelf of the Chukchi and Bering Seas. Dept. of Oceanography, University of Washington, Seattle. Technical Report No. 135. 2 vols.

CURRENT RESEARCH

5.10901 OIL SPILL VULNERABILITY, COASTAL MORPHOLOGY, SEDIMENTATION KOTZEBUE SOUND - CHUKCHI SEA

Hayes, Miles O.
Univ. of South Carolina, Dept. of Geology
Columbia, SC 29208

(803)777-6759

8/77 to 8/78

U.S. NOAA/BLM OCSEAP

\$30,000

MARINE: Kotzebue Sound and Chukchi Sea. To determine the vulnerability of coastal environments with regard to potential oil spills; to delineate coastal morphology and erosion-deposition trends; to analyze sediment characteristics and transport dynamics; to determine the interaction of oil spills and coastal ice.

5.10902 EVALUATION OF EARTHQUAKE ACTIVITY AROUND NORTON AND KOTZEBUE SOUNDS

Biswas, Niren N.
Univ. of Alaska, Geophysical Institute
Fairbanks, AK 99701

(907)479-7010

10/76 to 9/79

U.S. NOAA/BLM OCSEAP

\$144,300

NORTHWEST: Norton Sound and Kotzebue Sound. To install a temporary seismic network in western Alaska to help determine environmental hazards affecting offshore petroleum development.

CHAPTER 5.2

PHYSICAL OCEANOGRAPHY

- 5.20001 Coachman, Lawrence K., Robert L. Charnell, James D. Schumacher, and Knut Aagaard. 1977. Norton Sound/Chukchi Sea oceanographic processes (N-COP). Pages 579-673 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1977. Vol. 15. NOAA OCSEAP Research unit 541.
- 5.20002 Hunt, William R., and Claus-M Naske. 1977. Beaufort Sea, Chukchi Sea and Bering Strait baseline ice study. Pages 180-191 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1977. Vol. 15. NOAA OCSEAP Research unit 261.
- 5.20003 Stringer, William J., Stephen A. Barrett, and Linda Schreurs. 1978. Morphology of Beaufort, Chukchi and Bering Seas near shore ice conditions by means of satellite and aerial remote sensing. Pages 1-220 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1978. Vol. 10. NOAA OCSEAP Research unit 257.
- 5.20004 Goodman, Joe R., John H. Lincoln, Thomas G. Thompson, and Frederick A. Zeusler. 1942. Physical and chemical investigations: Bering Sea, Bering Strait, Chukchi Sea during the summers of 1937 and 1938. University of Washington Publications in Oceanography. 3(4):105-169.

CURRENT RESEARCH

5.20901 NORTON SOUND OCEANOGRAPHIC PROCESSES

Muench, Robin D.
U.S. Pacific Marine Environmental Lab
3711 15th Avenue NE, Seattle, WA 98105

(206) 442-1960

10/78 to 9/79

Charnell, Robert L., U.S. Pacific Marine Environmental Lab
Schumacher, James D., U.S. Pacific Marine Environmental Lab
Coachman, Lawrence K., Univ. of Washington
Aagaard, Knut, Univ. of Washington

U.S. NOAA/BLM OCSEAP

NORTHWEST: Norton Sound. To study fluctuations of the prevailing currents in Norton and Kotzebue Sounds.

5.20902 PREFERRED CRYSTAL ORIENTATIONS IN THE FAST ICE ALONG THE COAST OF THE BEAUFORT AND CHUKCHI SEAS

Weeks, Wilford F.
U.S. Army CRREL
P.O. Box 282, Hanover, NH 03755

(603) 643-3200

10/78 to 9/79

Gow, A., U.S. Army CRREL

U.S. Army CRREL

\$55,600

MARINE: Chukchi Sea. To describe and explain the strong preferred horizontal c-axis orientations that occur in the fast ice. Sampling has now been completed between Kivalina and Camden Bay.

CHAPTER 5.3
CHEMICAL OCEANOGRAPHY

- 5.30001 Shaw, D. G. 1977. Hydrocarbons: natural distribution and dynamics on the Alaskan outer continental shelf. Pages 507-727 in Environmental Assessment of the Alaskan Outer Continental Shelf. Principal Investigators' Reports, March, 1977. Vol. 13. NOAA OCSEAP Research unit 275.
- 5.30002 Cline, Joel D. 1977. Distribution of light hydrocarbons, C1-C4 in the northeast Gulf of Alaska, lower Cook Inlet, southeastern Bering Shelf, Norton Sound and southeastern Chukchi Sea. Pages 180-268 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1977. Vol. 13. NOAA OCSEAP Research unit 153.
- 5.30003 Burrell, David C., T. Gosink, A. S. Naidu, and D. Robertson. 1977. Natural distribution of trace heavy metals and environmental background in Alaskan shelf and estuarine areas. Pages 290-506 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1977. Vol. 13. NOAA OCSEAP Research unit 162.

CHAPTER 6.0
BIOTIC COMMUNITIES

- 6.00001 Melchior, Herbert R., Kenneth R. Whitten, Richard T. Schideler, and Charles H. Racine. 1976. Biological survey of the proposed Kobuk Valley National Monument. Cooperative Park Studies Unit, University of Alaska, Fairbanks. 215 pp.
- 6.00002 Broad, A. C., Helmut Koch, and G. M. Petrie. 1977. Reconnaissance characterization of littoral biota, Beaufort and Chukchi Seas. Pages 109-274 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1977. Vol. 9. NOAA OCSEAP Research unit 359.
- 6.00003 Watson, D. G., and W. H. Rickard. 1962. Gamma-emitting radio-nuclides in Alaskan fish and plants. Pages 244-257 in Hanford biology-1962 progress report. U.S. Atomic Energy Commission. Report HW-76000.
- 6.00004 Bergstrand, Jay. 1978. Fish and wildlife use and management in Alaska. Joint Federal-State Land Use Planning Commission for Alaska. Study 31. 50 pp.
- 6.00005 Young, Steven B. 1974. The environment of the Noatak River Basin, Alaska. Center for Northern Studies, Wolcott, VT. Contribution no. 1. 584 pp.
- 6.00006 Alaska Dept. of Environmental Conservation. 1976. Coastal ecosystems of Alaska: A preliminary review of the distribution and abundance of primary producers and consumers in the marine environment. Report for Alaska Coastal Management Program. 189 pp.

- 6.00007 Melchior, Herbert R. 1974. Final report. Chukchi-Imuruk biological survey. Cooperative Park Studies Unit, University of Alaska, Fairbanks. 517 pp.
- 6.00008 Dean, Frederick C., and David L. Chesmore. 1974. Studies of birds and mammals in the Baird and Schwatka Mountains, Alaska. Biological Papers of the University of Alaska. No. 15.
- 6.00009 Evans, Charles D., and Sal V. Cuccarese. 1977. Evaluation of wildlife habitats in Alaska--alternatives for replacement of national wildlife refuge lands. Arctic Environmental Information and Data Center, University of Alaska, Anchorage. Report for U.S. Fish and Wildlife Service. 155 pp. and maps. (scale, 1:1,000,000).

CHAPTER 6.1

TERRESTRIAL VEGETATION

- 6.10001 Sigafos, Robert S. 1958. Vegetation of northwestern North America, as an aid in interpretation of geologic data. U.S. Geological Survey. Bulletin 1061-E. 21 pp. Also pages 165-185 in Contributions to General Geology, 1956.
- 6.10002 Holmen, Kjeld. 1962. Chromosome studies in some arctic Alaskan Leguminosae. Botaniska Notiser. 115(1):87-92.
- 6.10003 Steere, William C. 1958. Mnium andrewsianum, a new sub-arctic and arctic moss. Bryologist. 61(3):173-182.
- 6.10004 Matthews, John V. 1974. Quaternary environments at Cape Deceit, (Seward Peninsula, Alaska): Evolution of a tundra ecosystem. Bulletin of the Geological Society of America. 85(9):1353-1384.
- 6.10005 Persson, Herman. 1947. Further notes on Alaskan-Yukon bryophytes. Bryologist. 50:179-310.
- 6.10006 Porsild, A. E. 1939. Contributions to the flora of Alaska. Rhodora. 41(485):141-301.
- 6.10007 Lutz, Harold J. 1963. Early forest conditions in the Alaska interior: An historical account with original sources. U.S. Forest Service. Juneau. 74 pp.

- 6.10008 Hanson, Herbert C. 1953. Vegetation types in northwestern Alaska and comparisons with communities in other arctic regions. *Ecology*. 34(1):111-140.
- 6.10009 Drury, Horace F., and Stanley G. Smith. 1957. Emergency food value of Alaska wild plants. Arctic Aeromedical Laboratory, Ladd Air Force Base, Fairbanks, AK. Technical Note AAL-IN-57-16.
- 6.10010 Nodler, Frances A., Arthur J. LaPerriere, and David R. Klein. 1978. Vegetation type mapping in northwestern Alaska in relation to caribou and reindeer range potentials. Cooperative Wildlife Research Unit, University of Alaska, Fairbanks. Special Report No. 2. 33 pp.
- 6.10011 Racine, Charles H. 1977. Tundra disturbance resulting from a 1974 drilling operation in the Cape Espenberg area, Seward Peninsula, Alaska. Report for the U.S. National Park Service. 47 pp.
- 6.10012 Murray, David F. 1974. Notes on the botany at selected localities in the Alatna and Killik River Valleys, central Brooks Range, Alaska. Final Report. Biology and Resource Management Project. Cooperative Park Studies Unit, University of Alaska, Fairbanks. 218 pp. and appendix 96 pp.
- 6.10013 Racine, Charles H. 1979. Tundra disturbance and recovery resulting from off-road vehicle use for summer reindeer herding and a 1974-75 winter drilling operation in the northern Seward Peninsula, Alaska. The Center for Northern Studies, Wolcott, VT. 69 pp.

CURRENT RESEARCH

6.10901 HISTORY OF ARCTIC ALASKAN AND BERINGIAN PLANT COMMUNITIES

Colinvaux, Paul A. (614) 422-6531
Ohio State Univ., Dept. of Zoology & Inst. Polar Studies
125 South Oval Mall, Columbus, Ohio 43210 1/77 to 1/79

National Science Foundation \$48,000

ARCTIC and NORTHWEST: Imuruk Lake, Whitefish Lake, Pribilofs, and Seward Peninsula. To refine the history of climate and environment of the Bering Land Bridge over the histories published between 1963 and 1967. Dating of the ancient history at Imuruk Lake is by remnant magnetism and radiocarbon. A refined, close-interval pollen analysis is being used to describe the history of the vegetation at these and other arctic Alaskan sites over more than 100,000 yr. In association with other work on surface samples, we shall use multivariate analyses to interpret the vegetation history as a climatic history of arctic Alaska.

6.30901 INVENTORY AND ANALYSIS OF THE FOREST RESOURCES OF THE NANA REGION

Hays, Hank (907) 276-0939
U.S. Forest Service, State and Private Forestry
2221 E. Northern Lights Blvd., Anchorage, AK 99502 3/79 to 1/80

Venard, Jim, U.S. Forest Service, State and Private Forestry

NORTHWEST: NANA Region. To inventory, map (1:63,360 scale) and assess the forest resources on native-selected lands in the NANA region.

CHAPTER 6.2
AQUATIC VEGETATION

- 6.20001 Alaska Dept. of Environmental Conservation. 1976. A preliminary inventory of tidally-influenced wetlands of coastal Alaska. Report for Alaska Coastal Management Program. 44 pp.

CHAPTER 6.3
TERRESTRIAL ANIMALS

- 6.30001 Pruitt, William O. 1968. Synchronous biomass fluctuations of some northern mammals. *Mammalia*. 32(2):172-191.
- 6.30002 Quay, W. B. 1951. Observations on mammals of the Seward Peninsula, Alaska. *Journal of Mammology*. 32(1):88-99.
- 6.30003 Neiland, Kenneth A. 1975. Further observations on rangiferine brucellosis in Alaskan carnivores. *Journal of Wildlife Diseases*. 11:45-53.
- 6.30004 Neiland, Kenneth A. 1970. Rangiferine brucellosis in Alaskan canids. *Journal of Wildlife Diseases*. 6:136-139.
- 6.30005 Ehrlich, Paul R. 1958. Lepidoptera collected in the tundra-taiga ecotone at Kotzebue, Alaska. *Entomological News*. 69(1):17-18.
- 6.30006 Bailey, Alfred M., and Russel W. Hendee. 1926. Notes on the mammals of northwestern Alaska. *Journal of Mammology*. 7(1):9-28.
- 6.30007 Alaska Dept. of Fish and Game. 1977. A fish and wildlife resource inventory of western and arctic Alaska, Vol. 1--Wildlife. Unpublished. Report for the Alaska Coastal Management Program. 360 pp.

- 6.30008 Alaska Dept. of Fish and Game. 1978. Alaska's wildlife and habitat. Vol. 2. Anchorage.
- 6.30009 McKnight, Donald E. 1975. Annual report of survey-inventory activities. Parts 1-4. Div. of Game, Alaska Dept. of Fish and Game. Federal Aid in Wildlife Restoration. Project W-17-6. Vol. 5. (4 parts)
- 6.30010 McKnight, Donald E. 1976. Annual report of survey-inventory activities. Parts 1-4. Div. of Game, Alaska Dept. of Fish and Game. Federal Aid in Wildlife Restoration. Project W-17-7. Vol. 6. (4 parts)
- 6.30011 Hinman, Robert A. 1977. Annual report of survey-inventory activities. Parts 1-4. Div. of Game, Alaska Dept. of Fish and Game. Federal Aid in Wildlife Restoration. Project W-17-8. Vol. 7. (4 parts)
- 6.30012 Hinman, Robert A. 1978. Annual report of survey-inventory activities. Parts 1-4. Div. of Game, Alaska Dept. of Fish and Game. Federal Aid in Wildlife Restoration. Project W-17-9. Vol. 8. (4 parts)
- 6.30013 Franzmann, Albert W., and Theodore N. Bailey. 1977. Moose research center report. Div. of Game, Alaska Dept. of Fish and Game. Federal Aid in Wildlife Restoration. Project W-17-9. Vol. 18. 76 pp.
- 6.30014 Franzmann, Albert W., and Charles C. Schwarts. 1978. Moose research center report. Div. of Game, Alaska Dept. of Fish and Game. Federal Aid in Wildlife Restoration. Project W-17-10. Vol. 9. 11 pp.

- 6.30015 Coady, John W. 1976. Interior moose and moose disease studies. Div. of Game, Alaska Dept. of Fish and Game. Federal Aid in Wildlife Restoration. Projects W-17-7, W-17-8, W-17-6 (second half). Vol. 3. 28 pp.
- 6.30016 Sigman, Marilyn J., and Albert W. Franzmann. 1977. Moose behavior studies. Div. of Game, Alaska Dept. of Fish and Game. Federal Aid in Wildlife Restoration. Projects W-17-7, W-17-8, W-17-9. Final Report. 16 pp.
- 6.30017 Franzmann, Albert W., Robert E. LeResche, Paul D. Arneson, and James L. Davis. 1976. Moose productivity and physiology. Div. of Game, Alaska Dept. of Fish and Game. Federal Aid in Wildlife Restoration. Projects W-17-2, W-17-3, W-17-4, W-17-5, W-17-6, W-17-7. Final Report. 87 pp.
- 6.30018 Gasaway, William C. 1977. Moose survey procedures development. Div. of Game, Alaska Dept. of Fish and Game. Federal Aid in Wildlife Restoration. Project W-17-9. Vol. 1. 69 pp.
- 6.30019 Gasaway, William C. 1978. Moose survey procedures development. Div. of Game, Alaska Dept. of Fish and Game. Federal Aid in Wildlife Restoration. Project W-17-10. Vol. 2. 47 pp.
- 6.30020 Nielsen, Carol A. 1977. Wolf necropsy report: Preliminary pathological observations. Div. of Game, Alaska Dept. of Fish and Game. Federal Aid in Wildlife Restoration. Projects W-17-8 and W-17-9. Special Report. 129 pp.
- 6.30021 Stephenson, Robert O. 1978. Characteristics of exploited wolf populations. Div. of Game, Alaska Dept. of Fish and Game. Federal Aid in Wildlife Restoration. Projects W-17-3 through W-17-8. Final Report. 21 pp.

6.30022 Alaska Dept. of Fish and Game. 1976. Alaska wildlife management plans, Northwestern Alaska. Draft proposal. Div. of Game. 146 pp.

6.30023 Harbo, Samuel J. 1959. Wildlife reconnaissance, northwest coastal Alaska. Pages 490-504 in Alaska Dept. of Fish and Game. Federal Aid in Wildlife Restoration. Project W-6-R-1. Annual Progress Report. 1959-1960. Vol. 1.

6.30024 Alaska Dept. of Fish and Game. 1973. Alaska's wildlife and habitat. Vol. 1. Anchorage.

CURRENT RESEARCH

6.30901 INVENTORY AND ANALYSIS OF THE FOREST RESOURCES OF THE NANA REGION

Hays, Hank (907) 276-0939
U.S. Forest Service, State and Private Forestry
2221 E. Northern Lights Blvd., Anchorage, AK 99502 3/79 to 1/80

Venard, Jim, U.S. Forest Service, State and Private Forestry

NORTHWEST: NANA Region. To inventory, map (1:63,360 scale) and assess the forest resources on native-selected lands in the NANA region.

6.30902 HOME RANGE AND FOOD HABITS OF WOLVES IN NORTHWESTERN ALASKA

James, David G. (907) 479-7673
Univ. of Alaska, Coop. Wildlife Research Unit
Fairbanks, AK 99701 7/78 to 6/79

Alaska Dept. of Fish and Game \$2,500

NORTHWEST: To determine the home ranges of radio collared and associated wolves in an area of northwest Alaska in which caribou abundance drastically fluctuates seasonally; to determine the seasonal food habits of the study wolves by scat analysis, observation of wolf and prey interactions, and examination of remains of animals killed by wolves; to determine seasonal prey abundance within the home ranges of the study wolves.

6.30903 ALASKA LEPIDOPTERA SURVEY

Philip, Kenelm W.
Univ. of Alaska, IAB
Fairbanks, AK 99701 Continuing

National Geographic Society

NORTHWEST: Seward Peninsula. To conduct a joint Soviet-U.S. expedition to investigate the insect fauna of the Bendeleben/Darby Mountains, Seward Peninsula, particularly Lepidoptera, Orthoptera and Coleoptera; the basis for a continual joint U.S.-Soviet program on the Beringian insect fauna.

CHAPTER 6.3.1

CARIBOU

- 6.31001 Davis, James L., and Patrick Valkenburg. 1978. Western arctic caribou herd studies. Div. of Game, Alaska Dept. of Fish and Game. Federal Aid in Wildlife Restoration. Projects W-17-8 and W-11-9, Jobs no. 3.19R, 3.20R, and 3.21R. Final Report. 1 vol.
- 6.31002 Fredericksen, Stan S., and Ray Tremblay. 1957. Arctic survey. Unpublished. U.S. Fish and Wildlife Service, Anchorage, AK. 12 pp.
- 6.31003 Lent, Peter C. 1966. Calving and related social behavior in the barren-ground caribou. *Zeitschrift fur Tierpsychologie*. 23:701-756.
- 6.31004 Klein, David R., and Robert G. White. 1978. Parameters of caribou population ecology in Alaska; proceedings of a symposium and workshop. *Biological Papers of the University of Alaska*. Special Report No. 3. 49 pp.
- 6.31005 Neiland, Kenneth A. 1978. Caribou disease studies. Div. of Game, Alaska Dept. of Fish and Game. Federal Aid in Wildlife Restoration. Projects W-17-4 through W-17-10. Final Report. 68 pp.
- 6.31006 Davis, James L. 1978. Age structure of caribou populations in arctic Alaska. Div. of Game, Alaska Dept. of Fish and Game. Federal Aid in Wildlife Restoration. Project W-17-9, W-17-10. Final Report. 9 pp.

- 6.31007 Thing, Henning. 1977. Behavior, mechanics and energetics associated with winter cratering by caribou in northwestern Alaska. Biological Papers of the University of Alaska. No. 18. 41 pp.
- 6.31008 U.S. Bureau of Land Management. 1976. Environmental analysis record: NANA reindeer grazing application in the Kotzebue-Noatak area. Fairbanks District Office. 105 pp.

CURRENT RESEARCH

6.31901 MANDIBULAR LESIONS IN THE WESTERN ARCTIC CARIBOU HERD

Doerr, Joseph
Univ. of Alaska, Coop. Wildlife Research Unit
Fairbanks, AK 99701

1/76-6/78

Dieterich, Robert A., Univ. of Alaska, IAB

Univ. of Alaska, Coop. Wildlife Research Unit
Univ. of Alaska, IAB

NORTHWEST: To determine the incidence, nature, and probable causes of mandibular lesions in caribou from the western Arctic herd. A final publication has been accepted by the Journal of Wildlife Disease.

6.31902 HOME RANGE USE, SOCIAL STRUCTURE, AND HABITAT SELECTION OF THE WESTERN ARCTIC CARIBOU HERD

Davis, James L.
Alaska Dept. of Fish and Game
1300 College Rd., Fairbanks, Alaska 99701

(907) 452-1531

7/78-12/81

Coady, John W., Alaska Dept. of Fish and Game

U.S. National Park Service
Alaska Dept. of Fish and Game

\$99,659

NORTHWEST: To determine the degree to which groups of caribou in the western Arctic caribou herd are traditional in their use of winter home ranges; to determine the integrity and persistence of social groups during all seasons; and to determine patterns of habitat use during winter with particular reference to the recent fire history of the region.

6.31903 POPULATION DYNAMICS OF THE WESTERN ARCTIC CARIBOU HERD

Doerr, Joseph
Univ. of Alaska, Coop. Wildlife Research Unit
Fairbanks, AK 99701

(907) 479-7673

7/75-12/78

Alaska Dept. of Fish and Game

NORTHWEST: To assess and evaluate important changes that may be occurring in the western Arctic caribou herd by critically analyzing data available on that herd and by analyzing relevant past data on other Alaskan caribou herds that may provide insight into the relationships between population fluctuations and parameters such as sex ratios, age structures, and age specific mortality and recruitment rates; to work in conjunction with the Alaska Department of Fish and Game in the investigation of current population parameters of the western Arctic herd, concentrating primarily on productivity, calf survival, and age structures. Thesis in preparation.

CHAPTER 6.3.2

REINDEER

- 6.32001 Palmer, Lawrence J. 1926. Progress in reindeer grazing investigations in Alaska. U.S. Dept. of Agriculture. Bulletin 1423. 37 pp.
- 6.32002 Palmer, Lawrence J. 1934. Raising reindeer in Alaska. U.S. Dept. of Agriculture. Miscellaneous Publication 207. 41 pp.
- 6.32003 Palmer, Lawrence J. 1945. The Alaska tundra and its use by reindeer. Office of Indian Affairs, U.S. Dept. of the Interior. 28 pp.
- 6.32004 Olson, Dean F. 1969. Alaska reindeer herdsman; a study of native management in transition. Institute of Social, Economic and Government Research, University of Alaska, Fairbanks. SEG Report 22. 156 pp.
- 6.32005 Wright, John M. 1978. Reindeer grazing in relation to bird nesting on the northern Seward Peninsula. Alaska Cooperative Wildlife Research Unit, University of Alaska, Fairbanks. Report for U.S. Fish and Wildlife Service and U.S. National Park Service. 81 pp.
- 6.32006 Lantis, Margaret. 1950. The reindeer industry in Alaska. Arctic. 3(1):27-44.

- 6.32007 Stern, Richard O., Edward L. Arobio, Larry L. Naylor, and Wayne C. Thomas. 1977. Socio-economic evaluation of reindeer herding in relation to proposed national interest lands (d)2 in northwestern Alaska. Final Report to the National Park Service. Institute of Arctic Biology, University of Alaska, Fairbanks. 313 pp.
- 6.32008 Haawen, Seymour, and Lawrence J. Palmer. 1922. Reindeer in Alaska. U.S. Dept. of Agriculture. Bulletin 1089. 74 pp.
- 6.32009 Stern, Richard O. 1977. A selected annotated bibliography of sources on reindeer herding in Alaska. Institute of Arctic Biology, University of Alaska, Fairbanks. Occasional Publications on Northern Life No. 2. 167 pp.

CURRENT RESEARCH

- 6.32901 DEVELOPMENT OF EMERGENCY AND/OR SUPPLEMENTAL FEEDS FOR REINDEER
- Luick, Jack R. (907) 479-7657
Univ. of Alaska, IAB
Fairbanks, AK 99701 7/77-6/78
- U.S. Bureau of Indian Affairs \$14,000
- NORTHWEST: To develop feeds for use during severe climatic conditions.
-
- 6.32902 INVESTIGATION OF THE IMMUNIZATION OF REINDEER AGAINST BRUCELLOSIS TYPE 4
- Dieterich, Robert A. (907) 479-7166
Univ. of Alaska, IAB
Fairbanks, AK 99701 9/77-9/80
- U.S. Dept. of Agriculture \$15,000
- NORTHWEST: To develop a vaccine to control brucellosis in Alaskan reindeer.
-
- 6.32903 EDUCATIONAL ACTIVITIES-REINDEER HERDING
- Luick, Jack R. (907) 479-7657
Univ. of Alaska, IAB
Fairbanks, AK 99701 Continuing
- Reindeer Herders Association \$31,000
- NORTHWEST: Nome. To provide advice on general herd health and management practices including field techniques during harvesting, translation of key materials and maintenance of the slaughter house in Nome.

6.32904 BIOLOGICAL CONSEQUENCES AND ECONOMIC ADVANTAGES OF CUTTING AND MARKETING
REINDEER ANTLER

Luick, Jack R.
Univ. of Alaska, IAB
Fairbanks, AK 99701

(907) 479-7657

7/77-6/78

U.S. Bureau of Indian Affairs

\$9,500

NORTHWEST:

CHAPTER 6.4
AQUATIC ANIMALS

- 6.40001 Holmquist, Charlotte. 1973. Fresh-water polychaete worms of Alaska with notes on the anatomy of Manayunkia speciosa Leidy. Zoologische Jahrbucher; Abteilung fur Systematik Geographie und Biologie der Tiere. 100:497-516.
- 6.40002 Holmquist, Charlotte. 1967. Marenzelleria wireni Augener - a polychaete found in fresh waters of northern Alaska - with taxonomical considerations on some related spionid worms. Zeitschrift fur Zoologische Systematik und Evolution-forschung. 5(3):298-313.
- 6.40003 Bowman, Thomas E., and Charlotte Holmquist. 1975. Asellus (Asellus) alaskensis n. sp., the first Alaskan Asellus, with remarks on its Asian affinities (Crustacea: Isopoda: Asellidae). Proceedings of the Biological Society of Washington. 88(7):59-72.
- 6.40004 Tash, Jerry C. 1971. Some crustacean zooplankton of the Noatak River area, northern Alaska. Arctic. 24:108-112.
- 6.40005 Wigutoff, Norman B., and Clarence J. Carlson. 1950. A survey of the commercial fishery possibilities of Seward Peninsula area, Kotzebue Sound, and certain inland rivers and lakes in Alaska. U.S. Fish and Wildlife Service. Fishery Leaflet 375. 24 pp.
- 6.40006 Holmquist, Charlotte. 1975. Lakes of northern Alaska and northwestern Canada and their invertebrate fauna. Zoologische Jahrbucher; Abteilung fur Systematik Okologie und Geographie der Tiere. 102(3):333-484.

- 6.40007 Uzman, J. R., and M. N. Hesselholt. 1957. New host and locality record for Triaenophorus crassus Forel (Cestoda: Pseudophylliidea). *Journal of Parasitology*. 43(2):205.
- 6.40008 Walters, Vladimir. 1955. Fishes of western arctic America and eastern arctic Siberia. *Bulletin of the American Museum of Natural History*. 106:359-366.
- 6.40009 Barton, Louis H. 1977. Finfish resource surveys in Norton Sound and Kotzebue Sound. Pages 113-194 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1977. Vol. 7. NOAA OCSEAP Research unit 19E.
- 6.40010 Cooney, R. Ted 1977. Zooplankton and micronekton studies in the Bering-Chukchi/Beaufort Seas. Pages 275-363 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1977. Vol. 10. NOAA OCSEAP Research unit 426.
- 6.40011 McCaine, Bruce B., Harold O. Hodgins, and William D. Gronlund. 1977. Determine the frequency and pathology of marine animal diseases in the Bering Sea, Gulf of Alaska, and Beaufort Sea. Pages 296-356 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1977. Vol. 11. NOAA OCSEAP Research unit 332.
- 6.40012 Feder, H. M., and Stephen C. Jewett. 1978. Trawl survey of the epifaunal invertebrates of Norton Sound, Southeastern Chukchi Sea, and Kotzebue Sound. Pages 338-486 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Final Reports, June 1978. Vol. 1. NOAA OCSEAP Research unit 502.

- 6.40013 Alaska Dept. of Fish and Game. 1978. Alaska's fisheries atlas. Anchorage. 2 vols.
- 6.40014 Alaska Dept. of Fish and Game. 1977. A fish and wildlife resource inventory of western and arctic Alaska, Vol. 2-- Fisheries. Unpublished. Report for the Alaska Coastal Management Program. 340 pp.
- 6.40015 Johnson, Martin W. 1953. Studies on plankton of the Bering and Chukchi Seas and adjacent areas. Pages 480-500 in Proceedings of the 7th Pacific Science Conference.
- 6.40016 McPhail, John D. 1966. The Coregonus autumnalis complex in Alaska and northwestern Canada. Journal of the Fisheries Research Board of Canada. 23(1):141-148.

CHAPTER 6.4.1

FRESHWATER AND ANADROMOUS FISH

- 6.41001 Fiscus, Clifford H. 1956. Salmon racial sampling in the areas north of Bristol Bay-1956. U.S. Fish and Wildlife Service. Pacific Salmon Investigations. 17 pp.
- 6.41002 Roguski, Eugene A. 1970. Monitoring and evaluation of arctic waters with emphasis on the North Slope drainages. Div. of Sport Fish, Alaska Dept. of Fish and Game. Federal Aid in Fish Restoration. Project F-9-2, Job no. 15-C. Annual Progress Report, Vol. 11.
- 6.41003 Winslow, Peter C. 1969. Investigation and cataloging of sport fish and sport fish waters in interior Alaska--char in northwestern Alaska. Pages 319-332 in Div. of Sport Fish, Alaska Dept. of Fish and Game. Federal Aid in Fish Restoration. Project F-9-1, Job no. 15-A. Annual Progress Report, Vol. 10.
- 6.41004 Mattson, Chester R. 1962. Chum salmon resources of Alaska from Bristol Bay to Point Hope. U.S. Fish and Wildlife Service. Special Scientific Report--Fisheries no. 425. 22 pp.
- 6.41005 Merrell, Theodore R. 1970. Alaska's fishery resources: the chum salmon. U.S. Bureau of Commercial Fisheries. Fishery Leaflet 632. 7 pp.
- 6.41006 Atkinson, C. E., J. H. Rose, and T. O. Duncan. 1966. Salmon of the North Pacific Ocean. Part 4. Spawning populations of North Pacific salmon in the United States. International North Pacific Fisheries Commission. Bulletin no. 23.

- 6.41007 Galerman, Donna M., and Howard J. Craven. 1952. The Alaska sheefish: Description and proximate composition. *Commercial Fisheries Review*. 14(4):22-23.
- 6.41008 Hurd, Charles L. 1972. Kotzebue area sheefish investigations, 1971. Div. of Commercial Fisheries, Alaska Dept. of Fish and Game, Nome. *Fishery Bulletin* 16.
- 6.41009 Alaska, University, Arctic Environmental Info. and Data Ctr. 1975. Anadromous fish inventory, Noatak National Arctic Range, Alaska, and associated area of ecological concern. Report for U.S. Fish and Wildlife Service. 46 pp.
- 6.41010 Alaska, University, Arctic Environmental Info. and Data Ctr. 1975. Anadromous fish inventory, Selawik National Wildlife Refuge, Alaska, and associated area of ecological concern. Report for U.S. Fish and Wildlife Service. 47 pp.
- 6.41011 Yanagawa, Carl M. 1971. Kotzebue chum salmon tagging project, 1966-1968. Div. of Commercial Fisheries, Alaska Dept. of Fish and Game, Anchorage. *Fishery Bulletin* 7. 32 pp.
- 6.41012 Alt, Kenneth T. 1968 through 1970. Sheefish and pike investigations of the upper Yukon and Kuskokwim drainages with emphasis on Minto Flats drainages. Sport Fish Div., Alaska Dept. of Fish and Game. Federal Aid in Fish Restoration. Progress reports. Vols. 9, 10, 11.
- 6.41013 Lebida, Robert C. 1971. Kotzebue Sound sheefish investigations, 1970. Alaska Dept. of Fish and Game. Arctic-Yukon-Kuskokwim Special Report No. 2.

- 6.41014 Alt, Kenneth T. 1971 through 1975. A life history study of sheefish and whitefish in Alaska. Sport Fish Div., Alaska Dept. of Fish and Game, Federal Aid in Fish Restoration. Study R-11. Vols. 12-16.
- 6.41015 Alt, Kenneth T. 1976. Age and growth of broad whitefish, Coregonus nasus. Transactions of the American Fisheries Society. 105(4):526-528.
- 6.41016 Alt, Kenneth T. 1977. Movements of inconnu, Stenodus leucichthys, in Alaska. Journal of the Fisheries Research Board of Canada. 34:129-133.
- 6.41017 Alt, Kenneth T. 1978. Life history study of sheefish in Alaska. Div. of Sport Fish, Alaska Dept. of Fish and Game. Federal Aid in Fish Restoration. Study R-11. Vol. 19. 22 pp.

CHAPTER 6.4.2

MARINE FISH

- 6.42001 Pereyra, Walter T., and Robert J. Wolotira. 1977. Baseline studies of fish and shellfish resources of Norton Sound and the southeastern Chukchi Sea. Pages 288-319 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1977. Vol. 8. NOAA OCSEAP Research unit 175.
- 6.42002 Andriashev, Anatoly P. 1955. A contribution to the knowledge of the fisheries from the Bering and Chukchi Seas. U.S. Fish and Wildlife Service. Special Scientific Report-- Fisheries no. 145. 81 pp.
- 6.42003 Pruter, Alonzo T., and Dayton L. Alverson. 1962. Abundance, distribution, and growth of flounders in the southeastern Chukchi Sea. Journal du Conseil. 27(1):81-99.

CURRENT RESEARCH

6.42901 FINFISH RESOURCE SURVEYS IN NORTON SOUND AND KOTZEBUE SOUND

Barton, Louis H.
Alaska Dept. of Fish and Game/Commercial Fish Div.
333 Raspberry Road, Anchorage, AK 99502

(907) 344-0541

3/76-9/78

U.S. Bureau of Land Management

NORTHWEST: Norton and Kotzebue Sounds. To determine the spatial and temporal distribution and relative abundance of pelagic finfish in the coastal waters of Norton and Kotzebue Sounds; to determine timing and routes of juvenile salmon migrations as well as monitor age and growth characteristics; to determine spatial and temporal distribution and relative abundance of spawning populations of herring and other forage fish; to monitor egg density and distribution and types of spawning substrates utilized; to monitor subsistence utilization of fishery resources by local residents.

6.42902 NORTON SOUND-KOTZEBUE SALMON STUDIES

Kuhlmann, Frederic W.
Alaska Dept. of Fish and Game/Commercial Fish Div.
P.O. Box 862, Nome, AK 99762

(907) 443-5167

7/77-6/82

State of Alaska
U.S. NOAA/BLM OCSEAP

\$76,900

MARINE and NORTHWEST: Norton and Kotzebue Sounds. To identify and evaluate potential sites for salmon escapement enumeration in Golovin; to determine relative magnitudes of chum salmon escapements to the Noatak River.

6.42903 KOTZEBUE CHUM SALMON FORECAST STUDIES

Kuhlmann, Frederic W.
Alaska Dept. of Fish and Game/Commercial Fish Div.
P.O. Box 862, Nome, AK 99762

(907) 443-5167

Continuing

State of Alaska

\$42,000

MARINE and NORTHWEST: Kotzebue Sound. To determine the feasibility of forecasting future chum salmon returns to the Kotzebue area.

6.42904 NORTON SOUND-KOTZEBUE SOUND SALMON ESCAPEMENT STUDIES

Kuhlmann, Frederic W.
Alaska Dept. of Fish and Game/Commercial Fish Div.
P.O. Box 862, Nome, AK 99762

(907) 443-5167

Continuing

State of Alaska

\$30,000

NORTHWEST: Norton Sound and Kotzebue. To expand aerial surveys of Norton and Kotzebue Sound drainages.

CHAPTER 6.4.3

MARINE MAMMALS

- 6.43001 Burns, John J., Lewis H. Shapiro, and Francis H. Fay. 1977. The relationships of marine mammal distributions, densities and activities to sea ice conditions. Pages 503-554 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1977. Vol. 1. NOAA OCSEAP Research unit 248.
- 6.43002 Braham, Howard W., Clifford H. Fiscus, and David J. Rugh. 1977. Marine mammals of the Bering and southern Chukchi Seas. Pages 1-99 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1977. Vol. 1. NOAA OCSEAP Research unit 67.
- 6.43003 Lowry, Lloyd F., Kathryn J. Frost, and John J. Burns. 1977. Trophic relationships among ice inhabiting phocid seals. Pages 303-390 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1977. Vol. 1. NOAA OCSEAP Research unit 232.
- 6.43004 Burns, John J., and Thomas J. Eley. 1977. The natural history and ecology of the bearded seal (Erignathus barbatus) and the ringed seal (Phoca hispida). Pages 226-302 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1977. Vol. 1. NOAA OCSEAP Research unit 320.

- 6.43005 Fay, Francis H., Robert A. Dieterich, and Larry M. Shults. 1977. Morbidity and mortality of marine mammals--Bering Sea. Pages 161-188 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1977. Vol. 1. NOAA OCSEAP Research unit 194.
- 6.43006 Burns, John J. 1970. Remarks on the distribution and natural history of pagophilic pinnipeds in the Bering and Chukchi Seas. Journal of Mammology. 51(3):445-454.
- 6.43007 Burns, John J. 1978. The natural history and ecology of the bearded seal (Erignathus barbatus) and the ringed seal (Phoca hispida). Pages 99-160 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1978. Vol. 1. NOAA OCSEAP Research unit 230.
- 6.43008 Lowry, Lloyd F., Kathryn J. Frost, and John J. Burns. 1978. Trophic relationships among ice inhabiting phocid seals. Pages 161-230 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Reports, March 1978. Vol. 1. NOAA OCSEAP Research unit 232.

CURRENT RESEARCH

6.43901 ICE RELATIONSHIPS OF MARINE MAMMAL DISTRIBUTIONS, DENSITIES AND ACTIVITIES TO SEA ICE CONDITIONS

Burns, John J. (907) 452-1531
Alaska Dept. of Fish and Game
1300 College Road, Fairbanks, AK 99701 10/77-9/78

Fay, Francis H., Univ. of Alaska, IMS
Shapiro, Lewis H., Univ. of Alaska, Geophysical Institute

U.S. NOAA/BLM OCSEAP \$61,925

NORTHWEST, ARCTIC, and MARINE: Bering Sea, Chukchi Sea, and Beaufort Sea. To delineate and describe the extent and distribution of regularly occurring marine mammal habitats in Alaskan waters by use of LANDSAT imagery and ground truthing; to determine the physical environmental factors that produce those habitats; to determine how dynamic changes in sea ice characteristics relate to major events in the lives of marine mammals.

6.43902 NATURAL HISTORY AND ECOLOGY OF THE BEARDED SEAL AND THE RINGED SEAL

Burns, John J. (907) 452-1531
Alaska Dept. of Fish and Game
1300 College Road, Fairbanks, AK 99701 10/77-9/77

Eley, Thomas J., Alaska Dept. of Fish and Game
Frost, Kathryn J., Alaska Dept. of Fish and Game

U.S. NOAA/BLM OCSEAP \$90,300

ARCTIC, NORTHWEST, and MARINE: Bering Sea, Chukchi Sea, and Beaufort Sea. To summarize and evaluate existing published and unpublished information on reproduction, distribution, abundance and human dependence on bearded and ringed seals; to acquire productivity and fetal growth rate data; to acquire baseline data on mortality and morbidity of ringed and bearded seals - parasitology, pathology, predation, human harvest. To determine population structure as indicated by harvest composition; to assess regional differences in density and distribution in relation to geographic areas and habitat type.

6.43903 TROPHIC RELATIONSHIPS AMONG ICE INHABITING PHOCID SEALS

Lowry, Lloyd F.
Alaska Dept. of Fish and Game
1300 College Road, Fairbanks, AK 99701

(907) 452-1531

10/77-9/79

Frost, Kathryn J., Alaska Dept. of Fish and Game
Burns, John J., Alaska Dept. of Fish and Game

U.S. NOAA/BLM OCSEAP

\$121,900

NORTHWEST, ARCTIC, and MARINE: Bering Sea, Chukchi Sea, and Beaufort Sea. To examine food habits and trophic relationships among ringed seals, bearded seals, spotted seals, ribbon seals and beluga whales in Alaskan waters. Food habit data will be integrated with other physical and biological information in order to assess impacts of offshore petroleum development on the species being studied.

6.43904 MORBIDITY AND MORTALITY OF MARINE MAMMALS

Fay, Francis H.
Univ. of Alaska, IMS
Fairbanks, AK 99701

(907) 479-7026

6/75-9/79

Dieterich, Robert A., Univ. of Alaska, IAB
Shults, Larry M., Univ. of Alaska, IMS

U.S. NOAA/BLM OCSEAP

\$60,000

NORTHWEST, ARCTIC, and MARINE: Chukchi Sea, Chirikov Basin, Kotzebue Sound, and Bering Sea. To determine by field and literature studies the incidence of diseases presently existing in marine mammals for use in evaluating future impacts of oil development.

CHAPTER 6.5

BIRDS

- 6.50001 Grinnell, Joseph. 1900. The varied thrush in summer. Condor. 2:5-7.
- 6.50002 Divoky, George J. 1977.. The distribution, abundance and feeding ecology of birds associated with pack ice. Pages 525-573 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1977. Vol. 2. NOAA OCSEAP Research unit 196.
- 6.50003 Lensink, Calvin J., James C. Bartonek, and Craig S. Harrison. 1976. Seasonal distribution and abundance of marine birds. Part 2. Aerial Surveys. Pages 1-98 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, April 1976. Vol. 4. NOAA OCSEAP Research unit 337.
- 6.50004 Harrison, Craig S. 1977. Seasonal distribution and abundance of marine birds. Part 2. Aerial surveys of marine birds. Pages 285-593 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1977. Vol. 3. NOAA OCSEAP Research unit 337.
- 6.50005 Bailey, Alfred M. 1926. A report on the birds of northwestern Alaska and regions adjacent to Bering Strait. Part IX. Condor. 28(3):121-126.

- 6.50006 Connors, Peter G., and Robert W. Risebrough. 1978. Shorebird dependence on arctic littoral habitats. Pages 84-166 in Environmental Assessment of the Alaskan Outer Continental Shelf. Principal Investigators' Annual Reports, October 1978. Vol. 2. NOAA OCSEAP Research unit 172.
- 6.50007 Hines, John Q. 1963. Birds of the Noatak River, Alaska. Condor. 65(5):410-425.
- 6.50008 Mickelson, P. G., Douglas Schamel, Diane Tracy, and Anne lonson. 1977. Avian community ecology at two sites on Espenberg Peninsula in Kotzebue Sound, Alaska. Pages 1-74 in Environmental Assessment of the Alaskan Continental Shelf. Principal Investigators' Annual Reports, March 1977. Vol. 5. NOAA OCSEAP Research unit 441.
- 6.50009 Hansen, Henry A., Sigurd T. Olson, Peter E. K. Shepherd, and Vernon Berns. 1957. Selawik production studies and banding. Pages 1-5 in Alaska Game Commission. Federal Aid in Wildlife Restoration. Project W-3-R-12. Job Completion Report. Vol. 12, No. 5.
- 6.50010 Nelson, Urban C., Edward F. Chatelmin, Robert F. Scott, and June Eliason. 1949. Waterfowl studies: Aerial surveys, banding and nesting studies; Kotzebue Sound. Pages 19-28 in Alaska Game Commission. Federal Aid in Wildlife Restoration. Project 3-R-4. Quarterly Report. Vol. 4, No. 1.
- 6.50011 Shepherd, Peter E. K. 1955. Migratory waterfowl studies--nesting and banding--Selawik area. Pages 34-49 in Alaska Game Commission. Federal Aid in Wildlife Restoration. Project . Progress Report. Vol. 10, No. 1.

- 6.50012 Degange, Anthony R., and Arthur L. Sowls. 1978. A survey of the Chamisso Island National Wildlife Refuge, 11-14 August, 1977. Unpublished. Office of Biological Services--Coastal Ecosystems, U.S. Fish and Wildlife Service, Anchorage, AK. Field Report 77-040. 17 pp.
- 6.50013 King, James G., and Bruce Conant. 1978. Alaska-Yukon waterfowl breeding pair survey, May 17 to June 11, 1978. Unpublished. U.S. Fish and Wildlife Service, Juneau, AK.
- 6.50014 Timm, Dan. 1975. Report of survey and inventory activities--waterfowl. Div. of Game, Alaska Dept. of Fish and Game. Federal Aid in Wildlife Restoration. Project W-17-7. Vol. 6. 53 pp.
- 6.50015 Timm, Dan. 1976. Report of survey and inventory activities--waterfowl. Div. of Game, Alaska Dept. of Fish and Game. Federal Aid in Wildlife Restoration. Project W-17-8. Vol. 7. 61 pp.
- 6.50016 Timm, Dan. 1977. Report of survey and inventory activities--waterfowl. Div. of Game, Alaska Dept. of Fish and Game. Federal Aid in Wildlife Restoration. Project W-17-9. Vol. 8. 37 pp.
- 6.50017 Sowls, Arthur L., Scott A. Hatch, and Calvin J. Lensink. 1978. Catalog of Alaska seabird colonies. U.S. Fish and Wildlife Service. 1 vol.
- 6.50018 Irving, Laurence. 1960. Birds of Anaktuvuk Pass, Kobuk, and Old Crow, a study in arctic adaptation. Smithsonian Institution, Washington, DC. U.S. National Museum. Bulletin 217. 409 pp.

6.50019 Grinnell, Joseph. 1900. Birds of the Kotzebue Sound region,
Alaska. Cooper Ornithological Club of California.
Pacific Coast Avifauna no. 1. 20 pp.

CURRENT RESEARCH

6.50901 THE DISTRIBUTION, ABUNDANCE AND FEEDING ECOLOGY OF BIRDS ASSOCIATED WITH PACK ICE

Divoky, George J. (415) 868-1221
Point Reyes Bird Observatory
4990 State Route 1, Stinson Beach, CA 94970 5/75-9/79

U.S. NOAA/BLM OCSEAP \$50,000

NORTHWEST, ARCTIC, and MARINE: Bering Sea, Chukchi Sea, and Beaufort Sea. To determine the effect of sea ice on seabird densities and distribution; to determine the principal prey items of seabirds associated with pack ice.

6.50902 COASTAL SURVEY OF MIGRATORY BIRD POPULATIONS DURING MID-SEPTEMBER 1977 and 1978 FROM PT BARROW TO DILLINGHAM

King, Rodney J. (907) 276-3800
U.S. Fish and Wildlife Service
1011 E. Tudor Road, Anchorage, AK 99503 1977-1978

U.S. Fish and Wildlife Service

STATEWIDE and MARINE: To tabulate populations and migration routes of birds on the western coast of Alaska during mid-September by means of aerial surveys immediately along the coastline and adjacent tidal flats and bays.

CHAPTER 7.0

SOCIO-CULTURAL RESOURCES

- 7.00001 Anderson, Douglas D. 1968. A stone-age campsite at the gateway to America. *Scientific American*. 218(6):24-33.
- 7.00002 Anderson, Douglas D. 1970. Akmak, an early archeological assemblage from Onion Portage, northwest Alaska. *Acta Arctica*. Fasc. 16. 80 pp.
- 7.00003 Giddings, James L. 1967. *Ancient men of the Arctic*. Knopf, New York, NY. 391 pp.
- 7.00004 Powers, William Roger 1975. Archeological survey of the proposed Chukchi-Imuruk National Wildlands. Interim Report for the National Park Service. Unpublished. 5 pp.
- 7.00005 Giddings, James L. 1948. Chronology of the Kobuk-Kotzebue Sites. *Tree-Ring Bulletin*. 14(4):26-32.
- 7.00006 Giddings, James L. 1942. Dated sites on the Kobuk River, Alaska. *Tree-Ring Bulletin*. 9(1):2-8.
- 7.00007 Giddings, James L. 1964. *The archaeology of Cape Denbigh*. Brown University Press, Providence, RI. 331 pp.

- 7.00008 Giddings, James L. 1957. Round houses in the western Arctic. *American Antiquity*. 23(2)121-135.
- 7.00009 Anderson, Douglas D. 1977. Archeological surveys of the proposed Cape Krusenstern and Kobuk National Monuments, Alaska. Brown University, Providence, RI. 28 pp.
- 7.00010 Burch, Ernest S. 1974. Eskimos of the Kotzebue Region: Ethnology and culture history. Unpublished. 36 pp.
- 7.00011 Anderson, Douglas D. 1977. Prehistoric and early historic human settlements and resource use areas in the Selawik drainage, Alaska. Brown University, Providence, RI. 23 pp. and 4 appendices.
- 7.00012 Anderson, Douglas D., and Wannii W. Anderson. 1977. Selawik Inupiat (Eskimo) archeological settlements, resources, and subsistence lifeways, northwestern Alaska. Brown University, Providence, RI. 96 pp. and 4 appendices.
- 7.00013 Smith, Valene L. 1966. Kotzebue: A modern Alaskan community. Ph.D. Thesis. University of Utah, Salt Lake City. 160 pp.
- 7.00014 Anderson, Douglas D. 1978. Tulagialq: A transitional near Ipiutak-Ipivtak period archeological site from Kotzebue Sound, Alaska. Final report for U.S. National Park Service. 17 pp.
- 7.00015 Anderson, Douglas D., Ray Bane, Richard K. Nelson, and Wannii W. Anderson. 1977. Kuuvanmiit subsistence: Traditional Eskimo life in the latter twentieth century. U.S. National Park Service. 775 pp.

- 7.00016 Andrews, Elizabeth F. 1976. Report of an archeological inspection of proposed BIA housing lots at Noatak, Alaska. Unpublished. Report for the Bureau of Indian Affairs. 3 pp.
- 7.00017 Alaska Department of Natural Resources. 1978. Alaska's plan for management and conservation of heritage resources 1973-1983. Volume II, The inventory. Office of History and Archaeology, Alaska Div. of Parks, Anchorage. 49 pp.
- 7.00018 Grauman, Melody W. 1977. A historical overview of the Seward Peninsula--Kotzebue Sound area. Report for the U.S. National Park Service, Anchorage, AK. 147 pp.
- 7.00019 Roberts, Helen. 1979. Inuguliq Kamaksriigalikun (growing up with respect); a Northwest Arctic School District profile. Northwest Arctic School District, Kotzebue, AK. 48 pp.
- 7.00020 VanStone, James W. 1955. Archaeological excavations at Kotzebue, Alaska. Anthropological Papers of the University of Alaska. 3(2):75-155.
- 7.00021 Giddings, James L. 1952. The arctic woodland culture of the Kobuk River. University Museum, University of Pennsylvania, Philadelphia. 143 pp.
- 7.00022 Uhl, William R., and Carrie K. Uhl. 1977. Tagiumsinaaqmit: Ocean dwellers of the Cape Krusenstern area: Subsistence patterns. Anthropology and Historic Preservation, Cooperative Park Studies Unit, University of Alaska, Fairbanks. Occasional Paper 14.

- 7.00023 Hall, Edwin S. 1976. Contributions to anthropology: The interior people of northern Alaska. National Museum of Man, Ottawa, Ontario, Canada. Archaeologica! Survey of Canada. Mercury Series. Paper No. 49. 391 pp.
- 7.00024 Hall, Edwin S. 1973. Known archaeological resources of the Noatak River basin, northern Alaska, as of January 1973. Report for U.S. National Park Service.
- 7.00025 Uhl, William R., and Carrie K. Uhl. 1979. Nuatakmiit, a study of subsistence use of renewable resources in the Noatak River valley. Anthropology and Historic Preservation, Cooperative Park Studies Unit, University of Alaska, Fairbanks.
- 7.00026 Foote, Don C. 1965. Exploration and resource utilization in northwestern arctic Alaska before 1855. Ph.D. Thesis. McGill University, Montreal, Quebec. 400 pp.

CURRENT RESEARCH

7.00901 PUYUK PROJECT

Pender, Jane(Frances E.)
1753 Alaska Way, Fairbanks, AK 99701

(907) 479-6703
9/78-7/79

Alaska Historical Commission

\$3,500

NORTHWEST and YUKON: Kotzebue and Fairbanks. To tape a life history of Della Keats (Puyuk), traditional healer from Kotzebue. To produce transcripts for deposit in an archive.

7.00902 CAPE KRUSENSTERN PHOTO MAPPING

Hsu, Dick P.
U.S. National Park Service
540 W. 5th Ave., Anchorage, AK 99501

(907) 276-8166

Continuing

U.S. National Park Service

\$82,000

NORTHWEST: Cape Krusenstern. To map the known archeological features and to look for undiscovered features from 1:8,000 scale color and color infrared aerial photos.

7.00903 SELAWIK RIVER ESKIMO ARCHEOLOGY AND MUSEUM PROJECT

Anderson, Douglas D.
Brown University, Dept. of Anthropology
Providence, Rl. 02912

(401) 863-3251

9/78

Anderson, Wannu W., Brown University

Northwest Arctic School District

\$5,000

NORTHWEST: Selawik. To conduct an archeological field school and training program for high school students in the prehistory of their own region. Also, to teach the need for preserving their own cultural heritage through the preservation and protection of archeological sites. Finally, to set up and operate properly a local museum for ethnological and archeological specimens.

7.00904 RECONSTRUCTION OF POST-PLEISTOCENE ENVIRONMENTS: THE INTERACTION OF
SUBSISTENCE STRATEGIES AND DISTRIBUTION OF SUBSISTENCE RESOURCES IN NW ALASKA

Anderson, Patricia M.
Brown University, Dept. of Anthropology
Providence, RI. 02912

(401) 863-3251

5/79-9/80

Anderson, Douglas D., Brown University

National Science Foundation

\$6,982

NORTHWEST: Kobuk, Selawik, and Noatak. To reconstruct past climatic and vegetational patterns in NW Alaska from surface pollen data and from lake cores. From these data we hope to delineate areas of high potential for occurrence of subsistence resources. Given this environmental model, the ethnographic and archeological records will be examined and a model for the interaction of subsistence strategies - settlement pattern - habitat will be constructed.

CHAPTER 8.0
PLANNING STUDIES

- 8.00001 U.S. National Park Service, Alaska Planning Group. 1974. Cape Krusenstern National Monument, Alaska, proposed. Final environmental statement. 461 pp.
- 8.00002 U.S. National Park Service, Alaska Planning Group. 1973. Gates of the Arctic National Wilderness Park and Nunamiut National Wildlands, Alaska, a master plan. 49 pp.
- 8.00003 U.S. National Park Service, Alaska Planning Group. 1973. Cape Krusenstern National Monument, a master plan. 42 pp.
- 8.00004 Engineering Computer Optecnomics, Inc. 1977. An assessment of marine transportation costs related to potential port sites in Alaska. Joint Federal-State Land Use Planning Commission for Alaska, Anchorage, AK. Study 25. 37 pp. and 29 appendices.
- 8.00005 Alonso, William , and Edgar Rust. 1976. The evolving pattern of village Alaska. Joint Federal-State Land Use Planning Commission for Alaska. Study 17. 69 pp.
- 8.00006 Alaska Consultants, Inc. 1976. Land use plan: Kotzebue. Report for City of Kotzebue.
- 8.00007 Alaska, University, Arctic Environmental Info. and Data Ctr. 1976. Northwest Alaska community profiles, a background for planning. Report for Alaska Dept. of Community and Regional Affairs. 11 folios.

- 8.00008 U.S. Fish and Wildlife Serv., Bur. of Sport Fish. and Wildlife. 1973. A concept plan for the proposed Selawik National Wildlife Refuge. U.S. Government Printing Office, Washington, D.C. 20 pp.
- 8.00009 Alaska Dept. of Environmental Conservation. 1976. Preliminary inventories of outfalls and solid waste disposal sites in the Alaska coastal zone. Report for Alaska Coastal Management Program. 224 pp.
- 8.00010 Alaska Office of Coastal Management. 1978. State agency information and plans applicable to the coast of Alaska. The Inter-Agency Regional Coastal Planning Team. 200 pp.
- 8.00011 U.S. Dept. of the Interior, Alaska Planning Group. 1974. Proposed Chukchi-Imuruk National Reserve. Final environmental statement. Washington, DC. 763 pp.
- 8.00012 U.S. Dept. of the Interior, Alaska Planning Group. 1974. Proposed Kobuk Valley National Monument. Final environmental statement. Washington, DC. 626 pp.
- 8.00013 Mauneluk Association, Inc. 1974. The NANA region, its resources and development potential. Kotzebue, AK. 289 pp.
- 8.00014 Alaska State Housing Authority. 1971. Kotzebue, Alaska comprehensive development plan. Kotzebue, AK.
- 8.00015 Weeden, Robert B. 1973. Wildlife management and Alaska land use decisions. Institute of Social, Economic and Government Research. University of Alaska, Fairbanks. Occasional Paper No. 8. 51 pp.

- 8.00016 Woolford, Ray. 1954. Notes on village economics and wildlife utilization in arctic Alaska. Unpublished. U.S. Fish and Wildlife Service, Fairbanks, AK. 34 pp.
- 8.00017 U.S. Bureau of Outdoor Recreation, Alaska Field Office. 1976. The Selawik River, a wild and scenic river analysis. Unpublished. 30 pp.
- 8.00018 Alaska State Housing Authority. 1972. Comprehensive planning in rural Alaska, an evaluation of 701 planning in Nome, Bethel, and Kotzebue. Dept. of Planning and Technical Services. 38 pp.
- 8.00019 U.S. Dept. of the Interior, Alaska Planning Group. 1974. Proposed Noatak National Arctic Range. Final environmental statement. Washington, DC. 700 pp.
- 8.00020 U.S. Dept. of the Interior, Alaska Planning Group. 1974. Proposed Selawik National Wildlife Refuge. Final environmental statement. Washington, DC. 631 pp.
- 8.00021 U.S. Army Corps of Engineers. 1957. Harbors and rivers in Alaska. Interim report No. 6. Northwestern Alaska. 120 pp.
- 8.00022 Alaska Dept. of Environmental Conservation. 1977. Village sanitation in Alaska. Alaska Dept. of Environmental Conservation and U.S. Public Health Service, Juneau. 1 vol. (loose-leaf)

CURRENT RESEARCH

8.00901 NANA REGIONAL STRATEGY

Conover, Matthew
Mauneluk Association
P.O. Box 256, Kotzebue, AK 99752

Mauneluk Association
U.S. Dept. of Housing and Urban Dev.

\$75,000

NORTHWEST: NANA Region. To develop a regional plan, community plans, and a management system for coordination. Policies and plans will be developed for land use, subsistence, housing, energy, transportation, public facilities, educational and social services, and economic development. Environmental carrying capacity will be considered for use as a management concept and policy guide.

8.00902 WESTERN AND ARCTIC TRANSPORTATION STUDY

Soden, Larry
Alaska Dept. of Transportation and Public Facilities
University Plaza East, Suite 1, 600 University Ave.,
Fairbanks, AK 99701

(907) 479-4284

1/79-6/80

Burger and Associates
Philleo Associates

Alaska Dept. of Transportation and Public Facilities

ARCTIC, NORTHWEST, and YUKON: To evaluate the present transportation systems in the area; to initiate a system for continually updating transportation information; to identify options for meeting present and future transportation needs; and to develop a strategy for implementing those options.

CHAPTER 9.0
HEALTH STUDIES

- 9.00001 Hanson, Wayne C., and Harvey E. Palmer. 1964. The accumulation of fallout cesium-137 in northern Alaska Natives. Pages 215-225 in Proceedings of the 29th North American Wildlife Conference.
- 9.00002 Palmer, Harvey E., Wayne C. Hanson, Bobby I. Griffin, and Leslie A. Braby. 1965. Radioactivity measured in Alaskan natives, 1962-1964. *Science*. 147(3658):620.
- 9.00003 Heller, Christine A., and Edward M. Scott. 1964. The Alaska dietary survey, 1956-1961. U.S. Public Health Service. Publication 999-AH-2. 281 pp.
- 9.00004 Lantis, Margaret. 1959. Folk medicine and hygiene; lower Kuskokwim and Nunivak-Nelson Island areas. *Anthropological Papers of the University of Alaska*. 8(1):1-75.
- 9.00005 Hopla, Cluff E. 1960. Epidemiology of tularemia in Alaska. Arctic Aeromedical Laboratory, U.S. Air Force. Technical Report 59-1.

CHAPTER 10.0

MAPS

- 10.00001 Alaska, University, Arctic Environmental Info. and Data Ctr. 1975. Chukchi Sea: Bering Strait--Icy Cape; physical and biological character of Alaskan coastal zone and marine environment. Anchorage. AEIDC Publication A75 and Sea Grant No. 75-10. 61 pp., 31 maps. (scale, 1:1,000,000).
- 10.00002 Patton, William W., Thomas P. Miller, and Irvin L. Tailleir. 1968. Regional geologic map of the Shungnak and southern part of the Ambler River quadrangles, Alaska. U.S. Geological Survey. Miscellaneous Geologic Investigations Map I-554. (scale, 1:250,000).
- 10.00003 Patton, William W., and Thomas P. Miller. 1966. Regional geologic map of the Hughes quadrangle. U.S. Geological Survey. Miscellaneous Geologic Investigations Map I-459. (scale, 1:250,000).
- 10.00004 Cobb, Edward H. 1972. Metallic mineral resources map of the Survey Pass quadrangle, Alaska. U.S. Geological Survey. Miscellaneous Field Studies Map MF-382. (scale, 1:250,000).
- 10.00005 Cass, J. T. 1959. Reconnaissance geologic map of the Candle quadrangle, AK. U.S. Geological Survey. Miscellaneous Geologic Investigations Map I-287. (scale, 1:250,000).
- 10.00006 Pessel, G. N., and W. P. Brøsgø. 1977. Preliminary reconnaissance geologic map of Ambler River quadrangle, Alaska. U.S. Geological Survey. Open-File Report 77-28. (scale, 1:250,000).

- 10.00007 Pessel, G. N. 1977. Preliminary reconnaissance geologic map of Survey Pass quadrangle, Alaska. U.S. Geological Survey. Open-File Report 77-27. (scale, 1:250,000).
- 10.00008 Spetzman, L. A. 1963. Terrain study of Alaska, part V: Vegetation. Military Geology Branch, U.S. Geological Survey. (scales, 1:250,000 and 1:2,500,000).
- 10.00009 U.S. Army Corps of Engineers. 1973. Preliminary flood hazard maps. Alaska District. 10 maps. (scales, various).
- 10.00010 Alaska Dept. of Environmental Conservation. 1978. Sources of water pollution and management actions in Alaska. Volume II. Div. of Water Programs. Juneau. (scale, 1:250,000).
- 10.00011 U.S. Bureau of Mines, Alaska Field Operations Center. 1978. Mining claim locations. Open-File Report 20-73. 9 maps. (scale, 1:250,000).
- 10.00012 Preston, James E., William R. Fibich, Thomas H. George, and Peter C. Scorupl. 1977. Kotzebue Sound range and soil inventory maps. U.S. Soil Conservation Service. 16 maps. (scale, 1:63,360).
- 10.00013 Joint Federal-State Land Use Planning Commission for Alaska. 1974. Locateable minerals. Resource Planning Team, Anchorage, AK. (scale, 1:250,000).
- 10.00014 Joint Federal-State Land Use Planning Commission for Alaska. 1974. Watershed boundary and soil associations. Resource Planning Team, Anchorage, AK. (scale, 1:250,000).

- 10.00015 Joint Federal-State Land Use Planning Commission for Alaska. 1974. Water resources. Resource Planning Team, Anchorage, AK. (scale, 1:250,000).
- 10.00016 Joint Federal-State Land Use Planning Commission for Alaska. 1974. Atiquities. Resource Planning Team, Anchorage, AK. (scale, 1:250,000).
- 10.00017 Joint Federal-State Land Use Planning Commission for Alaska. 1974. Existing trail system. Resource Planning Team, Anchorage, AK. (scale, 1:250,000).
- 10.00018 Joint Federal-State Land Use Planning Commission for Alaska. 1974. Geologic explanation. Resource Planning Team, Anchorage, AK. (scale, 1:250,000).
- 10.00019 Joint Federal-State Land Use Planning Commission for Alaska. 1974. Migratory birds, sea birds, raptors and endangered species. Resource Planning Team, Anchorage, AK. (scale, 1:250,000).
- 10.00020 Joint Federal-State Land Use Planning Commission for Alaska. 1974. Subsistence. Resource Planning Team, Anchorage, AK. (scale, 1:250,000).
- 10.00021 Joint Federal-State Land Use Planning Commission for Alaska. 1973. Oil and gas leases. Resource Planning Team, Anchorage, AK. (scale, 1:250,000).
- 10.00022 Joint Federal-State Land Use Planning Commission for Alaska. 1973. Fisheries resources. Resource Planning Team, Anchorage, AK. (scale, 1:250,000).

- 10.00023 NANA Regional Corporation, Land Dept. 1974. Historical and cemetary sites. Kotzebue, AK. (scale, 1:250,000).
- 10.00024 NANA Regional Corporation, Land Dept. 1974. Village and regional corporation selections. Kotzebue, AK. (scale, 1:250,000).
- 10.00025 NANA Regional Corporation, Land Dept. 1975. Subsistence priorities. Kotzebue, AK. (scale, 1:250,000).
- 10.00026 Joint Federal-State Land Use Planning Commission for Alaska. 1974. Ecosystems. Resource Planning Team, Anchorage, AK. (scale, 1:250,000).
- 10.00027 Joint Federal-State Land Use Planning Commission for Alaska. 1973. Transportation. Resource Planning Team, Anchorage, AK. (scale, 1:250,000).
- 10.00028 Patton, William W., and Thomas P. Miller. 1968. Regional geologic map of the Selawik and southeastern Baird Mountains quadrangles, Alaska. U.S. Geological Survey. Miscellaneous Geologic Investigations Map I-530. (scale, 1:250,000).
- 10.00029 Cobb, Edward H. 1972. Metallic mineral resource map of the Bendeleben quadrangle, Alaska. U.S. Geological Survey. Miscellaneous Field Studies Map MF-417. (scale, 1:250,000).
- 10.00030 Chakroff, David N. 1977. Alaska coastal land status/land use atlas; Vol. 4 - western and arctic Alaska. Planning and Research Section, Alaska Dept. of Natural Resources, Anchorage. 1 vol. (scale, 1:250,000).

- 10.00031 Alaska Dept. of Fish and Game. 1978. Biophysical boundary maps for Alaska's coastal zone. Anchorage, AK. Report for Alaska Coastal Management Program. 61 maps. (scale, 1:250,000)
- 10.00032 Alaska Dept. of Fish and Game. 1977. Biophysical process maps for Alaska's coastal zone. Anchorage, AK. Report for Alaska Coastal Management Program. 91 maps. (scale, 1:250,000).
- 10.00033 Albert, Nairn R. D. 1979. Interpretation of landsat imagery of the Ambler River quadrangle, Alaska. U.S. Geological Survey. Open-File Report 78-120-J. (scale, 1:250,000).

SECTION II
AUTHOR INDEX

AUTHOR INDEX

Aagaard, Knut	
Norton Sound/Chukchi Sea oceanographic processes (N-COP).....	5.20001
NORTON SOUND OCEANOGRAPHIC PROCESSES.....	5.20901
Abrahamson, John D.	
Westward Alaska: The native economy and its resource base.....	1.00010
Aitken, George W.	
Ground temperature observations, Kotzebue, Alaska.....	3.10002
Alaska Consultants, Inc	
Land use plan: Kotzebue.....	8.00006
Alaska Department of Natural Resources	
Alaska's plan for management and conservation of heritage	7.00017
Alaska Dept. of Environmental Conservation	
A preliminary inventory of tidally-influenced wetlands of	6.20001
Coastal ecosystems of Alaska: A preliminary review of the	6.00006
Coastal processes, terrain, and hazards.....	3.30002
Preliminary inventories of outfalls and solid waste disposal ...	8.00009
Sources of water pollution and management actions in Alaska. ...	10.00010
Village sanitation in Alaska.....	8.00022
Alaska Dept. of Fish and Game	
A fish and wildlife resource inventory of western and arctic ...	6.30007
A fish and wildlife resource inventory of western and arctic ...	6.40014
Alaska wildlife management plans, Northwestern Alaska. Draft ...	6.30022
Alaska's fisheries atlas.....	6.40013
Alaska's wildlife and habitat. Vol. 1.....	6.30024
Alaska's wildlife and habitat. Vol. 2.....	6.30008
Biophysical boundary maps for Alaska's coastal zone.....	10.00031
Biophysical process maps for Alaska's coastal zone.....	10.00032
Alaska Office of Coastal Management	
State agency information and plans applicable to the coast of ..	8.00010
Alaska Public Forum	
NANA Survey.....	1.00009
Alaska State Housing Authority	
Comprehensive planning in rural Alaska, an evaluation of 701 ...	8.00018
Kotzebue, Alaska comprehensive development plan.....	8.00014
Alaska Water Study Committee	
Alaska water assessment; state-regional future water and	4.00010
Alaska, University, Arctic Environmental Info. and Data Ctr	
Alaska Regional Profiles: Northwest Region.....	1.00002
Anadromous fish inventory, Noatak National Arctic Range,	6.41009
Anadromous fish inventory, Selawik National Wildlife Refuge, ...	6.41010
Chukchi Sea: Bering Strait--Icy Cape; physical and biological ..	10.00001
Northwest Alaska community profiles, a background for planning..	8.00007

Albert, Nairn R. D.	
Interpretation of landsat imagery of the Ambler River	10.00033
Allen, Anda	
Survey of Alaska information systems.....	1.00012
Alonso, William	
The evolving pattern of village Alaska.....	8.00005
Alt, Kenneth T.	
A life history study of sheefish and whitefish in Alaska.....	6.41014
Age and growth of broad whitefish, <u>Coregonus nasus</u>	6.41015
Life history study of sheefish in Alaska.....	6.41017
Movements of inconnu, <u>Stenodus leucichthys</u> , in Alaska.....	6.41016
Sheefish and pike investigations of the upper Yukon and	6.41012
Alverson, Dayton L.	
Abundance, distribution, and growth of flounders in the	6.42003
Anderson, Douglas D.	
A stone-age campsite at the gateway to America.....	7.00001
Akmak, an early archeological assemblage from Onion Portage, ...	7.00002
Archeological surveys of the proposed Cape Krusenstern and	7.00009
Kuuvaumiit subsistence: Traditional Eskimo life in the latter ..	7.00015
Prehistoric and early historic human settlements and resource ..	7.00011
RECONSTRUCTION OF POST-PLEISTOCENE ENVIRONMENTS: THE	7.00904
Selawik Inupiat (Eskimo) archeological settlements, resources, .	7.00012
SELAWIK RIVER ESKIMO ARCHEOLOGY AND MUSEUM PROJECT.....	7.00903
Tulagiat: A transitional near Ipiutak-Ipivtak period	7.00014
Anderson, Patricia M.	
RECONSTRUCTION OF POST-PLEISTOCENE ENVIRONMENTS: THE	7.00904
Anderson, Wanni W.	
Kuuvaumiit subsistence: Traditional Eskimo life in the latter ..	7.00015
Selawik Inupiat (Eskimo) archeological settlements, resources, .	7.00012
SELAWIK RIVER ESKIMO ARCHEOLOGY AND MUSEUM PROJECT.....	7.00903
Andrews, Elizabeth F.	
Report of an archeological inspection of proposed BIA housing ..	7.00016
Andriashhev, Anatoly P.	
A contribution to the knowledge of the fisheries from the	6.42002
Arneson, Paul D.	
Moose productivity and physiology.....	6.30017
Arnou, G. M.	
Characteristics of surface and ground waters in selected	4.00009
Arobio, Edward L.	
Socio-economic evaluation of reindeer herding in relation to ...	6.32007
Atkinson, C. E.	
Salmon of the North Pacific Ocean.....	6.41006
Bailey, Alfred M.	
A report on the birds of northwestern Alaska and regions	6.50005
Notes on the mammals of northwestern Alaska.....	6.30006
Bailey, Theodore N.	
Moose research center report.....	6.30013
Bane, Ray	
Kuuvaumiit subsistence: Traditional Eskimo life in the latter ..	7.00015
Barnes, David F.	
Preliminary interpretation of geophysical data from the lower ..	3.00030
Barnes, Ivan	
Geologic setting and chemical characteristics of hot springs in	3.00015

Barnes, Peter	
Marine environmental problems in the ice-covered Beaufort Sea ..	5.10002
Barrett, Stephen A.	
Morphology of Beaufort, Chukchi and Bering Seas near shore ice .	5.20003
Barry, R. G.	
Study of climatic effects on fast ice extent and its seasonal ..	2.00007
Barton, Louis H.	
Finfish resource surveys in Norton Sound and Kotzebue Sound.....	6.40009
FINFISH RESOURCE SURVEYS IN NORTON SOUND AND KOTZEBUE SOUND.....	6.42901
Bartonek, James C.	
Seasonal distribution and abundance of marine birds. Part 2. ...	6.50003
Bergstrand, Jay	
Fish and wildlife use and management in Alaska.....	6.00004
Berns, Vernon	
Selawik production studies and banding.....	6.50009
Biswas, Niren N.	
EVALUATION OF EARTHQUAKE ACTIVITY AROUND NORTON AND KOTZEBUE ...	5.10902
Seismicity studies: (A) Northeast Alaska and (B) Norton and	5.10001
Bodurtha, Frank T.	
An investigation of anticyclogenesis in Alaska.....	2.00006
Bottge, Robert G.	
Economic mining feasibility studies of selected mineral deposit	3.40012
Bowen, Charles D.	
Soils of the Kobuk area, Alaska.....	3.10003
Bowman, Thomas E.	
<u>Asellus</u> (<u>Asellus</u>) <u>alaskensis</u> n. sp., the first	6.40003
Braby, Leslie A.	
Radioactivity measured in Alaskan natives, 1962-1964.....	9.00002
Braham, Howard W.	
Marine mammals of the Bering and southern Chukchi Seas.....	6.43002
Broad, A. C.	
Reconnaissance characterization of littoral biota, Beaufort and	6.00002
Brosge, W. P.	
Preliminary reconnaissance geologic	10.00006
Brower, William A.	
Climatic atlas of the outer continental shelf waters and	2.00008
Burch, Ernest S.	
Eskimos of the Kotzebue Region: Ethnology and culture history..	7.00010
Burns, John J.	
ICE RELATIONSHIPS OF MARINE MAMMAL DISTRIBUTIONS, DENSITIES	6.43901
Major late winter features of ice in northern Bering and	5.00002
NATURAL HISTORY AND ECOLOGY OF THE BEARDED SEAL AND THE RINGED .	6.43902
Remarks on the distribution and natural history of pagophilic ..	6.43006
The natural history and ecology of the bearded seal	6.43004
The natural history and ecology of the bearded seal	6.43007
The relationships of marine mammal distributions, densities and	6.43001
Trophic relationships among ice inhabiting phocid seals.....	6.43003
Trophic relationships among ice inhabiting phocid seals.....	6.43008
TROPIC RELATIONSHIPS AMONG ICE INHABITING PHOCID SEALS	6.43903
Burrell, David C.	
Natural distribution of trace heavy metals and environmental ...	5.30003
Cannon, P. Jan	
The environmental geology and geomorphology of the Gulf of	5.10005

Carlson, Clarence J.		
A survey of the commercial fishery possibilities of Seward	6.40005	
Carlson, Robert F.		
Effects of seasonability and variability of streamflow on	4.00004	
Effects of seasonability and variability of streamflow on	4.00005	
Cass, J. T.		
Reconnaissance geologic map of the Gandle quadrangle, AK.....	10.00005	
Cathcart, S. H.		
Mining in northwestern Alaska.....	3.40008	
Cederstrom, D. J.		
A test well at Kotzebue, Alaska.....	4.00013	
Origin of a salt-water lens in permafrost at Kotzebue, Alaska...	4.00002	
Chakroff, David N.		
Alaska coastal land status/land use atlas; Vol. 4 - western and	10.00030	
Charnell, Robert L.		
Norton Sound/Chukchi Sea oceanographic processes (N-COP).....	5.20001	
NORTON SOUND OCEANOGRAPHIC PROCESSES.....	5.20901	
Chatelmin, Edward F.		
Waterfowl studies: Aerial surveys, banding and nesting studies;	6.50010	
Chesmore, David L.		
Studies of birds and mammals in the Baird and Schwatka	6.00008	
Cline, Joel D.		
Distribution of light hydrocarbons, C1-C4 in the	5.30002	
Coachman, Lawrence K.		
Norton Sound/Chukchi Sea oceanographic processes (N-COP).....	5.20001	
NORTON SOUND OCEANOGRAPHIC PROCESSES.....	5.20901	
Coady, John W.		
HOME RANGE USE, SOCIAL STRUCTURE, AND HABITAT SELECTION OF THE .	6.31902	
Interior moose and moose disease studies.....	6.30015	
Cobb, Edward H.		
Metallic mineral resource map of the Bendeleben quadrangle,	10.00029	
Metallic mineral resources map of the Survey Pass quadrangle, ..	10.00004	
Colinvaux, Paul A.		
HISTORY OF ARCTIC ALASKAN AND BERINGIAN PLANT COMMUNITIES.....	6.10901	
PALEOMAGNETISM OF LAST 150,000 YR IN ALASKA.....	3.00901	
The environment of the Bering land bridge.....	3.00032	
Conant, Bruce		
Alaska-Yukon waterfowl breeding pair survey, May 17 to June 11,	6.50013	
Connors, Peter G.		
Shorebird dependence on arctic littoral habitats.....	6.50006	
Conover, Matthew		
NANA REGIONAL STRATEGY.....	8.00901	
Cooney, R. Ted		
Zooplankton and micronekton studies in the Bering-Chukchi/.....	6.40010	
Craven, Howard J.		
The Alaska sheefish: Description and proximate composition.....	6.41007	
Creager, Joe S.		
Bottom sediment data from the continental shelf of the Chukchi .	5.10006	
Cuccarese, Sal V.		
Evaluation of wildlife habitats in Alaska--alternatives for	6.00009	
CH2M Hill Engineering of Alaska, Inc		
An evaluation of the water and wastewater systems for the city .	4.00007	

Dake, H. C.	
Alaska jade deposits.....	3.40005
Dall, William H.	
Notes on Alaska and the vicinity of Bering Strait.....	3.00002
Davis, James L.	
Age structure of caribou populations in arctic Alaska.....	6.31006
HOME RANGE USE, SOCIAL STRUCTURE, AND HABITAT SELECTION OF THE .	6.31902
Moose productivity and physiology.....	6.30017
Western arctic caribou herd studies.....	6.31001
Dean, Frederick C.	
Studies of birds and mammals in the Baird and Schwatka	6.00008
Degange, Anthony R.	
A survey of the Chamisso Island National Wildlife Refuge, 11-14	6.50012
Dieterich, Robert A.	
INVESTIGATION OF THE IMMUNIZATION OF REINDEER AGAINST	6.32902
Morbidity and mortality of marine mammals--Bering Sea.....	6.43005
MANDIBULAR LESIONS IN THE WESTERN ARCTIC CARIBOU HERD.....	6.31901
MORBIDITY AND MORTALITY OF MARINE MAMMALS.....	6.43904
Dingman, S. Lawrence	
The water balance in arctic and subarctic regions; annotated ...	4.00001
Divoky, George J.	
The distribution, abundance and feeding ecology of birds	6.50002
THE DISTRIBUTION, ABUNDANCE AND FEEDING ECOLOGY OF BIRDS	6.50901
Dixon, Marvin L.	
Soils of the Deering area, Alaska.....	3.10006
Doerr, Joseph	
MANDIBULAR LESIONS IN THE WESTERN ARCTIC CARIBOU HERD.....	6.31901
POPULATION DYNAMICS OF THE WESTERN ARCTIC CARIBOU HERD.....	6.31903
Drake, David	
Marine environmental problems in the ice-covered Beaufort Sea ..	5.10002
Drury, Horace F.	
Emergency food value of Alaska wild plants.....	6.10009
Duncan, T. O.	
Salmon of the North Pacific Ocean.....	6.41006
Dutro, J. Thomas	
Stratigraphy and paleontology of the Noatak and associated	3.00023
Eckhardt, John M.	
A bibliography on Alaskan subsistence.....	1.00001
Ehrlich, Paul R.	
Lepidoptera collected in the tundra-taiga ecotone at Kotzebue, .	6.30005
Eittrich, Stephen	
Seismic and tectonic hazards in the Hope Basin and Beaufort	5.10003
Eley, Thomas J.	
NATURAL HISTORY AND ECOLOGY OF THE BEARDED SEAL AND THE RINGED .	6.43902
The natural history and ecology of the bearded seal	6.43004
Eliason, June	
Waterfowl studies: Aerial surveys, banding and nesting studies;	6.50010
Emmel, K.	
Areas of particular concerns for geologic reasons in the Alaska	3.30005
Engineering Computer Optecnomics, Inc	
An assessment of marine transportation costs related to	8.00004
Evans, Charles D.	
Evaluation of wildlife habitats in Alaska--alternatives for	6.00009

Fathauer, Theodore F.	
A forecast procedure for coastal floods in Alaska.....	3.30003
Fay, Francis H.	
ICE RELATIONSHIPS OF MARINE MAMMAL DISTRIBUTIONS, DENSITIES	6.43901
Morbidity and mortality of marine mammals--Bering Sea.....	6.43005
MORBIDITY AND MORTALITY OF MARINE MAMMALS.....	6.43904
The relationships of marine mammal distributions, densities and	6.43001
Feder, H. M.	
Trawl survey of the epifaunal invertebrates of Norton Sound, ...	6.40012
Federal Field Committee for Development Planning in Alaska	
Alaska natives and the land.....	1.00003
Fernald, Arthur T.	
Active sand dunes in the Kobuk River valley, northwestern	3.00021
Feulner, Alvin J.	
Seasonal changes in the chemical quality of shallow ground	4.00012
Fibich, William R.	
Kotzebue Sound range and soil inventory maps.....	10.00012
Range sites and soils of the Kotzebue Sound area.....	3.10004
Finley, S.	
Areas of particular concerns for geologic reasons in the Alaska	3.30005
Fiscus, Clifford H.	
Marine mammals of the Bering and southern Chukchi Seas.....	6.43002
Salmon racial sampling in the areas north of Bristol Bay-1956...	6.41001
Foote, Don C.	
Exploration and resource utilization in northwestern arctic	7.00026
Forbes, R. B.	
The origin and geologic setting of the moors near Cape	3.00033
Franzmann, Albert W.	
Moose behavior studies.....	6.30016
Moose productivity and physiology.....	6.30017
Moose research center report.....	6.30013
Moose research center report.....	6.30014
Fredericksen, Stan S.	
Arctic survey.....	6.31002
Fritts, Crawford E.	
Geology and geochemistry of the Cosmos Hills, Ambler River, and	3.00024
Frost, Kathryn J.	
NATURAL HISTORY AND ECOLOGY OF THE BEARDED SEAL AND THE RINGED .	6.43902
Trophic relationships among ice inhabiting phocid seals.....	6.43003
Trophic relationships among ice inhabiting phocid seals.....	6.43008
TROPHIC RELATIONSHIPS AMONG ICE INHABITING PHOCID SEALS	6.43903
Furbush, Clarence E.	
Soils of the City of Kotzebue.....	3.10005
Galerman, Donna M.	
The Alaska sheefish: Description and proximate composition.....	6.41007
Gasaway, William C.	
Moose survey procedures development.....	6.30018
Moose survey procedures development.....	6.30019
Gates, George O.	
Structure and tectonic history of Alaska.....	3.00012
Gedney, Larry D.	
EVALUATION OF EARTHQUAKE ACTIVITY AROUND NORTON AND KOTZEBUE ...	5.10902
Seismicity studies: (A) Northeast Alaska and (B) Norton and	5.10001

George, Thomas H.	
Kotzebue Sound range and soil inventory maps.....	10.00012
Range sites and soils of the Kotzebue Sound area.....	3.10004
Giddings, James L.	
Ancient men of the Arctic.....	7.00003
Chronology of the Kobuk-Kotzebue Sites.....	7.00005
Dated sites on the Kobuk River, Alaska.....	7.00006
Round houses in the western Arctic.....	7.00008
The archaeology of Cape Denbigh.....	7.00007
The arctic woodland culture of the Kobuk River.....	7.00021
Goldberg, Burton	
Selected bibliography and annotations: Land regulation, land ...	1.00007
Goodman, Joe R.	
Physical and chemical investigations: Bering Sea, Bering	5.20004
Gordon, Richard J.	
Alaska natural landscapes.....	1.00005
Gosink, T.	
Natural distribution of trace heavy metals and environmental ...	5.30003
Gow, A.	
PREFERRED CRYSTAL ORIENTATIONS IN THE FAST ICE ALONG THE COAST .	5.20902
Grantz, Arthur	
Seismic and tectonic hazards in the Hope Basin and Beaufort	5.10003
Grauman, Melody W.	
A historical overview of the Seward Peninsula--Kotzebue Sound ..	7.00018
Griffin, Bobby I.	
Radioactivity measured in Alaskan natives, 1962-1964.....	9.00002
Grinnell, Joseph	
Birds of the Kotzebue Sound region, Alaska.....	6.50019
The varied thrush in summer.....	6.50001
Gronlund, William D.	
Determine the frequency and pathology of marine animal diseases	6.40011
Gryc, George	
Structure and tectonic history of Alaska.....	3.00012
Haawen, Seymour	
Reindeer in Alaska.....	6.32008
Hall, Edwin S.	
Contributions to anthropology: The interior people of northern .	7.00023
Known archaeological resources of the Noatak River basin,	7.00024
Halpern, Joel M.	
Arctic jade.....	3.40006
Hansen, Henry A.	
Selawik production studies and banding.....	6.50009
Hanson, Herbert C.	
Vegetation types in northwestern Alaska and comparisons with ...	6.10008
Hanson, Wayne C.	
Radioactivity measured in Alaskan natives, 1962-1964.....	9.00002
The accumulation of fallout cesium-137 in northern Alaska	9.00001
Harbo, Samuel J.	
Wildlife reconnaissance, northwest coastal Alaska.....	6.30023
Harrison, Craig S.	
Seasonal distribution and abundance of marine birds. Part 2. ...	6.50003
Seasonal distribution and abundance of marine birds. Part 2. ...	6.50004

Harrison, W. D.	
Subsea permafrost: probing, thermal regime and data analysis...	5.10004
Hatch, Scott A.	
Catalog of Alaska seabird colonies.....	6.50017
Hawley, Chuck C.	
ALASKA MINERAL RESOURCES.....	3.00902
Hayes, Miles O.	
OIL SPILL VULNERABILITY, COASTAL MORPHOLOGY, SEDIMENTATION	5.10901
Hays, Hank	
INVENTORY AND ANALYSIS OF THE FOREST RESOURCES OF THE NANA	6.30901
Heller, Christine A.	
The Alaska dietary survey, 1956-1961.....	9.00003
Hendee, Russel W.	
Notes on the mammals of northwestern Alaska.....	6.30006
Herreid, Gordon	
The geology and geochemistry of the Inmachuk River map area, ...	3.00004
Hershey, Oscar H.	
The ancient Kobuk Glacier of Alaska.....	3.00016
Hesselholt, M. N.	
New host and locality record for <u>Triaenophorus crassus</u>	6.40007
Hines, John Q.	
Birds of the Noatak River, Alaska.....	6.50007
Hinman, Robert A.	
Annual report of survey-inventory activities. Parts 1-4.....	6.30011
Annual report of survey-inventory activities. Parts 1-4.....	6.30012
Hinton, Robert B.	
Soils of the Deering area, Alaska.....	3.10006
Hodgins, Harold O.	
Determine the frequency and pathology of marine animal diseases	6.40011
Holmen, Kjeld	
Chromosome studies in some arctic Alaskan Leguminosae.....	6.10002
Holmquist, Charlotte	
<u>Asellus (Asellus) alaskensis</u> n. sp., the first	6.40003
Fresh-water polychaete worms of Alaska with notes on the	6.40001
Lakes of northern Alaska and northwestern Canada and their	6.40006
<u>Marenzelleria wireni</u> Augener - a polychaete found in fresh	6.40002
Hopkins, David M.	
A marine fauna probably of late Pliocene age near Kivalina,	3.00011
Cenozoic history of the Bering land bridge.....	3.00019
Coastal processes and coastal erosional hazards to the Cape	3.30004
Evidence for an early recent warm interval in northwestern	3.00010
History of Imuruk Lake, Seward Peninsula, Alaska.....	3.00003
Quaternary correlations across Bering Strait.....	3.00007
Soil instability on slopes in regions of perennially frozen	3.10007
The paleogeography and climatic history of Beringia during late	3.00017
The Bering land bridge.....	3.00028
Hopla, Cluff E.	
Epidemiology of tularemia in Alaska.....	9.00005
Hsu, Dick P.	
CAPE KRUSENSTERN PHOTO MAPPING.....	7.00902
Huang, P.	
Seismicity studies: (A) Northeast Alaska and (B) Norton and	5.10001

Hubbs, G. L.	Characteristics of surface and ground waters in selected	4.00009
Hudson, Travis	Geology, mineral deposits, and geochemical and radiometric	3.40004
Hunt, William R.	Beaufort Sea, Chukchi Sea and Bering Strait baseline ice study..	5.20002
Hurd, Charles L.	Kotzebue area sheefish investigations, 1971.....	6.41008
Jonson, Anne	Avian community ecology at two sites on Espenberg Peninsula	6.50008
Irving, Laurence	Birds of Anaktuvuk Pass, Kobuk, and Old Crow, a study in arctic	6.50018
James, David D.	HOME RANGE AND FOOD HABITS OF WOLVES IN NORTHWESTERN ALASKA.....	6.30902
Jansons, Uldis	Economic mining feasibility studies of selected mineral deposit	3.40012
Jewett, Stephen C.	Trawl survey of the epifaunal invertebrates of Norton Sound, ...	6.40012
Johnson, Martin W.	Studies on plankton of the Bering and Chukchi Seas and adjacent	6.40015
Joint Federal-State Land Use Planning Commission for Alaska		
	Atiquities.....	10.00016
	Ecosystems.....	10.00026
	Existing trail system.....	10.00017
	Fisheries resources.....	10.00022
	Geologic explanation.....	10.00018
	Locateable minerals.....	10.00013
	Migratory birds, sea birds, raptors and endangered species.....	10.00019
	Noatak-Kobuk: A description.....	1.00006
	Oil and gas leases.....	10.00021
	Resources of Alaska, a regional summary.....	1.00004
	Subsistence.....	10.00020
	Transportation.....	10.00027
	Water resources.....	10.00015
	Watershed boundary and soil associations.....	10.00014
Kachadoorian, Reuben	Geology, mineral deposits, and geochemical and radiometric	3.40004
Kane, Douglas	Effects of seasonability and variability of streamflow on	4.00004
Keating, Peter	Alaska data inventory catalogue; a guide to unpublished data ...	1.00013
King, James G.	Alaska-Yukon waterfowl breeding pair survey, May 17 to June 11,	6.50013
King, Rodney J.	COASTAL SURVEY OF MIGRATORY BIRD POPULATIONS DURING	6.50902
Klein, David R.	Parameters of caribou population ecology in Alaska;	6.31004
	Vegetation type mapping in northwestern Alaska in relation to ..	6.10010
Koch, Helmut	Reconnaissance characterization of littoral biota, Beaufort and	6.00002
Kuhlmann, Frederic W.		
	KOTZEBUE CHUM SALMON FORECAST STUDIES.....	6.42903
	NORTON SOUND-KOTZEBUE SALMON STUDIES.....	6.42902
	NORTON SOUND-KOTZEBUE SOUND SALMON ESCAPEMENT STUDIES.....	6.42904

Lamphere, Marvin A.	Preliminary report on a plutonic belt in west-central Alaska....	3.00008
Lantis, Margaret	Folk medicine and hygiene; lower Kuskokwim and Nunivak-Nelson ..	9.00004
	The reindeer industry in Alaska.....	6.32006
LaPerriere, Arthur J.	Vegetation type mapping in northwestern Alaska in relation to ..	6.10010
Lebida, Robert C.	Kotzebue Sound sheefish investigations, 1970.....	6.41013
Lemke, Richard W.	RECONNAISSANCE ENGINEERING GEOLOGY OF CERTAIN COASTAL	3.30901
Lensink, Calvin J.	Catalog of Alaska seabird colonies.....	6.50017
	Seasonal distribution and abundance of marine birds. Part 2. ...	6.50003
Lent, Peter C.	Calving and related social behavior in the barren-ground	6.31003
LeResche, Robert E.	Moose productivity and physiology.....	6.30017
Lincoln, John H.	Physical and chemical investigations: Bering Sea, Bering	5.20004
Lowry, Lloyd F.	Trophic relationships among ice inhabiting phocid seals.....	6.43003
	Trophic relationships among ice inhabiting phocid seals.....	6.43008
	TROPHIC RELATIONSHIPS AMONG ICE INHABITING PHOCID SEALS	6.43903
Luick, Jack R.	BIOLOGICAL CONSEQUENCES AND ECONOMIC ADVANTAGES OF CUTTING AND .	6.32904
	DEVELOPMENT OF EMERGENCY AND/OR SUPPLEMENTAL FEEDS FOR REINDEER.	6.32901
	EDUCATIONAL ACTIVITIES-REINDEER HERDING.....	6.32903
Lutz, Harold J.	Early forest conditions in the Alaska interior: An historical ..	6.10007
Mack, Steve	KOTZEBUE SOUND REGIONAL WATER PLANNING GUIDE.....	4.00901
MacNamara, Edlen E.	Soils of the Howard Pass area, northern Alaska.....	3.10001
MacNeil, F. S.	A marine fauna probably of late Pliocene age near Kivalina,	3.00011
	Quaternary correlations across Bering Strait.....	3.00007
Matthews, John V.	Quaternary environments at Cape Deceit, (Seward Peninsula,	6.10004
Mattson, Chester R.	Chum salmon resources of Alaska from Bristol Bay to Point	6.41004
Mauneluk Association, Inc	The NANA region, its resources and development potential.....	8.00013
McCaine, Bruce B.	Determine the frequency and pathology of marine animal diseases	6.40011
McCulloch, David S.	Evidence for an early recent warm interval in northwestern	3.00010
	Stratigraphy, non-marine mollusks, and radiometric dates from ..	3.00022
McKnight, Donald E.	Annual report of survey-inventory activities. Parts 1-4.....	6.30009
	Annual report of survey-inventory activities. Parts 1-4.....	6.30010
McManus, Dean A.	Bottom sediment data from the continental shelf of the Chukchi .	5.10006

McPhail, John D.	
The <u>Coregonus autumnalis</u> complex in Alaska and northwestern	6.40016
Melchior, Herbert R.	
Biological survey of the proposed Kobuk Valley National	6.00001
Final report. Chukchi-Imuruk biological survey.....	6.00007
Mendenhall, Walter C.	
Reconnaissance from Fort Hamlin to Kotzebue Sound, Alaska, by ..	3.00025
Merklin, R. L.	
Quaternary correlations across Bering Strait.....	3.00007
Merrell, Theodore R.	
Alaska's fishery resources: the chum salmon.....	6.41005
Mertie, J. B.	
Geology and mineral resources of northwestern Alaska.....	3.00034
Mickelson, P. G.	
Avian community ecology at two sites on Espenberg Peninsula	6.50008
Miller, Thomas P.	
Geologic setting and chemical characteristics of hot springs in	3.00015
Hardrock uranium potential in Alaska.....	3.40003
Petrology of the plutonic rocks of west-central Alaska.....	3.00029
Potassium-rich alkaline intrusive rocks of western Alaska.....	3.00009
Preliminary report on a plutonic belt in west-central Alaska....	3.00008
Regional geologic map of the Hughes quadrangle.....	10.00003
Regional geologic map of the Selawik and southeastern Baird	10.00028
Regional geologic map of the Shungnak and southern part of the .	10.00002
Mitchell, Jr., Michael	
ALASKA MINERAL RESOURCES.....	3.00902
Moore, George W.	
Recent eustatic sea-level fluctuations recorded by arctic beach	3.00001
Morris, Donald A.	
Water resources of the Kotzebue area, Northwestern Alaska.....	4.00006
Morrison, Peter R.	
A note on hot springs in the interior of Alaska.....	3.00031
Muench, Robin D.	
NORTON SOUND OCEANOGRAPHIC PROCESSES.....	5.20901
Mulligan, John J.	
Examination of Hannum lead prospect, Fairhaven district, Seward	3.40007
Murray, David F.	
Notes on the botany at selected localities in the Alutna and ...	6.10012
Naidu, A. S.	
Natural distribution of trace heavy metals and environmental ...	5.30003
Naske, Claus-M	
Beaufort Sea, Chukchi Sea and Bering Strait baseline ice study..	5.20002
Nava, Joseph A.	
A note on hot springs in the interior of Alaska.....	3.00031
Naylor, Larry L.	
Socio-economic evaluation of reindeer herding in relation to ...	6.32007
Neiland, Kenneth A.	
Caribou disease studies.....	6.31005
Further observations on rangiferine brucellosis in Alaskan	6.30003
Rangiferine brucellosis in Alaskan canids.....	6.30004
Nelson, Richard K.	
Kuuvanmiit subsistence: Traditional Eskimo life in the latter ..	7.00015

Nelson, Urban C.	
Waterfowl studies: Aerial surveys, banding and nesting studies;	6.50010
Nielsen, Carol A.	
Wolf necropsy report: Preliminary pathological observations.....	6.30020
Nodler, Frances A.	
Vegetation type mapping in northwestern Alaska in relation to ..	6.10010
Noltimier, Hallan C.	
PALEOMAGNETISM OF LAST 150,000 YR IN ALASKA.....	3.00901
Norwood, Gus	
Alaska water resources, a strategic national asset.....	4.00003
NANA Regional Corporation, Land Dept	
Historical and cemetary sites.....	10.00023
Subsistence priorities.....	10.00025
Village and regional corporation selections.....	10.00024
Olson, Dean F.	
Alaska reindeer herdsman; a study of native management in	6.32004
Olson, Sigurd T.	
Seiawik production studies and banding.....	6.50009
Osterkamp, T. E.	
Subsea permafrost: probing, thermal regime and data analysis...	5.10004
Outer Continental Shelf Environmental Assessment Program	
Environmental assessment of the Alaskan continental shelf.	5.00004
Palmer, Harvey E.	
Radioactivity measured in Alaskan natives, 1962-1964.....	9.00002
The accumulation of fallout cesium-137 in northern Alaska	9.00001
Palmer, Lawrence J.	
Progress in reindeer grazing investigations in Alaska.....	6.32001
Raising reindeer in Alaska.....	6.32002
Reindeer in Alaska.....	6.32008
The Alaska tundra and its use by reindeer.....	6.32003
Patton, William W.	
Geologic setting and chemical characteristics of hot springs in	3.00015
Preliminary report on a plutonic belt in west-central Alaska....	3.00008
Reconnaissance geology of the northern Yukon-Koyukuk province, .	3.00005
Regional geologic map of the Hughes quadrangle.....	10.00003
Regional geologic map of the Selawik and southeastern Baird	10.00028
Regional geologic map of the Shungnak and southern part of the .	10.00002
Pender, Jane(Frances E.)	
PUYUK PROJECT.....	7.00901
Pereyra, Walter T.	
Baseline studies of fish and shellfish resources of Norton	6.42001
Persson, Herman	
Further notes on Alaskan-Yukon bryophytes.....	6.10005
Pessel, G. N.	
Preliminary reconnaissance geologic	10.00006
Preliminary reconnaissance geologic map of Survey Pass	10.00007
Petrie, G. M.	
Reconnaissance characterization of littoral biota, Beaufort and	6.00002
Petrov, O. M.	
Quaternary correlations across Bering Strait.....	3.00007
Philip, Kenelm W.	
ALASKA LEPIDOPTERA SURVEY.....	6.30903

Plahuta, Joseph T.		
Geologic map and cross sections of the Red Dog prospect, DeLong		3.40010
Porsild, A. E.		
Contributions to the flora of Alaska.....		6.10006
Earth mounds in unglaciated arctic northwestern Alaska.....		3.00020
Powers, William Roger		
Archeological survey of the proposed Chukchi-Imuruk National ...		7.00004
Preston, James E.		
Kotzebue Sound range and soil inventory maps.....	10.00012	
Range sites and soils of the Kotzebue Sound area.....		3.10004
Pruitt, William O.		
Synchronous biomass fluctuations of some northern mammals.....		6.30001
Pruter, Alonzo T.		
Abundance, distribution, and growth of flounders in the		6.42003
Quackenbush, L. S.		
Notes on Alaskan mammoth expeditions of 1907 and 1908.....		3.00014
Quay, W. B.		
Observations on mammals of the Seward Peninsula, Alaska.....		6.30002
Racine, Charles H.		
Biological survey of the proposed Kobuk Valley National		6.00001
Tundra disturbance and recovery resulting from off-road vehicle		6.10013
Tundra disturbance resulting from a 1974 drilling operation in .		6.10011
Reimnitz, Erk		
Marine environmental problems in the ice-covered Beaufort Sea ..		5.10002
Richards, Thomas		
Geology, mineral deposits, and geochemical and radiometric		3.40004
Rickard, W. H.		
Gamma-emitting radionuclides in Alaskan fish and plants.....		6.00003
Riehle, J.		
Areas of particular concerns for geologic reasons in the Alaska		3.30005
Risebrough, Robert W.		
Shorebird dependence on arctic littoral habitats.....		6.50006
Roberts, Helen		
Inuguliq Kamaksriigalikun (growing up with respect); a		7.00019
Robertson, D.		
Natural distribution of trace heavy metals and environmental ...		5.30003
Roguski, Eugene A.		
Monitoring and evaluation of arctic waters with emphasis on		6.41002
Rose, J. H.		
Salmon of the North Pacific Ocean.....		6.41006
Rubin, Meyer		
Stratigraphy, non-marine mollusks, and radiometric dates from ..		3.00022
Ruby, Christopher H.		
OIL SPILL VULNERABILITY, COASTAL MORPHOLOGY, SEDIMENTATION		5.10901
Rugh, David J.		
Marine mammals of the Bering and southern Chukchi Seas.....		6.43002
Rust, Edgar		
The evolving pattern of village Alaska.....		8.00005
Sainsbury, C. L.		
Geology, mineral deposits, and geochemical and radiometric		3.40004
Geology, ore deposits, and mineral potential of the Seward		3.40009
Upper Pleistocene features in the Bering Strait area.....		3.00006

Schamel, Douglas		
Avian community ecology at two sites on Espenberg Peninsula		6.50008
Schideler, Richard T.		
Biological survey of the proposed Kobuk Valley National		6.00001
Schoephorster, Dale B.		
Soils of the Kobuk area, Alaska.....		3.10003
Schreurs, Linda		
Morphology of Beaufort, Chukchi and Bering Seas near shore ice .		5.20003
Schumacher, James D.		
Norton Sound/Chukchi Sea oceanographic processes (N-COP).....		5.20001
NORTON SOUND OCEANOGRAPHIC PROCESSES.....		5.20901
Schupp, Robert G.		
Seasonal changes in the chemical quality of shallow ground		4.00012
Schwartz, Charles C.		
Moose research center report.....		6.30014
Scorupl, Peter C.		
Kotzebue Sound range and soil inventory maps.....	10.00012	
Range sites and soils of the Kotzebue Sound area.....		3.10004
Scott, Edward M.		
The Alaska dietary survey, 1956-1961.....		9.00003
Scott, Robert F.		
Waterfowl studies: Aerial surveys, banding and nesting studies;		6.50010
Searby, Harold W.		
Climatic atlas of the outer continental shelf waters and		2.00008
Seifert, Richard		
Effects of seasonability and variability of streamflow on		4.00004
Shaine, Benjamin A.		
Alaska natural landscapes.....		1.00005
Shapiro, Lewis H.		
ICE RELATIONSHIPS OF MARINE MAMMAL DISTRIBUTIONS, DENSITIES		6.43901
Major late winter features of ice in northern Bering and		5.00002
The relationships of marine mammal distributions, densities and		6.43001
Shaw, D. G.		
Hydrocarbons: natural distribution and dynamics on the Alaskan		5.30001
Shepherd, Peter E. K.		
Migratory waterfowl studies--nesting and banding--Selawik area..		6.50011
Selawik production studies and banding.....		6.50009
Shults, Larry M.		
Morbidity and mortality of marine mammals--Bering Sea.....		6.43005
MORBIDITY AND MORTALITY OF MARINE MAMMALS.....		6.43904
Sigafoos, Robert S.		
Soil instability in tundra vegetation.....		3.10008
Soil instability on slopes in regions of perennially frozen		3.10007
Vegetation of northwestern North America, as an aid in		6.10001
Sigman, Marilyn J.		
Moose behavior studies.....		6.30016
Smith, Philip S.		
Geology and mineral resources of northwestern Alaska.....		3.00034
Glaciation in northwestern Alaska.....		3.00018
The Alatna-Noatak Region.....		3.00026
The Noatak-Kobuk Region, Alaska.....		3.00027
Smith, Stanley G.		
Emergency food value of Alaska wild plants.....		6.10009

Smith, Valene L.		
Kotzebue: A modern Alaskan community.....		7.00013
Soden, Larry		
WESTERN AND ARCTIC TRANSPORTATION STUDY.....		8.00902
Sokolov, Barbara J.		
Survey of Alaska information systems.....		1.00012
Sowls, Arthur L.		
A survey of the Chamisso Island National Wildlife Refuge, 11-14		6.50012
Catalog of Alaska seabird colonies.....		6.50017
Spetzman, L. A.		
Terrain study of Alaska, part V: Vegetation.....		10.00008
Steere, William C.		
<u>Mnium andrewsianum</u> , a new sub-arctic and arctic moss.....		6.10003
Stephenson, Robert O.		
Characteristics of exploited wolf populations.....		6.30021
Stern, Richard O.		
A selected annotated bibliography of sources on reindeer		6.32009
Socio-economic evaluation of reindeer herding in relation to ...		6.32007
Still, P. J.		
Index of surface water quality records to September 30, 1973, ..		4.00011
Stringer, William J.		
Morphology of Beaufort, Chukchi and Bering Seas near shore ice .		5.20003
Tailleur, Irvin L.		
Preliminary interpretation of geophysical data from the lower ..		3.00030
Regional geologic map of the Shungnak and southern part of the .		10.00002
Tash, Jerry C.		
Some crustacean zooplankton of the Noatak River area, northern .		6.40004
Taylor, Dwight W.		
Stratigraphy, non-marine mollusks, and radiometric dates from ..		3.00022
Thing, Henning		
Behavior, mechanics and energetics associated with winter		6.31007
Thomas, Wayne C.		
Socio-economic evaluation of reindeer herding in relation to ...		6.32007
Thompson, Thomas G.		
Physical and chemical investigations: Bering Sea, Bering		5.20004
Timm, Dan		
Report of survey and inventory activities--waterfowl.....		6.50014
Report of survey and inventory activities--waterfowl.....		6.50015
Report of survey and inventory activities--waterfowl.....		6.50016
Tracy, Diane		
Avian community ecology at two sites on Espenberg Peninsula		6.50008
Tremblay, Ray		
Arctic survey.....		6.31002
Tuten, Merry A.		
A bibliography on Alaskan subsistence.....		1.00001
U.S. Army Corps of Engineers		
Alaskan communities: Flood hazard and pertinent data.....		3.30001
Harbors and rivers in Alaska. Interim report No. 6.		8.00021
Preliminary flood hazard maps.....		10.00009
U.S. Bureau of Land Management		
BLM photography coverage in Alaska.....		1.00008
Environmental analysis record for WGM/COMINCO mineral		3.40011
Environmental analysis record: NANA reindeer grazing		6.31008

U.S. Bureau of Mines, Alaska Field Operations Center	
Mineral appraisal of the proposed Gates of the Arctic	3.40002
Mineral appraisal of the proposed Kobuk Valley National Park, ..	3.40001
Mining claim locations.....	10.00011
U.S. Bureau of Outdoor Recreation, Alaska Field Office	
The Selawik River, a wild and scenic river analysis.....	8.00017
U.S. Dept. of the Interior, Alaska Planning Group	
Proposed Chukchi-Imuruk National Reserve.....	8.00011
Proposed Kobuk Valley National Monument.....	8.00012
Proposed Noatak National Arctic Range.....	8.00019
Proposed Selawik National Wildlife Refuge.....	8.00020
U.S. Fish and Wildlife Serv., Bur. of Sport Fish. and Wildlife	
A concept plan for the proposed Selawik National Wildlife	8.00008
U.S. Geological Survey	
Water resources data for Alaska, water year 1977.....	4.00008
U.S. National Climatic Center	
Climatological data, Alaska; annual summary.....	2.00004
Climatological data, Alaska; monthly summary.....	2.00005
Local climatological data; annual summary with comparative data.	2.00002
Local climatological data; monthly summary.....	2.00001
Surface weather observations.....	2.00003
U.S. National Oceanic and Atmospheric Administration	
NODC catalog of OCSEAP data. Part 1; Distribution of digital ...	5.00003
NODC catalog of OCSEAP data. Part 2; Inventory of digital data .	5.00001
U.S. National Park Service, Alaska Planning Group	
Cape Krusenstern National Monument, a master plan.....	8.00003
Cape Krusenstern National Monument, Alaska, proposed.....	8.00001
Gates of the Arctic National Wilderness Park and Nunamiut	8.00002
Ugolini, F. C.	
Ice-rafted sediments as a cause of some thermokarst lakes in ...	3.00013
Uhl, Carrie K.	
Nuatakmiit, a study of subsistence use of renewable resources ..	7.00025
Tagiumsinaaqmiit: Ocean dwellers of the Cape Krusenstern area: .	7.00022
Uhl, William R.	
Nuatakmiit, a study of subsistence use of renewable resources ..	7.00025
Tagiumsinaaqmiit: Ocean dwellers of the Cape Krusenstern area: .	7.00022
Uzmann, J. R.	
New host and locality record for <u>Friaenophorus crassus</u>	6.40007
Valkenburg, Patrick	
Western arctic caribou herd studies.....	6.31001
VanStone, James W.	
Archaeological excavations at Kotzebue, Alaska.....	7.00020
Venard, Jim	
INVENTORY AND ANALYSIS OF THE FOREST RESOURCES OF THE NANA	6.30901
Walters, Vladimir	
Fishes of western arctic America and eastern arctic Siberia.....	6.40008
Watson, D. G.	
Gamma-emitting radionuclides in Alaskan fish and plants.....	6.00003
Weeden, Robert B.	
Wildlife management and Alaska land use decisions.....	8.00015
Weeks, Wilford F.	
PREFERRED CRYSTAL ORIENTATIONS IN THE FAST ICE ALONG THE COAST .	5.20902

White, Robert G.	
Parameters of caribou population ecology in Alaska;	6.31004
Whitten, Kenneth R.	
Biological survey of the proposed Kobuk Valley National	6.00001
Wigutoff, Norman B.	
A survey of the commercial fishery possibilities of Seward	6.40005
Wilimovsky, Norman J.	
Environment of the Cape Thompson region, Alaska.....	1.00011
Williams, John R.	
Water resources of the Kotzebue area, Northwestern Alaska.....	4.00006
Winslow, Peter C.	
Investigation and cataloging of sport fish and sport fish	6.41003
Wise, James L.	
Climatic atlas of the outer continental shelf waters and	2.00008
Wolotira, Robert J.	
Baseline studies of fish and shellfish resources of Norton	6.42001
Wolford, Ray	
Notes on village economics and wildlife utilization in arctic ..	8.00016
Wright, John M.	
Reindeer grazing in relation to bird nesting on the northern ...	6.32005
Yanagawa, Carl M.	
Kotzebue chum salmon tagging project, 1966-1968.....	6.41011
Yehle, Lynn A.	
RECONNAISSANCE ENGINEERING GEOLOGY OF CERTAIN COASTAL	3.30901
Young, Steven B.	
The environment of the Noatak River Basin, Alaska.....	6.00005
Zeusler, Frederick A.	
Physical and chemical investigations: Bering Sea, Bering	5.20004

SECTION III
GEOGRAPHIC INDEX

USGS QUADRANGLES

Ambler River.....	1.00002	1.00003	1.00004	1.00005
	1.00006	2.00004	2.00005	3.00005
	3.00010	3.00012	3.00016	3.00018
	3.00021	3.00024	3.00025	3.00026
	3.00027	3.00028	3.00029	3.00030
	3.00034	3.10003	3.50001	3.40001
	3.40008	3.40012	4.00003	4.00004
	4.00005	4.00008	4.00009	4.00010
	6.00001	6.00004	6.00005	6.00008
	6.00009	6.10001	6.10006	6.10007
	6.10008	6.10010	6.30006	6.30007
	6.30008	6.30009	6.30010	6.30011
	6.30012	6.30022	6.30023	6.30024
	6.30901	6.31001	6.31002	6.31003
	6.31006	6.32002	6.32006	6.32008
	6.40007	6.40013	6.40014	6.41004
	6.41006	6.41008	6.41009	6.41010
	6.41011	6.41012	6.41013	6.41014
	6.41017	6.50001	6.50005	6.50007
	6.50014	6.50015	6.50016	6.50018
	6.50019	7.00001	7.00002	7.00005
	7.00006	7.00008	7.00009	7.00015
	7.00017	7.00021	7.00023	7.00024
	7.00025	8.00005	8.00007	8.00012
	8.00019	8.00022	8.00901	9.00001
	9.00002	9.00003	10.00002	10.00006
	10.00008	10.00010	10.00011	10.00013
	10.00014	10.00015	10.00016	10.00017
	10.00018	10.00019	10.00020	10.00021
	10.00022	10.00023	10.00024	10.00025
	10.00026	10.00027	10.00033	

Baird Mts.....	1.00002	1.00003	1.00004	1.00005
	1.00006	1.00011	3.00005	3.00006
	3.00010	3.00012	3.00016	3.00018
	3.00019	3.00021	3.00022	3.00025
	3.00026	3.00027	3.00028	3.00029
	3.00030	3.00034	3.40001	3.40008
	3.40012	4.00003	4.00009	4.00010
	6.00001	6.00002	6.00004	6.00005
	6.00008	6.00009	6.10001	6.10006
	6.10007	6.10008	6.10010	6.20001
	6.30006	6.30007	6.30008	6.30009
	6.30010	6.30011	6.30012	6.30022
	6.30024	6.30901	6.31001	6.31002
	6.31003	6.31006	6.31007	6.32002
	6.32003	6.32006	6.32008	6.40004
	6.40005	6.40007	6.40013	6.40014
	6.41004	6.41006	6.41008	6.41009
	6.41010	6.41011	6.41012	6.41013
	6.41014	6.41017	6.50005	6.50007
	6.50014	6.50015	6.50016	6.50017
	6.50019	7.00001	7.00002	7.00005
	7.00006	7.00008	7.00015	7.00017
	7.00021	7.00024	7.00025	8.00012
	8.00019	8.00901	10.00001	10.00008
	10.00010	10.00011	10.00013	10.00014
	10.00015	10.00016	10.00017	10.00018
	10.00019	10.00020	10.00021	10.00022
	10.00023	10.00024	10.00025	10.00026
	10.00027	10.00028	10.00031	10.00032

Bendeleben.....	1.00002	1.00003	1.00004	1.00005
	3.00003	3.00004	3.00012	3.00015
	3.00022	3.00032	3.00033	3.00901
	3.10004	3.10006	3.10008	3.40004
	4.00009	4.00010	6.00004	6.00009
	6.10011	6.10013	6.10901	6.30007
	6.30008	6.30009	6.30010	6.30011
	6.30012	6.30022	6.30024	6.30903
	6.31006	6.31008	6.32004	6.32005
	6.32007	6.40006	6.40013	6.40014
	6.41006	6.41011	6.50014	6.50015
	6.50016	7.00004	7.00017	8.00011
	8.00022	8.00901	10.00001	10.00008
	10.00010	10.00011	10.00012	10.00013
	10.00014	10.00015	10.00016	10.00017
	10.00018	10.00020	10.00021	10.00022
	10.00023	10.00024	10.00025	10.00026
	10.00027	10.00029	10.00031	10.00032

Candle.....	1.00003	1.00004	1.00005	3.00005
	3.00012	3.00022	3.00025	3.00029
	3.10004	3.10008	4.00009	4.00010
	6.00004	6.00009	6.10006	6.10007
	6.20001	6.30007	6.30008	6.30009
	6.30010	6.30011	6.30012	6.30022
	6.30023	6.30024	6.31006	6.31008
	6.32003	6.32004	6.32006	6.32007
	6.32008	6.40009	6.40013	6.40014
	6.41004	6.41006	6.50014	6.50015
	6.50016	6.50019	7.00008	7.00017
	8.00007	8.00009	8.00011	8.00901
	10.00001	10.00005	10.00008	10.00010
	10.00011	10.00012	10.00013	10.00014
	10.00015	10.00016	10.00017	10.00018
	10.00019	10.00020	10.00021	10.00022
	10.00023	10.00024	10.00025	10.00026
	10.00027	10.00031	10.00032	
DeLong Mts.....	3.00034	3.40010	3.40011	3.40012
	6.30008	6.30024	6.40013	10.00010
	10.00011	10.00013	10.00014	10.00015
	10.00016	10.00017	10.00018	10.00020
	10.00021	10.00022	10.00023	10.00024
	10.00025	10.00026	10.00027	
Howard Pass.....	3.10001	6.00005	6.10010	6.31001
	7.00024	7.00025	8.00019	
Hughes.....	1.00002	1.00003	1.00004	1.00005
	3.00026	3.00027	3.40002	6.00004
	6.00009	6.30007	6.30008	6.30009
	6.30010	6.30011	6.30012	6.30024
	6.31006	6.40013	6.40014	6.41006
	6.41012	6.41014	6.50014	6.50015
	6.50016	6.50018	7.00017	8.00002
	10.00003	10.00008	10.00010	10.00013
	10.00014	10.00015	10.00016	10.00017
	10.00018	10.00019	10.00020	10.00021
	10.00022	10.00026	10.00027	

Kotzebue.....	1.00002	1.00003	1.00004	1.00005
	1.00006	2.00001	2.00002	2.00004
	2.00005	2.00006	2.00007	2.00008
	3.00002	3.00004	3.00005	3.00007
	3.00010	3.00012	3.00016	3.00017
	3.00019	3.00020	3.00022	3.00025
	3.00026	3.00028	3.00032	3.00033
	3.00034	3.10002	3.10004	3.10005
	3.10006	3.10008	3.30001	3.30002
	3.30003	3.30901	3.40005	3.40007
	4.00001	4.00002	4.00006	4.00007
	4.00009	4.00010	4.00011	4.00013
	5.00001	5.00003	5.10001	5.10003
	5.10004	5.10005	5.10006	5.10901
	5.10902	5.20001	5.20002	5.20003
	5.20004	5.20901	5.30002	5.30003
	6.00001	6.00002	6.00004	6.00006
	6.00007	6.00009	6.10003	6.10004
	6.10007	6.10011	6.10013	6.20001
	6.30001	6.30002	6.30005	6.30006
	6.30007	6.30008	6.30009	6.30010
	6.30011	6.30012	6.30022	6.30023
	6.30024	6.31001	6.31002	6.31006
	6.31008	6.32002	6.32003	6.32004
	6.32005	6.32006	6.32007	6.32008
	6.40002	6.40005	6.40006	6.40007
	6.40008	6.40009	6.40010	6.40011
	6.40012	6.40013	6.40014	6.41001
	6.41003	6.41004	6.41006	6.41009
	6.41010	6.41011	6.41012	6.41013
	6.41014	6.42001	6.42903	6.42904
	6.43001	6.43002	6.43003	6.43004
	6.43005	6.43007	6.43008	6.43904
	6.50001	6.50004	6.50005	6.50006
	6.50007	6.50008	6.50009	6.50010
	6.50012	6.50014	6.50015	6.50016
	6.50017	6.50019	7.00004	7.00007
	7.00010	7.00013	7.00015	7.00017
	7.00019	7.00020	7.00022	7.00023
	8.00003	8.00004	8.00005	8.00006
	8.00007	8.00008	8.00009	8.00011
	8.00014	8.00015	8.00016	8.00018
	8.00022	8.00901	9.00001	9.00002
	9.00003	9.00004	9.00005	10.00001
	10.00008	10.00010	10.00011	10.00012
	10.00013	10.00014	10.00015	10.00016
	10.00016	10.00017	10.00018	10.00019
	10.00020	10.00021	10.00022	10.00023
	10.00024	10.00025	10.00026	10.00027
	10.00027	10.00031	10.00032	

Misheguk Mtn.....	1.00002	1.00003	1.00004	1.00005
	1.00006	3.00012	3.00026	3.00027
	3.00028	3.00030	3.00034	4.00003
	6.00004	6.00005	6.00008	6.00009
	6.10007	6.10008	6.10010	6.30006
	6.30007	6.30008	6.30009	6.30010
	6.30011	6.30012	6.30024	6.31001
	6.31006	6.32003	6.32006	6.40004
	6.40007	6.40013	6.40014	6.41004
	6.41006	6.50005	6.50007	6.50014
	6.50015	6.50016	6.50019	7.00005
	7.00006	7.00017	7.00021	7.00024
	7.00025	8.00019	10.00008	10.00013
	10.00014	10.00015	10.00016	10.00017
	10.00018	10.00019	10.00020	10.00021
	10.00022	10.00026	10.00027	

Noatak.....	1.00002	1.00003	1.00004	1.00005
	1.00006	1.00011	2.00004	2.00005
	2.00008	3.00001	3.00011	3.00012
	3.00013	3.00018	3.00019	3.00022
	3.00023	3.00026	3.00027	3.00028
	3.00030	3.00034	3.30001	3.30002
	3.30003	3.30004	3.30005	3.40011
	4.00003	4.00009	4.00010	4.00011
	5.00001	5.00002	5.00003	5.00004
	5.10002	5.10003	5.10004	5.10005
	5.10006	5.10901	5.20001	5.20002
	5.20003	5.20004	5.20902	5.30002
	6.00002	6.00003	6.00004	6.00005
	6.00006	6.00008	6.00009	6.10002
	6.10006	6.10007	6.10008	6.20001
	6.30005	6.30006	6.30007	6.30008
	6.30009	6.30010	6.30011	6.30012
	6.30022	6.30024	6.30901	6.31001
	6.31002	6.31006	6.31008	6.32003
	6.32006	6.40001	6.40002	6.40004
	6.40005	6.40007	6.40008	6.40010
	6.40011	6.40012	6.40013	6.40014
	6.40015	6.40016	6.41002	6.41003
	6.41004	6.41006	6.41009	6.41011
	6.42001	6.42002	6.42003	6.42901
	6.42902	6.43001	6.43002	6.43003
	6.43004	6.43005	6.43006	6.43007
	6.43008	6.43901	6.43903	6.43904
	6.50005	6.50006	6.50007	6.50014
	6.50015	6.50016	6.50017	6.50019
	7.00003	7.00005	7.00006	7.00007
	7.00009	7.00010	7.00014	7.00016
	7.00017	7.00019	7.00021	7.00022
	7.00024	7.00025	7.00902	8.00001

Noatak (continued).....	8.00003	8.00004	8.00005	8.00007
	8.00009	8.00016	8.00019	8.00022
	8.00901	9.00001	9.00003	9.00004
	10.00001	10.00002	10.00010	10.00011
	10.00013	10.00014	10.00015	10.00016
	10.00017	10.00018	10.00019	10.00020
	10.00021	10.00022	10.00023	10.00024
	10.00025	10.00026	10.00027	10.00031
	10.00032			

Selawik.....	1.00002	1.00003	1.00004	1.00005
	1.00006	2.00004	2.00005	3.00005
	3.00006	3.00008	3.00009	3.00010
	3.00012	3.00015	3.00016	3.00018
	3.00019	3.00020	3.00022	3.00025
	3.00026	3.00027	3.00028	3.00029
	3.00031	3.10004	3.30001	3.30002
	3.40001	3.40003	4.00003	4.00008
	4.00009	4.00010	4.00011	5.00001
	5.00003	5.10005	6.00001	6.00001
	6.00004	6.00009	6.10001	6.10005
	6.10006	6.10007	6.10008	6.10010
	6.20001	6.30006	6.30007	6.30008
	6.30009	6.30010	6.30011	6.30012
	6.30022	6.30023	6.30024	6.30901
	6.31001	6.31002	6.31003	6.31006
	6.31007	6.31008	6.32002	6.32003
	6.32004	6.32006	6.32007	6.32008
	6.40001	6.40002	6.40003	6.40005
	6.40006	6.40007	6.40008	6.40013
	6.40014	6.40016	6.41001	6.41004
	6.41006	6.41008	6.41010	6.41011
	6.41012	6.41013	6.41014	6.41017
	6.50001	6.50005	6.50007	6.50009
	6.50010	6.50011	6.50013	6.50014
	6.50015	6.50016	6.50017	6.50018
	6.50019	7.00001	7.00002	7.00005
	7.00006	7.00008	7.00010	7.00011
	7.00012	7.00015	7.00017	7.00019
	7.00021	7.00023	7.00903	8.00005
	8.00007	8.00008	8.00009	8.00011
	8.00015	8.00016	8.00017	8.00020
	8.00022	8.00901	9.00001	9.00003
	9.00005	10.00001	10.00008	10.00010
	10.00011	10.00012	10.00013	10.00014
	10.00015	10.00016	10.00017	10.00018
	10.00019	10.00020	10.00021	10.00022
	10.00023	10.00024	10.00025	10.00026
	10.00027	10.00028	10.00031	10.00032

Shungnak.....	1.00002	1.00003	1.00004	1.00005
	1.00006	1.00011	2.00004	2.00005
	3.00005	3.00010	3.00012	3.00016
	3.00018	3.00024	3.00025	3.00026
	3.00027	3.00028	3.00029	3.10003
	3.30001	3.40001	3.40005	3.40006
	3.40008	4.00003	4.00009	4.00010
	4.00011	6.00001	6.00004	6.00009
	6.10001	6.10006	6.10008	6.30004
	6.30006	6.30007	6.30008	6.30009
	6.30010	6.30011	6.30012	6.30022
	6.30023	6.30024	6.30901	6.31001
	6.31002	6.31003	6.31006	6.32003
	6.32006	6.32008	6.40007	6.40013
	6.40014	6.41004	6.41006	6.41008
	6.41010	6.41011	6.41012	6.41014
	6.41017	6.50001	6.50007	6.50013
	6.50014	6.50015	6.50016	6.50018
	6.50019	7.00001	7.00002	7.00005
	7.00006	7.00012	7.00015	7.00017
	7.00019	7.00021	8.00005	8.00007
	8.00008	8.00012	8.00016	8.00017
	8.00020	8.00022	8.00901	9.00001
	9.00003	10.00002	10.00008	10.00010
	10.00011	10.00013	10.00014	10.00015
	10.00016	10.00017	10.00018	10.00020
	10.00021	10.00022	10.00023	10.00024
	10.00025	10.00026	10.00027	

Survey Pass.....	1.00002	1.00003	1.00004	1.00005
	3.00025	3.00026	3.00027	3.40002
	6.00004	6.00008	6.00009	6.10012
	6.30007	6.30008	6.30009	6.30010
	6.30011	6.30012	6.30024	6.31006
	6.40013	6.40014	6.50014	6.50015
	6.50016	6.50018	7.00017	8.00002
	10.00004	10.00007	10.00008	10.00010
	10.00013	10.00014	10.00015	10.00016
	10.00017	10.00018	10.00019	10.00020
	10.00021	10.00022	10.00026	10.00027

VILLAGES

Ambler.....	1.00009	3.30001	4.00004	4.00005
	4.00008	4.00009	4.00011	6.00001
	6.30003	6.31001	6.41008	6.41011
	6.41013	6.41014	7.00015	7.00019
	8.00005	8.00007	8.00012	8.00013
	8.00022	8.00901	9.00001	9.00002
	9.00003	10.00009	10.00010	10.00024
	10.00025			
Buckland.....	1.00009	3.10004	3.30001	4.00009
	6.30023	6.31001	6.32001	6.32004
	6.40009	6.41004	7.00019	8.00005
	8.00007	8.00009	8.00011	8.00013
	8.00022	8.00901	10.00009	10.00010
	10.00024	10.00025		
Deering.....	1.00009	2.00003	2.00004	2.00005
	2.00007	3.00025	3.00028	3.10004
	3.10006	3.30001	3.30002	3.40007
	4.00009	6.10004	6.30023	6.31001
	6.32004	6.32006	6.40009	6.41004
	7.00004	7.00007	7.00019	8.00005
	8.00007	8.00009	8.00011	8.00013
	8.00022	8.00901	9.00001	10.00010
	10.00024	10.00025		
Kiana.....	1.00009	3.00034	3.30001	4.00008
	4.00009	6.00001	6.10005	6.31001
	6.31002	6.40005	6.41004	6.41003
	6.41010	6.41011	6.41013	6.41014
	7.00015	7.00019	7.00021	8.00005
	8.00007	8.00012	8.00013	8.00016
	8.00022	8.00901	9.00001	10.00009
	10.00010	10.00024	10.00025	
Kivalina.....	1.00009	1.00011	2.00003	2.00004
	2.00005	2.00007	3.00011	3.00019
	3.00028	3.00034	3.30001	3.30002
	3.30004	3.40011	4.00009	4.00011
	6.00002	6.10006	6.31001	6.31002
	6.31008	6.32001	6.41002	6.41003
	6.41004	6.43004	6.43007	6.43008
	7.00010	7.00019	8.00001	8.00004
	8.00005	8.00007	8.00009	8.00013
	8.00016	8.00022	8.00901	9.00001
	10.00009	10.00010	10.00024	10.00025

Kobuk.....	1.00009	2.00003	2.00004	2.00005
	3.00024	3.10003	3.30001	4.00009
	6.00001	6.30003	6.30004	6.30023
	6.31001	6.31002	6.41008	6.41010
	6.41011	6.41013	6.41014	6.50018
	7.00015	7.00019	7.00904	8.00005
	8.00007	8.00012	8.00013	8.00016
	8.00022	8.00901	9.00001	9.00003
	10.00009	10.00010	10.00024	10.00025

Kotzebue.....	1.00009	2.00001	2.00002	2.00003
	2.00004	2.00005	2.00006	2.00007
	2.00008	3.00016	3.00026	3.00034
	3.10002	3.10004	3.10005	3.30001
	3.30002	3.30901	4.00001	4.00002
	4.00006	4.00007	4.00009	4.00011
	4.00013	6.00001	6.10003	6.30005
	6.30006	6.31001	6.31008	6.32004
	6.32006	6.40005	6.40007	6.41001
	6.41003	6.41004	6.41009	6.41010
	6.41011	6.41013	6.41014	6.42902
	6.42903	6.42904	6.43004	6.43007
	6.43008	6.50005	6.50007	7.00007
	7.00010	7.00013	7.00019	7.00020
	7.00021	7.00023	7.00901	8.00003
	8.00004	8.00005	8.00006	8.00007
	8.00008	8.00009	8.00013	8.00014
	8.00016	8.00018	8.00022	8.00901
	9.00001	9.00002	9.00003	9.00005
	10.00009	10.00010	10.00024	10.00025

Noatak.....	1.00009	1.00011	3.00030	3.30001
	4.00009	4.00011	6.31001	6.31002
	6.31008	6.32006	6.41004	6.41009
	6.41011	7.00010	7.00016	7.00019
	7.00022	7.00025	8.00001	8.00003
	8.00005	8.00007	8.00013	8.00016
	8.00019	8.00022	8.00901	9.00001
	9.00003	9.00004	10.00009	10.00010
	10.00024	10.00025		

Noorvik.....	1.00009	2.00003	2.00004	2.00005
	3.00034	3.30001	3.30002	4.00009
	6.00001	6.31001	6.31002	6.32004
	6.41008	6.41010	6.41011	6.41013
	6.41014	7.00015	7.00019	7.00021
	8.00005	8.00007	8.00009	8.00012
	8.00013	8.00022	8.00901	9.00001
	9.00005	10.00009	10.00010	10.00024
	10.00025			

Selawik.....	1.00009	2.00003	2.00004	2.00005
	3.30001	3.30002	4.00009	4.00011
	6.30023	6.31001	6.31002	6.32004
	6.32006	6.41008	6.41010	6.41012
	6.41013	6.41014	6.50011	7.00010
	7.00011	7.00012	7.00019	7.00903
	7.00904	8.00005	8.00007	8.00008
	8.00009	8.00013	8.00016	8.00017
	8.00020	8.00022	8.00901	9.00001
	10.00009	10.00010	10.00024	10.00025

Shungnak.....	1.00009	1.00011	2.00003	2.00004
	2.00005	3.00024	3.00034	3.30001
	4.00009	6.00001	6.30023	6.31001
	6.31002	6.32003	6.32006	6.41004
	6.41008	6.41010	6.41011	6.41012
	6.41013	6.41014	7.00015	7.00019
	7.00021	8.00005	8.00007	8.00012
	8.00013	8.00016	8.00022	8.00901
	9.00001	9.00003	10.00002	10.00009
	10.00010	10.00024	10.00025	

OTHER LOCATIONS

Bering Land Bridge National Monument....	6.00007	6.32005	6.32007	8.00021
Bornite.....	3.00024	3.10003		
Buckland River.....	3.00005	3.00014	3.00022	3.00025
	3.00029	4.00009	6.00002	6.10006
	6.10007	6.20001	6.32003	6.41004
	6.41006	6.41010	6.50010	6.50019
	7.00008	10.00005	10.00010	
Candle.....	4.00009	6.32006	6.32008	10.00005
Cape Espenberg	3.00033	6.00007	6.10010	6.10011
	6.50008			
Cape Krusenstern National Monument.....	1.00005	3.00001	3.00028	3.30004
	3.30005	6.00002	6.50006	7.00001
	7.00003	7.00007	7.00009	7.00018
	7.00022	7.00002	8.00001	8.00003
Chukchi Sea.....	1.00011	2.00007	2.00008	3.30002
	3.30004	5.00001	5.00002	5.00003
	5.00004	5.10002	5.10003	5.10004
	5.10005	5.10006	5.10001	5.20001
	5.20002	5.20003	5.20004	5.20002
	5.30001	5.30002	5.30003	6.00002
	6.00006	6.40005	6.40010	6.40011
	6.40012	6.40013	6.40015	6.40016
	6.41005	6.42001	6.42002	6.42003
	6.43001	6.43002	6.43003	6.43004
	6.43005	6.43006	6.43007	6.43008
	6.43901	6.43902	6.43903	6.43904
	6.50002	6.50003	6.50004	6.50001
	8.00003	8.00004	10.00001	
Commercial Fisheries Management Unit 12.	6.40013	6.40014	6.42902	6.42904
Dahl Creek.....	2.00003	3.00024	3.10003	
Eschscholtz Bay.....	3.00028	6.40005	6.40016	6.50010

Game Management Unit 23.....	6.30007	6.30008	6.30009	6.30010
	6.30011	6.30012	6.30022	6.30024
	6.30901	6.30902	6.31001	6.31006
	6.31901	6.31902	6.31903	
Hotham Inlet.....	3.00014	3.00016	3.00022	3.00025
	3.00028	5.10005	6.00002	6.10007
	6.20001	6.40002	6.40005	6.40006
	6.40013	6.41001	6.41007	6.41010
	6.41011	6.41012	6.41013	6.41014
	6.50001	6.50004	6.50019	8.00004
	10.00901	10.00910		
Inland Lake.....	3.00009	3.00029	6.40002	6.40003
	6.40005	6.40006	6.40013	6.41010
	8.00017	10.00001		
Inmachuk River.....	3.00004	3.40007	4.00009	6.20001
	6.40013	6.41006	6.41011	
Kivalina Lagoon.....	3.00011	6.41002	6.41003	10.00001
Kobuk River.....	1.00005	1.00006	3.00005	3.00006
	3.00010	3.00016	3.00018	3.00019
	3.00022	3.00024	3.00025	3.00026
	3.00027	3.00028	3.00029	3.40001
	3.40005	3.40006	3.40008	4.00003
	4.00004	4.00005	4.00008	4.00009
	4.00011	5.10005	6.00001	6.10001
	6.10006	6.10007	6.10008	6.10010
	6.20001	6.30006	6.31001	6.31002
	6.31003	6.32001	6.32002	6.32006
	6.32008	6.40002	6.40005	6.40007
	6.40008	6.40013	6.40014	6.41004
	6.41005	6.41006	6.41007	6.41008
	6.41009	6.41010	6.41011	6.41012
	6.41013	6.41014	6.41017	6.50001
	6.50005	6.50007	6.50013	6.50018
	6.50019	7.00007	7.00002	7.00005
	7.00006	7.00007	7.00008	7.00009
	7.00010	7.00015	7.00021	7.00904
	8.00012	9.00007	9.00003	10.00001
	10.00002	10.00003	10.00006	10.00010
Kobuk Valley National Monument.....	3.00021	6.00001	7.00001	7.00009
	7.00018	7.00904	8.00012	

Kotzebue Sound.....	2.00007	2.00008	3.00002	3.00005
	3.00007	3.00010	3.00016	3.00017
	3.00019	3.00022	3.00025	3.00028
	3.00032	3.30003	3.40005	5.00001
	5.00003	5.10001	5.10003	5.10004
	5.10006	5.10901	5.10902	5.20001
	5.20002	5.20003	5.20004	5.20901
	5.30002	5.30003	6.00006	6.10004
	6.30006	6.31001	6.32001	6.32003
	6.32008	6.40005	6.40008	6.40009
	6.40010	6.40011	6.40012	6.40013
	6.40014	6.41005	6.41007	6.41010
	6.41011	6.41013	6.42001	6.42901
	6.42903	6.42904	6.43001	6.43002
	6.43003	6.43004	6.43005	6.43007
	6.43008	6.43904	6.50001	6.50004
	6.50006	6.50009	6.50010	6.50019
	7.00018	7.00021	8.00004	9.00001
	9.00004	10.00001	10.00010	
Noatak National Monument.....	6.00005	6.41009	7.00024	7.00025
	7.00904	8.00019		
Noatak River.....	1.00005	1.00006	1.00011	3.00013
	3.00018	3.00019	3.00026	3.00027
	3.00028	3.00030	4.00003	4.00009
	4.00011	5.10005	6.00003	6.00005
	6.00008	6.10002	6.10006	6.10007
	6.10008	6.10010	6.20001	6.30005
	6.30006	6.31001	6.31002	6.32003
	6.32006	6.40001	6.40002	6.40004
	6.40005	6.40007	6.40013	6.40014
	6.41004	6.41005	6.41006	6.41007
	6.41009	6.41011	6.42902	6.50005
	6.50007	6.50019	7.00005	7.00006
	7.00014	7.00021	7.00024	7.00025
	8.00001	8.00019	9.00001	10.00001
10.00004	10.00007	10.00010		
NANA Region.....	1.00001	1.00002	1.00003	1.00004
	1.00005	1.00008	1.00009	1.00010
	1.00011	3.10007	4.00010	4.00011
	4.00901	6.00004	6.00009	6.10009
	6.30009	6.30010	6.30011	6.30012
	6.30022	6.30901	6.30902	6.31004
	6.31006	6.31901	6.31902	6.31903
	6.32007	6.50014	6.50015	6.50016
	6.50901	6.50902	7.00018	7.00026
	8.00007	8.00010	8.00013	8.00014
	8.00015	8.00021	8.00901	8.00902
	8.00902	10.00008	10.00011	10.00013
	10.00014	10.00015	10.00016	10.00017
	10.00018	10.00019	10.00020	10.00021
	10.00022	10.00023	10.00024	10.00025
10.00026	10.00027	10.00030		

Selawik Lake.....	3.00009	3.00014	3.00022	3.00025
	3.00029	6.00002	6.40001	6.40002
	6.40005	6.40006	6.40013	6.41007
	6.41010	6.41012	6.41013	6.41014
	6.50011	7.00012	8.00017	10.00001
Selawik National Wildlife Refuge.....	6.41010	7.00012	8.00008	8.00020
Selawik River.....	1.00005	1.00006	3.00005	3.00014
	3.00015	3.00025	3.00029	3.00031
	4.00011	6.30006	6.31001	6.32003
	6.40005	6.40013	6.40014	6.41004
	6.41007	6.41008	6.41010	6.41013
	6.41014	6.50010	6.50011	6.50013
	6.50019	7.00005	7.00006	7.00012
	7.00012	8.00008	8.00015	8.00017
	10.00001			
Sheshalik.....	5.10005	6.31002	6.41009	6.41011
	6.50006	7.00007	7.00010	7.00022
	8.00001			
Sport Fisheries Regulatory Area 8.....	6.40013	6.40014		
Wulik River.....	1.00011	6.40013	6.40014	6.41002
	6.41003	6.41011	8.00001	10.00001

SECTION IV
KEY WORD INDEX

AESTHETICS.....	1.00005	1.00006	3.40011	8.00011
	8.00012	8.00019	8.00020	
AGRICULTURE.....	1.00003	1.00004	3.10003	4.00010
	8.00010	8.00014	8.00016	8.00021
AIR QUALITY.....	6.31008	8.00011	8.00012	8.00019
	8.00020			
ALASKA NATIVE CLAIMS SETTLEMENT ACT.....	1.00004	8.00017	10.00024	
ANTHROPOLOGY.....	3.00028	3.00032	6.32004	6.32007
	6.32009	7.00001	7.00002	7.00005
	7.00006	7.00011	7.00012	7.00013
	7.00015	7.00020	7.00021	7.00022
	7.00023	7.00025	7.00026	7.00904
	8.00001	8.00011	8.00012	8.00019
	8.00020	9.00004	10.00016	10.00023
ARCHAEOLOGY.....	1.00004	1.00006	1.00011	3.00028
	3.30004	3.30005	3.40006	6.00005
	6.00007	7.00001	7.00002	7.00003
	7.00004	7.00005	7.00006	7.00007
	7.00009	7.00011	7.00012	7.00014
	7.00015	7.00016	7.00017	7.00020
	7.00021	7.00023	7.00024	7.00902
	7.00903	8.00001	8.00003	8.00011
	8.00012	8.00017	8.00019	8.00020
	10.00016			
ARCTIC CHAR.....	6.00001	6.00009	6.40008	6.40009
	6.40013	6.40014	6.41002	6.41003
	6.41009	6.41011	9.00001	
ARCTIC CONSTRUCTION.....	4.00007	5.10004	6.32002	7.00008
ATTITUDINAL SURVEY.....	1.00009			
BEAR.....	3.00014	3.00025	3.00026	3.00027
	6.00001	6.00004	6.00005	6.00008
	6.00009	6.30002	6.30003	6.30006
	6.30007	6.30009	6.30010	6.30011
	6.30012	6.30022	6.30023	6.30024
	6.31002	6.43001	7.00015	8.00011
	8.00012	8.00019	8.00020	9.00001
	10.00001			

BIOLOGY-MARINE.....	1.00002	5.00001	5.00003	6.00002
	6.00006	6.40008	6.40010	6.40011
	6.40012	6.40015	6.42002	6.42003
	6.43002	6.43003	6.43004	6.43005
	6.43005	6.43006	6.43007	6.43008
	7.00013			
BIRDS.....	1.00002	1.00006	1.00011	3.00026
	3.00027	3.00034	5.00001	5.00003
	5.00004	6.00001	6.00005	6.00007
	6.00008	6.00009	6.30004	6.30008
	6.30022	6.30023	6.31002	6.31008
	6.32005	6.50001	6.50002	6.50003
	6.50004	6.50005	6.50006	6.50007
	6.50008	6.50012	6.50014	6.50015
	6.50016	6.50017	6.50018	6.50019
	6.50901	6.50902	7.00020	8.00011
	8.00012	8.00017	8.00019	8.00020
	9.00001	10.00001	10.00019	
BIRDS-WATERFOWL.....	3.00025	3.00026	3.00027	4.00010
	6.00001	6.00005	6.00008	6.00009
	6.30007	6.30022	6.30023	6.30024
	6.32005	6.50003	6.50004	6.50008
	6.50009	6.50010	6.50011	6.50013
	6.50014	6.50015	6.50016	6.50017
	6.50018	6.50019	6.50902	7.00012
	7.00015	7.00020	8.00007	8.00008
	8.00011	8.00012	8.00015	8.00017
	8.00019	8.00020	9.00003	10.00001
	10.00019			
CARIBOU.....	3.00014	3.00025	3.00026	3.00027
	4.00010	6.00001	6.00003	6.00004
	6.00005	6.00008	6.00009	6.10010
	6.30003	6.30004	6.30007	6.30009
	6.30010	6.30011	6.30012	6.30022
	6.30023	6.30024	6.30901	6.31001
	6.31002	6.31003	6.31004	6.31005
	6.31006	6.31007	6.31008	6.31901
	6.31902	6.31903	6.32002	6.32003
	7.00015	8.00002	8.00011	8.00012
	8.00016	8.00019	8.00020	9.00001
	9.00002	9.00003	10.00001	10.00020
CHEMISTRY-AQUATIC.....	1.00011	4.00008	4.00009	4.00011
	4.00012	5.00001	5.00003	5.00004
	5.20001	5.20004	5.30001	5.30002
	5.30003	6.00005	6.40001	6.40002
	6.41014	6.42002	10.00001	

CLIMATE.....	1.00002	1.00011	2.00001	2.00002
	2.00003	2.00004	2.00005	2.00006
	2.00007	2.00008	3.00003	3.00007
	3.00010	3.00017	3.00025	3.00026
	3.00027	3.00028	3.00032	3.00034
	3.10001	3.10002	3.10003	3.10005
	3.10006	3.10008	3.30003	4.00010
	5.00004	5.10001	6.00001	6.00005
	6.00007	6.00008	6.10004	6.10007
	6.10012	6.32001	6.32002	6.32008
	6.40008	6.50007	6.50008	6.50009
	6.50018	7.00001	7.00012	7.00013
	7.00013	7.00015	7.00904	8.00001
	8.00002	8.00003	8.00004	8.00007
	8.00007	8.00011	8.00012	8.00014
	8.00017	8.00019	8.00020	8.00021
	10.00001			
COAL.....	3.00005	3.00025	3.00027	3.00034
	3.40001	3.40002	3.40008	4.00010
	8.00014	8.00021		
COPPER.....	3.00024	3.00026	3.00027	3.00034
	3.40001	3.40002	5.30003	8.00013
	10.00003	10.00013		
CRAB.....	5.30001	6.00002	6.40012	6.40013
	6.40014	6.41001		
CURRENTS.....	1.00002	2.00007	2.00008	3.00002
	3.30002	3.30004	5.00001	5.00003
	5.10005	5.20001	5.20002	5.20003
	5.20004	6.40015	6.50008	7.00009
	8.00004	10.00001		
DATA INVENTORY.....	1.00002	1.00008	1.00012	1.00013
	2.00001	2.00002	2.00003	2.00004
	2.00005	5.00001	5.00003	5.10006
	6.40013	6.50017	8.00010	10.00001
	10.00010			
ECONOMICS.....	1.00002	1.00003	3.00004	3.40012
	6.31002	6.31008	6.32004	6.32006
	6.32007	6.32009	6.32904	6.40005
	6.40005	7.00013	7.00015	7.00021
	8.00001	8.00004	8.00005	8.00006
	8.00007	8.00010	8.00011	8.00012
	8.00013	8.00014	8.00016	8.00017
	8.00019	8.00020	8.00022	9.00005
EDUCATION.....	1.00009	7.00019		

EMPLOYMENT.....	1.00003	1.00009	6.31008	7.00019
	8.00006	8.00007	8.00013	8.00014
	8.00016	8.00017		
ENERGY.....	1.00003	1.00004	3.30001	4.00010
	8.00007	8.00010	8.00013	8.00014
	10.00015			
EROSION.....	1.00011	3.00018	3.30002	3.30004
	3.30005	3.30901	4.00010	5.00004
	5.00004	5.10005	6.10011	8.00006
	8.00007	8.00022	10.00001	
FIRE.....	1.00002	6.00001	6.31902	6.32005
	6.32007	6.50009	8.00011	8.00012
	8.00019	8.00020		
FISH.....	1.00003	3.00025	3.00026	3.00027
	3.00034	4.00010	5.00001	5.30001
	6.00001	6.00002	6.00007	6.00009
	6.31008	6.40005	6.40007	6.40008
	6.40009	6.40010	6.40011	6.40012
	6.40013	6.40014	6.40016	6.41001
	6.41002	6.41003	6.41006	6.41008
	6.41009	6.41010	6.41011	6.41014
	6.42002	6.43003	6.43004	6.43007
	6.43008	7.00012	8.00002	8.00007
	8.00010	8.00011	8.00012	8.00016
	8.00017	8.00019	8.00020	8.00021
	10.00022			
FISH-ANADROMOUS.....	1.00006	1.00011	3.00026	3.00027
	6.00001	6.00003	6.40005	6.40008
	6.40013	6.40014	6.41001	6.41003
	6.41004	6.41006	6.41009	6.41010
	6.41011	6.42903	6.42904	7.00015
	8.00015	10.00001	10.00022	
FISH-FRESHWATER.....	1.00006	3.00027	6.00001	6.00003
	6.00005	6.40008	6.40013	6.40014
	6.41008	6.41012	6.41014	6.41015
	6.41016	6.41017	7.00015	10.00001
	10.00022			
FISH-MARINE.....	1.00011	5.00003	5.00004	5.30001
	6.00002	6.00003	6.40008	6.40009
	6.40010	6.40011	6.40012	6.40013
	6.40014	6.41001	6.41009	6.41010
	6.42003	6.43003	6.43004	6.43007
	6.43008	10.00001		

FISHERIES-COMMERCIAL.....	1.00003	1.00010	6.00001	6.00004
	6.40005	6.40007	6.40009	6.40013
	6.40014	6.41001	6.41004	6.41007
	6.41009	6.41010	6.41011	6.41013
	6.41014	6.42003	6.42901	6.42902
	6.42903	6.42904	7.00013	8.00011
	8.00012	8.00013	8.00014	8.00019
	8.00020			
FISHERIES-SPORT.....	6.40013	6.40014	6.41003	6.41009
	6.41010	6.41013	6.41014	8.00002
	8.00011	8.00012	8.00017	8.00019
	8.00020			
FISHERIES-SUBSISTENCE.....	1.00001	1.00003	1.00010	3.00027
	6.00001	6.00003	6.00004	6.31002
	6.40005	6.40007	6.40009	6.40013
	6.40014	6.41001	6.41002	6.41003
	6.41004	6.41008	6.41009	6.41010
	6.41011	6.41013	6.41014	7.00007
	7.00011	7.00012	7.00013	7.00015
	7.00020	7.00021	8.00011	8.00012
	8.00013	8.00016	8.00017	8.00019
	8.00020	9.00001	10.00020	
FLOOD PLAINS.....	3.30001	3.30003	6.00001	6.50008
	8.00007	10.00009		
FLOODING.....	2.00007	3.00013	3.00026	3.30001
	3.30002	3.30003	4.00010	8.00006
	8.00021	8.00022	10.00009	
FOG.....	2.00001	2.00002	2.00003	2.00008
FORAGE.....	3.10004	6.10010	6.10013	6.31001
	6.31004	6.32001	6.32003	6.32005
	6.32007			
FOREST.....	1.00003	3.00028	4.00010	6.00005
	6.10007	6.10008	6.10010	6.10012
	6.32003	7.00015	8.00002	8.00014
	8.00017	10.00008	10.00026	
FOX.....	3.00025	3.00026	3.00027	6.00001
	6.00005	6.00008	6.30002	6.30003
	6.30007	6.30008	6.30023	6.43004
	6.43007	6.43008	6.50008	
FUR BEARERS.....	1.00002	1.00003	6.00004	6.00008
	6.00009	6.30007	6.30008	6.30009
	6.30010	6.30011	6.30012	6.30022
	7.00012	7.00015	8.00016	

GEOCHEMISTRY.....	3.00004	3.00009	3.00015	3.00024
	3.00024	3.00028	3.00029	3.40004
	3.40007			
GEOLOGIC MAPPING.....	1.00006	3.00004	3.00024	3.00025
	3.00026	3.00027	3.00028	3.00029
	3.00030	3.00034	3.10001	3.40010
	5.10003	10.00002	10.00003	10.00004
	10.00005	10.00006	10.00007	10.00028
	10.00029	10.00033		
GEOLOGY.....	1.00002	1.00004	1.00006	1.00011
	3.00001	3.00002	3.00003	3.00004
	3.00005	3.00006	3.00007	3.00008
	3.00009	3.00010	3.00011	3.00012
	3.00013	3.00014	3.00015	3.00018
	3.00019	3.00020	3.00021	3.00022
	3.00023	3.00024	3.00025	3.00026
	3.00027	3.00028	3.00029	3.00030
	3.00032	3.00033	3.00034	3.00901
	3.00902	3.10001	3.10008	3.30005
	3.40001	3.40002	3.40003	3.40004
	3.40007	3.40008	3.40011	4.00002
	4.00006	5.10001	5.10002	5.10003
	5.10004	5.10005	6.00001	6.00007
	6.00008	6.10001	6.10004	6.10007
	6.10012	6.30002	6.31008	7.00012
	8.00001	8.00010	8.00011	8.00012
	8.00017	8.00019	8.00020	8.00021
	10.00001	10.00002	10.00003	10.00005
	10.00006	10.00007	10.00013	10.00018
	10.00028	10.00029	10.00033	
GEOLOGY-HISTORICAL.....	3.00003	3.00005	3.00006	3.00007
	3.00008	3.00009	3.00010	3.00011
	3.00012	3.00014	3.00016	3.00017
	3.00018	3.00019	3.00022	3.00024
	3.00025	3.00026	3.00027	3.00028
	3.00029	3.00030	3.00032	3.00033
	3.00901	3.30004	5.10002	5.10005
	6.10004	7.00001	7.00002	10.00002
GEOLOGY-MARINE.....	1.00011	3.00007	3.00019	3.00028
	3.30004	3.30901	5.00001	5.00003
	5.00004	5.10002	5.10003	10.00001
GEOLOGY-MORPHOLOGY.....	3.00003	3.00005	3.00006	3.00017
	3.00024	3.00027	3.00028	3.00029
	3.00032	3.10001	3.30004	5.10005
	10.00002	10.00003	10.00005	10.00006
	10.00007			
GEOPHYSICS.....	3.00030	3.00032	5.10003	

GLACIATION.....	1.00006	3.00006	3.00007	3.00010
	3.00014	3.00016	3.00017	3.00018
	3.00019	3.00022	3.00024	3.00025
	3.00028	3.00032	3.10001	6.50018
GOLD.....	3.00024	3.00025	3.00026	3.00027
	3.00034	3.40001	3.40002	10.00003
	10.00004	10.00005	10.00013	10.00029
GOVERNMENT.....	1.00002	1.00013	7.00013	8.00007
	8.00013			
GRAVEL.....	3.00026	3.00028	3.10003	3.10005
	3.10006	6.50008	8.00007	
HABITAT.....	1.00006	3.00027	4.00010	5.00004
	6.00001	6.00002	6.10010	6.30002
	6.30008	6.30022	6.30024	6.31902
	6.32002	6.32003	6.32005	6.32008
	6.40010	6.40013	6.40014	6.41014
	6.43001	6.43003	6.43004	6.43007
	6.43008	6.43901	6.50003	6.50007
	6.50008	6.50009	6.50011	6.50013
	7.00012	8.00011	8.00012	8.00015
	8.00019	8.00020	10.00019	
HARBORS.....	8.00004	8.00006	8.00902	10.00010
HARVEST STATISTICS.....	1.00004	6.00001	6.00004	6.30007
	6.30009	6.30010	6.30011	6.30012
	6.30021	6.30023	6.31001	6.40013
	6.40014	6.41002	6.41006	6.41008
	6.41009	6.41010	6.41011	6.41013
	6.41014	6.50010	6.50014	6.50015
	6.50016	8.00016		
HEALTH-HUMAN.....	1.00003	6.10009	7.00901	8.00014
	9.00001	9.00002	9.00003	9.00004
	9.00005			
HOT SPRINGS.....	3.00015	3.00025	3.00031	8.00017
HOUSING.....	1.00003	1.00011	3.30001	7.00008
	7.00012	7.00013	7.00016	7.00020
	7.00021	7.00023	8.00003	8.00006
	8.00007	8.00013	8.00014	8.00018
HUNTING-SPORT.....	6.00004	6.30007	6.30009	6.30010
	6.30011	6.30012	6.30023	6.31001
	8.00002	8.00011	8.00012	8.00019
	8.00020			

HUNTING-SUBSISTENCE.....	1.00001	1.00006	3.00027	6.00004
	6.30007	6.30009	6.30010	6.30011
	6.30012	6.30023	6.31001	6.31002
	6.40005	6.50005	6.50008	6.50010
	7.00007	7.00011	7.00012	7.00015
	7.00020	7.00021	8.00011	8.00012
	8.00016	8.00019	8.00020	9.00001
	9.00005	10.00020		
HYDROELECTRIC.....	4.00010	10.00015		
HYDROLOGY.....	1.00002	1.00004	1.00011	3.00003
	3.00015	3.10008	4.00001	4.00002
	4.00003	4.00004	4.00005	4.00006
	4.00008	4.00009	4.00011	4.00013
	6.00005	6.10011	6.50009	6.50011
	8.00008	8.00011	8.00012	8.00017
	8.00019	8.00020	8.00021	10.00001
	10.00014			
ICE.....	1.00002	2.00004	2.00007	3.00002
	3.00003	3.00010	3.00013	3.10008
	3.30003	4.00004	4.00005	5.10002
	6.00001	6.43003	6.50002	6.50009
	6.50010	10.00001		
INSECTS.....	1.00011	6.00002	6.00005	6.30005
	6.30903	6.31004		
INVERTEBRATES.....	1.00011	3.00011	3.00028	5.00001
	5.00003	5.30001	6.00002	6.00005
	6.00006	6.00007	6.30005	6.30903
	6.40001	6.40002	6.40003	6.40004
	6.40005	6.40006	6.40007	6.40010
	6.40011	6.40012	6.41001	6.43003
	6.50008	10.00001		
LAND USE PLANNING.....	1.00005	1.00007	3.10003	3.10005
	3.10006	3.40011	4.00010	8.00001
	8.00002	8.00003	8.00006	8.00007
	8.00010	8.00011	8.00012	8.00014
	8.00015	8.00018	8.00019	8.00020
	10.00009	10.00024	10.00030	
LIMNOLOGY.....	1.00002	1.00011	4.00008	6.00005
	6.00007	6.40001	6.40004	6.40006
	6.41012	6.41014		
LITTORAL ZONE.....	3.30002	5.00001	5.00003	5.10005
	6.00002	6.40012	6.50006	10.00001

MAMMALS-MARINE.....	1.00002	1.00006	1.00011	3.00028
	5.00001	5.00003	5.00004	6.00004
	6.00009	6.30006	6.30007	6.30022
	6.30023	6.43001	6.43002	6.43003
	6.43004	6.43005	6.43006	6.43007
	6.43008	6.43901	6.43904	7.00013
	7.00020	7.00021	8.00003	8.00007
	10.00001			
MAMMALS-TERRESTRIAL.....	1.00002	1.00006	1.00011	3.00010
	3.00014	3.00025	3.00026	3.00027
	3.00028	6.00001	6.00005	6.00007
	6.00008	6.00009	6.30001	6.30002
	6.30006	6.30009	6.30010	6.30011
	6.30012	6.30023	6.30901	6.30902
	6.31001	6.31003	6.31008	6.31901
	6.31902	6.31903	6.32001	6.32901
	6.32902	6.32903	6.32904	7.00013
	7.00020	7.00021	8.00002	8.00003
	8.00007	8.00008	8.00011	8.00012
	8.00017	8.00019	8.00020	
MAPS.....	1.00002	1.00003	1.00004	1.00005
	1.00008	3.00024	3.00029	3.00902
	3.10003	3.10004	3.30003	3.30004
	3.30005	3.40010	4.00011	5.10005
	5.20003	6.00009	6.20001	6.31008
	6.41009	6.41010	6.50017	7.00012
	7.00015	7.00020	7.00021	8.00009
	8.00010	8.00011	8.00012	8.00014
	8.00019	8.00020	8.00021	10.00001
	10.00002	10.00003	10.00004	10.00005
	10.00006	10.00007	10.00008	10.00009
	10.00010	10.00011	10.00012	10.00013
	10.00014	10.00015	10.00016	10.00017
	10.00018	10.00019	10.00020	10.00021
	10.00022	10.00023	10.00024	10.00025
	10.00026	10.00027	10.00028	10.00029
	10.00030	10.00031	10.00032	10.00033
MICROBIOLOGY.....	5.00001	6.30003	6.30004	6.30017
	6.31005	6.32902	6.40010	6.40011
	9.00005			
MINERALS.....	1.00002	1.00003	1.00004	1.00006
	1.00010	3.00004	3.00006	3.00009
	3.00024	3.00025	3.00026	3.00027
	3.00028	3.00029	3.00034	3.00902
	3.30005	3.40002	3.40003	3.40004
	3.40005	3.40006	3.40007	3.40008
	3.40010	3.40011	4.00010	8.00007
	8.00010	8.00011	8.00012	8.00013
	8.00014	8.00017	8.00019	8.00020
	10.00001	10.00002	10.00003	10.00004
	10.00005	10.00013	10.00030	10.00033

MINERALS-ECONOMIC.....	3.00025	3.00026	3.00027	3.40002
	3.40003	3.40004	3.40005	3.40006
	3.40007	3.40008	10.00003	10.00004
	10.00005			
MINING.....	1.00002	3.00024	3.00026	3.00027
	3.00902	3.40004	3.40005	3.40006
	3.40008	3.40010	3.40011	3.40012
	6.00007	7.00018	8.00011	8.00012
	8.00013	8.00014	8.00015	8.00020
	10.00004	10.00005	10.00011	10.00029
MOOSE.....	3.00027	3.10004	4.00010	6.00001
	6.00004	6.00005	6.00009	6.30006
	6.30007	6.30009	6.30010	6.30011
	6.30012	6.30013	6.30014	6.30015
	6.30016	6.30017	6.30018	6.30019
	6.30022	6.30023	6.31002	7.00015
	8.00011	8.00012	8.00015	8.00019
	8.00019	8.00020	9.00001	10.00020
MUSKOX.....	3.10004	6.00009	6.30007	6.30009
	6.30010	6.30011	6.30012	6.30022
	6.32003			
PERMAFROST.....	1.00002	1.00011	3.00013	3.00014
	3.00020	3.00022	3.00032	3.10001
	3.10002	3.10004	3.10007	3.10008
	3.10008	3.30002	4.00002	4.00006
	4.00013	5.10004	6.00005	6.00007
	6.10001	6.10004	6.10008	6.30002
	6.50018	7.00007	8.00011	8.00012
	8.00019	8.00020	10.00001	
PETROLEUM.....	1.00002	4.00004	4.00010	5.00001
	5.00003	5.00004	5.10002	5.10003
	5.10004	5.30001	5.30002	5.30003
	6.40009	6.40011	6.40012	6.41001
	6.43003	6.50008	10.00001	10.00021
PETROLEUM-SOCIAL IMPACT.....	6.00002	6.10011	6.10013	6.41001
	8.00004	8.00006	8.00015	
PLANKTON.....	1.00011	5.00001	5.00003	5.30001
	6.00006	6.40010	6.40015	6.50006
	10.00001			

POPULATION-ANIMAL.....	1.00003	1.00009	1.00011	6.00001	
	6.00004	6.30001	6.30002	6.30007	
	6.30015	6.30018	6.30019	6.30020	
	6.30021	6.30022	6.30901	6.31001	
	6.31003	6.31004	6.31901	6.31903	
	6.32006	6.32008	6.40005	6.40009	
	6.40012	6.41001	6.41006	6.41013	
	6.43002	6.43004	6.43007	6.43008	
	6.50004	6.50008	6.50009	6.50010	
	6.50013	6.50014	6.50015	6.50016	
	6.50017				
	POPULATION-HUMAN.....	1.00002	1.00003	1.00006	1.00011
		3.00024	3.00025	3.00027	3.00028
3.00034		3.30001	4.00007	6.31002	
6.40005		6.40009	6.41004	7.00010	
7.00012		7.00015	7.00019	7.00026	
8.00005		8.00006	8.00007	8.00011	
8.00012		8.00013	8.00014	8.00016	
8.00017		8.00019	8.00020	8.00021	
9.00003		9.00004	9.00005		
PRECIPITATION.....		2.00001	2.00002	2.00003	2.00004
	2.00005	2.00008	3.00003	3.00001	
	3.00025	3.00026	3.00027	3.00034	
	3.10002	3.10008	4.00001	4.00004	
	6.00001	6.00005	6.00007	6.10004	
	6.50007	8.00007			
	PREDATION.....	6.30003	6.30009	6.30010	6.30011
6.30012		6.30015	6.30020	6.31001	
6.31004		6.32008	6.40012	6.43003	
6.43004		6.43007	6.43008	6.50001	
6.50008		6.50011	6.50901		
RADIOACTIVITY.....	1.00011	3.40004	4.00011	6.00003	
	9.00001	9.00002			
RECREATION.....	1.00003	1.00004	4.00010	7.00013	
	7.00019	8.00002	8.00003	8.00010	
	8.00011	8.00012	8.00014	8.00017	
	8.00019	8.00020			
REGULATIONS.....	6.30009	6.30010	6.30011	6.30012	
	6.30022	8.00011	8.00012	8.00015	
	8.00016	8.00019	8.00020		
REINDEER.....	1.00002	1.00004	1.00010	3.00027	
	3.10004	6.00007	6.10010	6.10013	
	6.30004	6.30023	6.31008	6.32001	
	6.32002	6.32003	6.32004	6.32005	
	6.32006	6.32007	6.32008	6.32009	
	6.32901	6.32902	6.32903	6.32904	
	6.50011	7.00018	8.00011	8.00017	
	8.00020	8.00021	9.00001	10.00001	

REMOTE SENSING.....	1.00008	2.00007	4.00004	5.10005
	6.10010	6.30018	6.30019	6.30021
	7.00902	10.00033		
REVEGETATION.....	6.10011	6.10013		
RODENTS.....	6.00001	6.00008	6.30001	6.30004
	6.30006	6.31005	9.00005	
SALMON.....	1.00006	1.00010	1.00011	3.00025
	3.00026	3.00027	6.00003	6.00004
	6.00009	6.31002	6.40005	6.40007
	6.40009	6.40013	6.41001	6.41003
	6.41006	6.41009	6.41010	6.41011
	6.42002	6.42903	6.42904	7.00020
	7.00021	8.00013	9.00003	10.00001
SALMON-CHUM.....	6.00001	6.00003	6.40005	6.40007
	6.40008	6.40009	6.40013	6.41001
	6.41003	6.41005	6.41006	6.41009
	6.41010	6.41011	6.42002	6.42902
	6.42903	8.00013		
SEA ICE.....	2.00007	2.00008	5.00002	5.00004
	5.10002	5.10005	5.20002	5.20003
	5.20004	6.43001	6.43003	6.43004
	6.43007	6.43008	6.50002	6.50901
	8.00004	10.00001		
SEAL.....	1.00011	6.30006	6.30007	6.30009
	6.30010	6.30011	6.30012	6.30023
	6.30024	6.43001	6.43002	6.43003
	6.43004	6.43005	6.43006	6.43007
	6.43008	6.43902	6.43903	6.50012
	8.00003	9.00001	10.00001	
SEDIMENTS.....	1.00011	3.00005	3.00013	3.00014
	3.00022	3.00028	3.00030	3.00901
	3.30004	4.00011	4.00013	5.00001
	5.00003	5.10002	5.10003	5.10004
	5.10005	5.10006	5.30001	5.30002
	6.00002	7.00904	10.00001	
SEISMOLOGY.....	1.00011	3.30901	5.00004	5.10001
	5.10002	5.10003		
SEWAGE TREATMENT.....	1.00003	3.30001	4.00007	8.00007
	8.00009	8.00014	8.00022	10.00010
SHEEFISH.....	6.00001	6.00003	6.00009	6.40005
	6.40008	6.40009	6.40014	6.41007
	6.41008	6.41009	6.41010	6.41012
	6.41013	6.41014	6.41016	6.41017
	7.00012	7.00020	7.00021	

SHEEP-DALL.....	3.00025	3.00026	3.00027	6.00001
	6.00004	6.00008	6.00009	6.30007
	6.30009	6.30010	6.30011	6.30012
	6.30022	6.30023	6.30024	9.00001
SILVER.....	3.00026	3.00027	3.40004	3.40007
	5.30003	10.00004		
SNOW.....	2.00001	2.00002	2.00003	2.00004
	2.00005	3.10002	3.10004	4.00004
	4.00005	6.31001	6.31007	6.50007
SOCIO-CULTURAL.....	1.00009	1.00011	3.40011	5.20002
	6.31008	6.32007	7.00001	7.00003
	7.00009	7.00011	7.00012	7.00014
	7.00017	7.00021	7.00022	7.00024
	7.00025	7.00026	7.00901	7.00903
	8.00003	8.00014	8.00017	8.00018
	9.00002	9.00003	9.00005	10.00023
SOILS.....	1.00002	1.00004	1.00006	2.00003
	2.00004	2.00005	3.00002	3.00003
	3.00007	3.00010	3.00020	3.00028
	3.00032	3.10001	3.10002	3.10003
	3.10004	3.10005	3.10006	3.10007
	3.10008	4.00002	6.00005	6.00007
	6.10008	6.10013	6.31008	6.32001
	6.32003	8.00006	8.00007	8.00008
	8.00014	8.00017	10.00001	10.00012
	10.00014			
SOLID WASTE.....	1.00003	8.00007	8.00009	8.00014
	8.00022	10.00010		
SUBSISTENCE.....	1.00001	1.00004	1.00009	1.00011
	4.00010	6.00003	6.00004	6.32007
	6.41010	6.41013	6.50010	6.50012
	7.00010	7.00011	7.00012	7.00013
	7.00015	7.00022	7.00025	7.00026
	7.00904	8.00011	8.00012	8.00013
	8.00014	8.00016	8.00017	8.00019
	8.00020	10.00025		
TECHNOLOGY.....	7.00010	7.00015	7.00021	
TEMPERATURE.....	2.00001	2.00002	2.00003	2.00004
	2.00005	2.00006	2.00008	3.00002
	3.00025	3.00026	3.00027	3.00034
	3.10002	3.10008	5.00001	5.00003
	5.10002	5.20001	5.20004	6.00005
	6.00007	6.10004	6.40001	6.50007
	6.50018	7.00019	8.00007	

TIDES.....	1.00002 5.00004	3.00014 8.00004	3.30002 10.00001	3.30003
TIMBER.....	1.00002 3.00027 8.00017	1.00003 6.30901	1.00004 8.00010	3.00025 8.00014
TRANSPORTATION.....	1.00002 3.00024 4.00010 6.40005 7.00012 8.00003 8.00007 8.00014 8.00019 10.00017	1.00004 3.10007 5.20002 7.00007 7.00019 8.00004 8.00010 8.00015 8.00020 10.00027	1.00006 3.30001 6.10011 7.00010 7.00020 8.00005 8.00011 8.00016 8.00021	1.00009 3.40007 6.10013 7.00012 7.00021 8.00006 8.00012 8.00017 8.00902
TRAPPING.....	1.00003 7.00015	6.00004 8.00016	6.30023 8.00017	7.00012 10.00020
TUNDRA.....	3.00032 6.10004 6.10011 6.30005 6.50007 8.00017	3.10008 6.10007 6.10012 6.32002 6.50009 10.00008	6.00005 6.10008 6.10013 6.32003 6.50018 10.00026	6.10003 6.10010 6.30002 6.32005 8.00002
URANIUM.....	3.40001	3.40003	10.00005	10.00013
VEGETATION-AQUATIC.....	1.00002 6.00005 6.50008	1.00011 6.00006 6.50011	5.30001 6.32003 6.50018	6.00002 6.40003 10.00001
VEGETATION-TERRESTRIAL.....	1.00002 3.00002 3.00025 3.00031 3.10002 6.00001 6.00007 6.10003 6.10007 6.10011 6.30002 6.31008 6.32005 6.50008 7.00001 8.00008 8.00019 10.00012	1.00004 3.00010 3.00026 3.00032 3.10004 6.00002 6.00008 6.10004 6.10008 6.10012 6.30005 6.32001 6.32006 6.50011 7.00012 8.00011 8.00020 10.00026	1.00005 3.00014 3.00027 3.00034 3.10007 6.00003 6.10001 6.10005 6.10009 6.10013 6.31004 6.32002 6.50001 7.00904 8.00012 9.00004	1.00011 3.00020 3.00028 3.10001 3.10008 6.00005 6.10002 6.10006 6.10010 6.30001 6.31007 6.32003 6.50007 6.50018 8.00007 8.00017 10.00008

WATER QUALITY.....	1.00002	1.00003	4.00002	4.00006
	4.00007	4.00008	4.00009	4.00010
	4.00011	4.00012	4.00013	5.30001
	5.30002	5.30003	6.00005	6.40006
	8.00007	8.00011	8.00012	8.00017
	8.00019	8.00020	8.00022	10.00010
WATER SUPPLY.....	1.00002	1.00003	1.00006	3.00003
	3.00032	3.30001	3.40007	4.00001
	4.00002	4.00006	4.00007	4.00009
	4.00010	4.00012	4.00013	6.32002
	6.40005	8.00007	8.00021	8.00022
	10.00015			
WAVES.....	1.00011	2.00008	5.10005	10.00001
WETLANDS.....	3.10004	6.00005	6.10010	6.20001
	6.50006	6.50011	8.00008	8.00017
WHALE-BELUGA.....	6.30006	6.30007	6.30023	6.43001
	6.43002	6.43005	6.43903	9.00001
WHALE-GENERAL.....	1.00011	6.30006	6.43001	6.43002
	6.43005	7.00018	9.00003	10.00001
WHITEFISH.....	3.00025	3.00027	6.00001	6.00003
	6.40005	6.40008	6.40009	6.40013
	6.40014	6.40016	6.41009	6.41010
	6.41012	6.41014	6.41015	7.00012
	7.00020	7.00021	9.00003	
WILDLIFE MANAGEMENT.....	3.10004	6.00004	6.30002	6.30009
	6.30010	6.30011	6.30012	6.30013
	6.30014	6.30015	6.30016	6.30017
	6.30018	6.30019	6.30020	6.30021
	6.30022	6.30023	6.31001	6.31006
	6.32002	6.32007	6.50013	6.50018
	8.00010	8.00015	8.00016	8.00017
WIND.....	2.00001	2.00002	2.00003	2.00004
	2.00005	2.00007	2.00008	3.00034
	3.30002	3.30003	5.00001	5.00002
	5.00003	5.20001	6.00005	6.00007
	6.43001	6.50008	8.00004	
WOLF.....	3.00014	3.00026	3.00027	6.00001
	6.00004	6.00008	6.00009	6.30002
	6.30003	6.30004	6.30009	6.30010
	6.30011	6.30012	6.30020	6.30021
	6.30022	6.30024	6.30902	6.31005
	6.43004	6.43007	6.43008	8.00016
WOLVERINE.....	3.00027	6.00005	6.00009	6.30009
	6.30010	6.30011	6.30012	6.30024

SECTION V
SOURCE LOCATION

SOURCE LOCATION

AEIDC.....	1.00011	1.00012	1.00013	2.00001
	2.00002	2.00003	2.00004	2.00005
	2.00006	2.00007	2.00008	3.00002
	3.00005	3.00013	3.00014	3.00015
	3.00016	3.00017	3.00020	3.00022
	3.00024	3.00030	3.00031	3.10002
	3.10004	3.10007	3.10008	3.30002
	3.30003	3.30005	3.40001	3.40002
	3.40003	3.40005	3.40006	3.40009
	4.00001	4.00002	4.00003	4.00004
	4.00005	4.00009	4.00010	4.00011
	5.10001	5.10002	5.10003	5.10004
	5.10005	5.20001	5.20002	5.20003
	5.20004	5.30001	5.30002	5.30003
	6.00001	6.00002	6.00003	6.00005
	6.00006	6.00007	6.00008	6.00009
	6.10002	6.10003	6.10005	6.10006
	6.20001	6.30001	6.30002	6.30003
	6.30004	6.30005	6.30008	6.30009
	6.30010	6.30011	6.30012	6.30013
	6.30014	6.30015	6.30016	6.30017
	6.30018	6.30019	6.30020	6.30021
	6.30024	6.31001	6.31002	6.31003
	6.31005	6.31006	6.40001	6.40002
	6.40003	6.40004	6.40005	6.40006
	6.40007	6.40008	6.40009	6.40010
	6.40011	6.40012	6.40013	6.40015
	6.40016	6.41001	6.41002	6.41003
	6.41007	6.41008	6.41009	6.41010
	6.41011	6.41012	6.41013	6.41014
	6.41015	6.41016	6.41017	6.42001
	6.42003	6.43001	6.43002	6.43003
	6.43004	6.43005	6.43006	6.43007
	6.43008	6.50001	6.50002	6.50003
	6.50004	6.50006	6.50008	6.50014
	6.50015	6.50016	6.50017	6.50019
	7.00026	8.00001	8.00009	8.00010
	8.00011	8.00012	8.00015	8.00018
	8.00019	8.00020	9.00001	9.00005
	10.00001	10.00030		
AGGSL.....	3.00004			
AMUL.....	3.00012			

ARL.....	1.00006	3.00025	3.00027	3.00028
	4.00008	4.00012	6.10007	6.10008
	6.30006	6.32002	6.32003	6.32007
	6.41004	6.41006	6.42002	6.50005
	6.50007	7.00002	7.00005	7.00006
	7.00007	7.00008	7.00024	9.00004
	10.00008			
Mauneluk.....	1.00001	1.00002	1.00003	1.00004
	1.00005	1.00008	1.00009	1.00012
	1.00013	3.10003	3.10005	3.10006
	3.30001	3.30004	3.40010	3.40011
	4.00006	4.00007	4.00010	5.00001
	5.00003	5.00004	6.00001	6.00004
	6.00005	6.10010	6.10011	6.10012
	6.10013	6.30007	6.30022	6.30023
	6.31004	6.31007	6.32005	6.32009
	6.40014	6.41005	6.50009	6.50010
	6.50011	6.50012	6.50013	7.00004
	7.00014	7.00015	7.00016	7.00017
	7.00019	7.00022	7.00025	8.00004
	8.00005	8.00006	8.00007	8.00008
	8.00009	8.00010	8.00013	8.00015
	8.00016	8.00017	8.00022	10.00001
	10.00009	10.00011	10.00029	10.00031
	10.00032			
NANA.....	1.00007	1.00010	2.00007	3.00033
	4.00005	5.10001	5.10002	5.10003
	6.00002	6.31003	6.32004	6.40010
	6.40011	6.40012	6.42001	6.43001
	6.43002	6.43003	6.43004	6.43005
	6.50002	6.50003	6.50004	7.00012
	8.00011	8.00012	8.00013	8.00014
	8.00019	8.00020	10.00010	10.00012
	10.00013	10.00014	10.00015	10.00016
	10.00017	10.00018	10.00019	10.00020
	10.00021	10.00022	10.00023	10.00024
	10.00025	10.00026	10.00027	
U of Wash.....	5.10006			
UAAL.....	3.00003	3.00007	3.00009	3.00010
	3.00018	3.00019	3.00021	3.00023
	3.00032	5.00002	6.10004	6.10009
	6.32001	6.32006	6.32008	6.50018
	7.00001	7.00020	7.00021	9.00002
	9.00003			
UAFL.....	3.10001	7.00023		
USBM/J.....	3.40007	3.40012	8.00021	
USFWS.....	6.30023	8.00017		

USGS.....	3.00001	3.00006	3.00008	3.00011
	3.00026	3.00029	3.00034	3.40004
	3.40008	4.00012	4.00013	6.10001
	10.00002	10.00003	10.00004	10.00005
	10.00006	10.00007	10.00028	10.00033
USNPS.....	7.00003	7.00009	7.00010	7.00011
	7.00012	7.00013	7.00018	8.00002
	8.00003			

ABBREVIATION

LOCATION

AEIDC	Arctic Environmental Information and Data Center University of Alaska 707 A Street Anchorage, Alaska 99501
AGGSL	Alaska Division Geological and Geophysical Survey Library 3327 Fairbanks Street Anchorage, Alaska 99503
AMUL	Alaska Pacific (Methodist) University Library E. Westly Drive Anchorage, Alaska 99504
ARL	Alaska Resources Library 701 C Street, Box 36 Anchorage, Alaska 99513
Mauneluk	Mauneluk Association P.O. Box 256 Kotzebue, Alaska 99752
NANA	NANA Regional Corporation, Inc. P.O. Box 49 Kotzebue, Alaska 99752
U of Wash	University of Washington Seattle, Washington 98195

UAAL University of Alaska, Anchorage, Library
3211 Providence Drive
Anchorage, Alaska 99504

UAFL University of Alaska, Fairbanks, Library
Fairbanks, Alaska 99701

USBM/J U.S. Bureau of Mines Library
Box 550
Juneau, Alaska 99802

USFWS U.S. Fish and Wildlife Service Library
1011 E. Tudor Road
Anchorage, Alaska 99503

USGS U.S. Geological Survey Library
Public Inquiries Office
508 W. 2nd Avenue
Anchorage, Alaska 99501

USNPS U.S. National Park Service
540 West 5th Avenue
Anchorage, Alaska 99501

PLEASE NOTE: THE PRECEDING PAGES WERE TREATED
AS A UNIT IN THE ORIGINAL DOCUMENT.

NOTE: At the time of this distribution, the reports from the Public Forum had not been received from the printers. As soon as they become available, the reports will be sent to you.

REVISED PROGRAM
COST ANALYSIS SUMMARY
by BUDGET COMPONENT

AGENCY	CATEGORY	code	
Office of the Governor	PROGRAM	09	Gen. Govt.
DIVISION	SUB-PROGRAM	91	Exec. Admin.
Policy Development &	ELEMENT	01	Exec Direction
Planning	SUB-ELEMENT	02	DPDP
		01	Statewide Planning

CODE	EXPENDITURE BY OBJECT	PRESENT AUTHORIZATION	REVISION INCREASE, (DECREASE)	AMENDED AUTHORIZATION
100	PERSONAL SERVICES	644,200		644,200
200	TRAVEL	39,900	5,000	44,900
300	CONTRACTUAL SERVICES	425,800	58,820	484,620
400	COMMODITIES	8,400		8,400
500	EQUIPMENT			
600	LANDS, BUILDINGS, NON-STRUCTURAL IMPROVEMENTS			
700	GRANTS, CLAIMS, SHARED REVENUE			
800	MISCELLANEOUS			
	INTER-AGENCY TRANSFERS (INCLUDED ABOVE)			
	TOTAL	1,118,300	63,820	1,182,120
NEW CODE	FEDERAL RECEIPTS	415,000	63,820	478,820
	REQUIRED GENERAL FUND MATCHING	137,500		137,500
	OTHER GENERAL FUND	390,800		390,800
	INTER-AGENCY TRANSFERS	175,000		175,000
	OTHER:			
	TOTAL	1,118,300	63,820	1,182,120
	PERMANENT FULL-TIME POSITIONS			
	PERMANENT PART-TIME POSITIONS			
	TEMPORARY (FULL-TIME EQUIVALENTS)			
	NUMBER OF MAN MONTHS			

(CURRENT FY)

	FY _____	FY _____	FY _____	FY _____	FY _____	FY _____
EXPENDITURES - TOTAL						
SOURCE OF FUNDS						
FEDERAL						
REQ. G.F. MATCH						
OTHER G. F.						
OTHER (SPECIFY)						

FY 80
DETAILED WORKPLAN for
REGIONAL STRATEGY

July 1979 - June 1980

GOALS:

- I. To establish Community Plans for all villages.
- II. To develop a background work for Regional Plan.
- III. To prepare Program Plans for Lands, Facilities, and Health/
Education/Social Services.
- IV. To establish a coordinated community & agency responses with
the Clearinghouse functions.
- V. To establish and assess the potential of various programs
and mechanisms for implementing the regional strategy.

Goal I: Community Plans

OBJECTIVES:

- A. Meet with all villages in region to explain regional strategy,
the planning process, and community planning objectives.
- B. Start all communities in a planning process.
- C. Assist five communities to complete preliminary plans, showing
preferred development locations, and land use designations.

Goal II: Regional Plan

OBJECTIVES:

- A. Develop a set of preliminary policies, (based on goals of
communities) by Fall of 1979.
- B. Coordinate the development of preliminary population
Projections during the Spring of 1980. (Based on earlier agency
research.)
- C. Determine preliminary needs priorities, (based on community plans)
by April of 1980.
- D. Coordinate overall economic development plan and facilities
plans with policies and needs statements from communities.

FY 80 WORKPLAN

-2-

Goal III: Program Plans

OBJECTIVES:

- A. Finalize drafts of Master Schedule, Program Directory, and Project Inventory for presentation to Steering Committee and participating agencies at Fall meeting, 1980.
- B. Distribute to Communities for review by Spring 1980
Community comments can then be passed on to agencies.
- C. Provide coordination between Program Task Forces (Lands, Facilities & Health). Procedures and products will be developed as on-going function throughout the year.
- D. Work with NANA Lands Dept. on community planning for adjacent lands.
- E. Hold Progress Meeting in the Fall of 1979 in Kotzebue for participating agencies.

Goal IV: Clearinghouse

- A. Finalize draft procedures for coordination, for presentation to Steering Committee in July, and participating agencies in the Summer, 1980.
- B. Circulate draft products from Regional Strategy for community and agency review.
- C. Provide State Clearinghouse with a list of strategy participants for wider circulation of A-95 proposals.

Goal V: Implementation Opportunities:

- A. Investigate programs which are useful for implementing the regional strategy, such as Coastal Management coordination, programmed facility construction, joint funding of projects, EDA coordination, etc.
- B. Develop specific objectives for detailed analysis in FY 81.

STRATEGY DOCUMENT OUTLINE

Background

Problem Definition

Process/Methodology

POLICIES

NEEDS PRIORITIES

SUMMARIES OF PLANS (Text, Charts, Maps)

- Community Plans
- Regional Plan
- Program plans for
Lands, Facilities, & Health/Education/Social Services

IMPLEMENTATION RECOMMENDATIONS

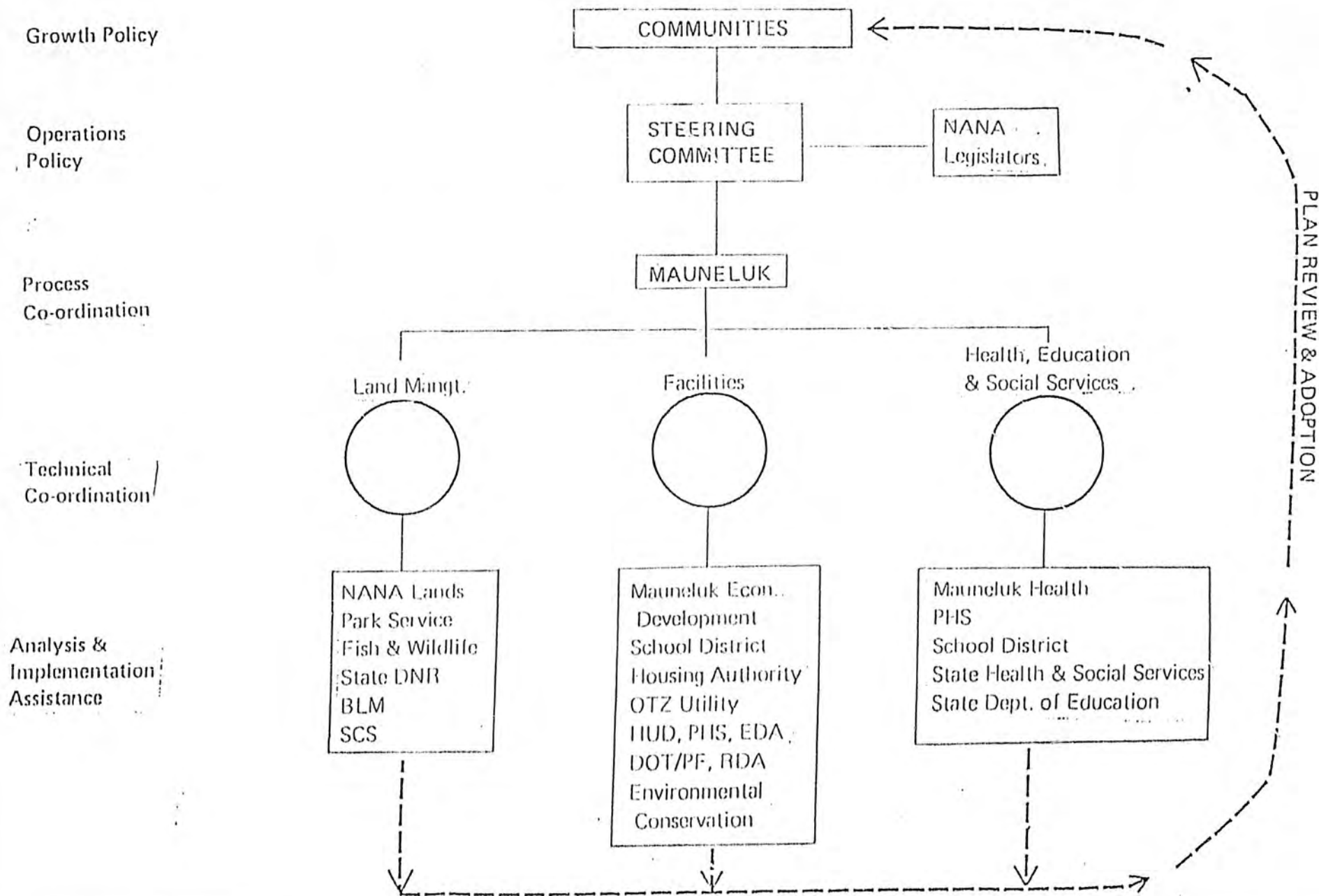
- Management Programs (e.g. Coastal Management)
- Regulations
- Sequenced Facility Agenda
- Coordination Mechanism (e.g. Clearinghouse or Review Board)
- Recommended Studies

IMPLEMENTATION STRUCTURE

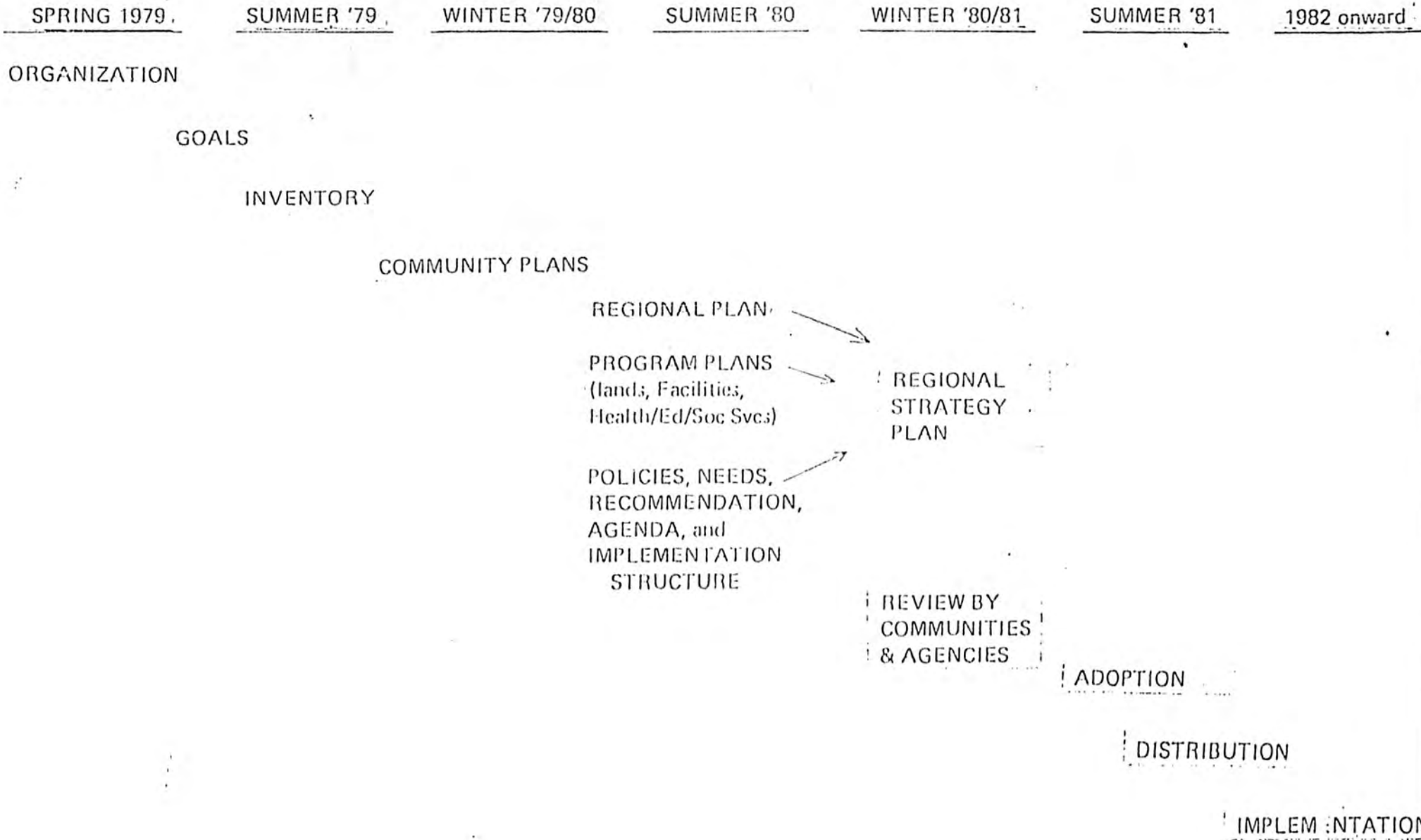
- Organization of Communities and/or Agencies for Ensuring that Recommendations are followed and plan is Updated.

NANA DEVELOPMENT STRATEGY

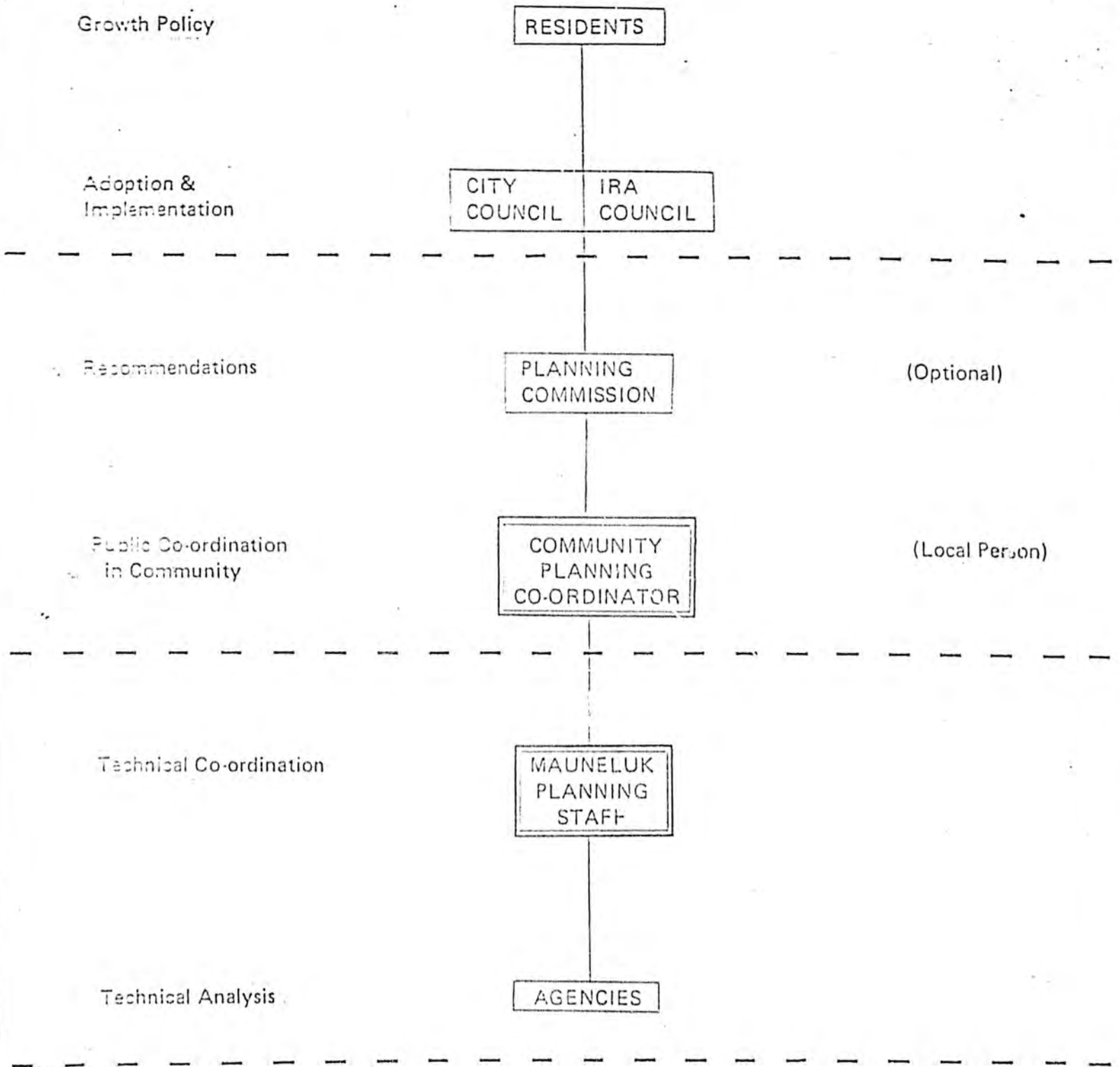
ORGANIZATION FOR REGIONAL PLANNING



NANA REGIONAL STRATEGY PROCESS



NANA DEVELOPMENT STRATEGY
ORGANIZATION FOR COMMUNITY PLANS



REGIONAL STRATEGY BUDGET

	CRA	OTHER	TOTAL
Personnel	24,000	6,000	30,000
Fringe @15%	3,600	900	4,500
Travel	3,228	772	4,000
L.D. Telephone	-0-	800	800
Supplies	-0-	500	500
Copies	-0-	500	500
Postage	-0-	200	200
Contractual	14,000	16,000	30,000
In-direct (58.3% based on salaries)	13,992	3,498	17,490
Total Budget	<u>58,820</u>	<u>28,970</u>	<u>87,790</u>

TOTAL PROJECT COSTS	\$ 87,820
Local Matching Funds @53%	28,970
TOTAL REQUEST	<u>\$ 58,850</u>

Description of Local Matching Funds

1. Personnel \$6,000, Fringe benefits \$900 and in-direct \$3,498, total \$10,398. This will be budgeted in our BIA 95-638 Tribal Operations Contract.
2. Long distance telephone \$800, travel \$772, supplies \$500, copies \$300, postage \$200, total \$2,572. This will be local cash from organization based in Kottzebue.
3. Contractual \$10,000. This will be in-kind match provided by NANA Regional Corporation, Lands Division.
4. Contractual \$6,000. This is a grant given by the BIA to the Forestry service under PL 95-638 on behalf of the region for vegetative mapping study of Native Allotted and selected lands located in the NANA Region.

Total Local Unmatching Funds \$ 28,970

PLEASE NOTE: THE FOLLOWING PAGES WERE TREATED
AS A UNIT IN THE ORIGINAL DOCUMENT.

STATE OF ALASKA

DEPT. OF COMMUNITY & REGIONAL AFFAIRS

DIVISION OF COMMUNITY PLANNING

Low good name Reg Strategy
JAY S. HAMMOND, GOVERNOR

225 CORDOVA, BUILDING B
ANCHORAGE, ALASKA 99501

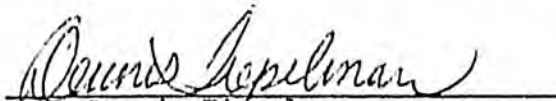
We are pleased to provide you with the enclosed progress report for the first year of the NANA regional strategy. This progress report summarizes activities undertaken during the past year, identifies key issues to be addressed in the regional strategy and proposes a management framework within which the regional strategy will evolve over the next several years.

Attached as appendices to the progress report are several reports produced in conjunction with the regional strategy. The Alaska Public Forum conducted a survey in the NANA region to elicit resident attitudes about several issues of local and regional significance, including subsistence, employment and community ties. The resulting information was used to develop goals and objectives for the regional strategy. An index and bibliography of existing information on the NANA region was developed to provide a single reference source and a focal point for future data collection and research efforts in the NANA region.

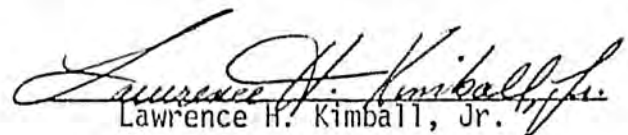
The first year of the regional strategy was high-lighted by the cooperation and assistance of a number of individuals, governmental agencies and other public and private entities. Such cooperation is central to the entire regional strategy concept; successful development of the strategy will depend upon continued cooperation from all individuals, agencies and organizations with responsibilities in the NANA region.

We trust you will find the enclosed information useful. We encourage your application of these materials should you have the opportunity to work in or near the NANA region. We stand ready to assist you in your efforts and to provide additional information if requested. It is our firm conviction that open dialogue and free interchange of ideas will prove mutually beneficial to all concerned.

✓ It is also important to note that the regional strategy was conceived as an ongoing, dynamic process. This progress report marks more the beginning of the second year's effort than the end of the first. Enclosed with this letter is the work program for the second year of the regional strategy. We encourage your use of it and your response to it. Please feel free to contact either Mauneluk Association or the Division of Community Planning for further information. We are appreciative of those whose past assistance has been valuable to this important effort and look forward to continued assistance in our future endeavors.



Dennis Tiepelman
President
Mauneluk Association



Lawrence H. Kimball, Jr.
Director
Division of Community Planning

PROGRESS REPORT
NANA REGIONAL STRATEGY

INTRODUCTION

The NANA Regional Strategy is a cooperative effort between the Federal, State, local governments, and private corporations to formulate an overall management program for the NANA Region. The management program will provide a guide for planning, construction, and delivery of programs and facilities for community development, economic development, transportation, and land management. The project may soon include health, education, and social services. To the extent that these last three (3) involve construction of facilities and land, they will already be involved.

The Regional Strategy will provide:

- ✓ 1. A coordination mechanism.
- ✓ 2. Facility programming assistance.
- ✓ 3. Regional development policies.
- ✓ 4. A continuing planning process.
- ✓ 5. Projections.
- ✓ 6. A set of projects appropriate for and consistent with local needs and conditions.

✓ In short, the Regional Strategy will provide a mechanism to tie together the programs in the region, including Coastal Management, so that projects are formulated as an integrated set, consistent with the goals, objectives, and policies of the region. For the NANA Region, this would mean a package

of programs and projects which would promote regional self-sufficiency, subsistence protection, facilities within local ability to pay life cycle costs, local training and employment in appropriate sectors, and protection of future options.

Feasibility of the process will depend on as little deviation as possible from established procedures and mechanisms.

Implementation will require continuing coordination between agencies and communities. Coordination will be provided by Mauneluk, whose role will be to provide a central coordination point, prepare supporting information such as projections, help villages prepare long-term management plans, consolidate and distribute agency planning and programming information, establish agreements and commitments, and coordinate preparation of the final document. Coordination will also be through the A-95 Clearinghouse. Federal and State agencies will be expected to continue present planning efforts, submit requested information, comment on proposals, and participate in task force planning sessions. Communities will be expected to comment on proposals, prepare community land-use and facility plans with technical assistance and review the final strategy document.

*Who will operate A-95
Regional office
Land Agency*

The products of the strategy will include the following:

1. Summaries of existing information.
2. Data gaps.
3. Long-term projections and scenarios.
4. Maps of preferred development locations.
5. Upgraded data base.
6. A master schedule of proposed projects.
7. Lists of development issues.
8. An implementation agenda.

The implementation agenda will include recommended agency and community actions for a several year period. The implementation agenda will include a prioritized list and sequence for:

1. Facility construction.
2. Regulation changes.
3. Allocation changes.
4. Program changes.
5. Future studies.
6. Joint funding opportunities.
7. Proposed legislation.

Recommendations will be based on needs assessments and priority lists developed with the communities earlier in the process. The recommendations for meeting the needs will be based on comments from communities and agencies. A board of communities will be able to clarify the character and the extent of problems and provide local policy guidance.

Benefits of participation by agencies will be 1) improved information sharing, 2) economies of scale, 3) improved administrative efficiency, 4) targeted service delivery, and 5) accelerated permitting. For communities, the strategy provides 1) improved access to State and Federal planning and decision making processes, 2) influence on decisions, 3) an organized approach. Eventually these opportunities could lead to expanded program allocations, improved technical assistance, and improved effectiveness of programs.

Experience to date has demonstrated that most agencies are willing to cooperate. The Department of the Interior has incorporated subsistence policies into its land management regulations, the Public Health Service has opened up its facility design process to greater public involvement and new ideas, and the Alaska Public Forum has helped formulate a neutral

set of goals, accurately reflecting the attitudes and positions observed by residents at the public meetings.

The U.S. Soil Conservation Service has offered to provide soil surveys to every community in the region within a single year, including assessments of engineering and land use suitability. The Bureau of Indian Affairs (BIA) has provided cooperative study money to the U.S. Forest Service for a forest inventory and assessment which could become the foundation for further community development projects. The U.S. Fish and Wildlife Service has cooperated in reviewing with the Bureau of Land Management (BLM) the availability of timber on the proposed Selawik National Wildlife Refuge for local harvesting for log homes in Selawik. Economic development projects such as timber harvesting, distribution, and milling could be fostered by use of NANA lands and funding of mills by the Economic Development Administration (EDA). Secondary effects of such programs will help achieve goals of regional self-sufficiency by substituting wood for oil in household heating, provide employment opportunities, reduce imports of lumber and labor from outside the region, and reduce the costs of materials for future development projects.

The NANA Lands Department is providing land planners to accompany the Regional Strategy staff to over twenty (20) community meetings, so communities can plan land management to meet goals of local economic development, community population growth and facility needs, and subsistence protection. Assistance will be provided by NANA in preparation of resource maps on land ownership and gravel resources. NANA will also establish consistent procedures for gravel removal, purchasing, and usage for community development projects. Gravel shortage is a limiting factor for development projects such as transportation, community buildings,

housing projects, and water and sewer. The Department of Transportation & Public Facilities (DOT/PF) is contributing financially to help with such work. DOT/PF is also considering other means of obtaining gravel to help on development projects.

Other agencies have offered to make similar efforts to adjust policies, accelerate schedules, and increase allocations. The willingness demonstrated by agencies to adjust their programs to fit with the regional strategy is an affirmation of the feasibility of a cooperative approach. If the rest of the project continues with this kind of cooperation, substantial benefits will be achieved. So far it appears probable that future cooperation will even exceed original expectations in some categories. There have been some difficulties in communication among the twenty (20) agencies and eleven (11) communities, but we expect these to be worked out during the course of the project.

DRAFT GOALS AND OBJECTIVES

(Formulated by the Alaska Public Forum and Maameluk Association)
To be submitted to communities for review.

OVERALL QUALITY OF LIFE GOALS.

1. TO MAINTAIN FREEDOM OF CHOICE IN LIFESTYLE: WHETHER SUBSISTENCE, CASH ECONOMY OR BOTH;
2. TO MAINTAIN THE CULTURE OF THE INUPIAT PEOPLE;
3. TO PROTECT FISH AND GAME RESOURCES FOR SUBSISTENCE USE;
4. TO MAXIMIZE LOCAL CONTROL IN DECISIONS WHICH AFFECT LOCAL PEOPLE;
5. TO INSURE THAT THE COSTS AND BENEFITS OF COMMUNITY OPTIONS ARE PRESENTED TO THE COMMUNITY BEFORE DECISIONS ARE MADE;
6. TO ENCOURAGE THE FULL DEVELOPMENT OF THE HUMAN POTENTIAL OF NANA RESIDENTS;
7. TO IMPROVE COMMUNICATIONS AMONG VILLAGES SO THAT MUTUAL PROBLEMS AND POTENTIAL SOLUTIONS MAY BE SHARED;
8. TO ELIMINATE ALCOHOLISM IN THE REGION.

These goals provide the overall framework for planning in the NANA Region. Subsistence remains a key element in the lives of all communities in the NANA Region. Employment is being perceived as increasingly important to pay for basic goods and services. The survey results and village workshops repeatedly emphasized the desire of individuals, families and villages to pursue both subsistence and cash economy activities. To meet those needs, planning for government programs and development projects must be presented in a manner that allows choices to be clearly identified by each community. Time must be allocated in the planning process to allow adequate public involvement in decision making that affects local people. This includes time:

- a. To assess and to digest information.
- b. To discuss the advantages and disadvantages of various options.
- c. To discuss the consequences of any actions.

COMMUNITY SERVICE GOALS

1. TO PROVIDE FAST AND EFFICIENT MEANS OF LOCATING MISSING PERSONS.

Objective:

- a) Improve the regional system of search and rescue for people in need of aid;
- b) Establish communication links to assure responsive and efficient rescues.

2. TO ENCOURAGE THE ACQUISITION AND USE OF ONLY EFFICIENT AND RELIABLE UTILITIES. THESE UTILITIES SUCH AS WATER, SEWER, AND ELECTRIC GENERATORS, MUST BE APPROPRIATE TO THE ENVIRONMENT, THE NEED, AND VILLAGE ABILITY TO OPERATE AND MAINTAIN THEM.

Objectives:

- a) Allow each community the opportunity to have safe, sanitary waste disposal systems provided within their fiscal means;
- b) Provide electrification at a reasonable cost to users;
- c) Ensure that each community is presented with the cost and complexity of operations and maintenance of all new facilities before they are built.

3. UPGRADE THE QUALITY OF CRIMINAL JUSTICE AND PUBLIC SAFETY SERVICES PROVIDED IN THE NANA VILLAGES.

Objectives:

- a) Explore methods for expansion of jail facilities and local police;
- b) Explore methods to expand local ability to handle firefighting.

TRANSPORTATION GOALS

1. TO PROVIDE A RELIABLE, ALL WEATHER TRANSPORTATION SYSTEM, AT REASONABLE COST IN THE NANA REGION.

Objectives:

- a) Design options to minimize the cost of transporting fuel to villages;
- b) Study the effects of frequency of transportation service on costs of moving goods and people;
- c) Strive to provide a safe, dependable trail network in the region.

2. TO INCREASE THE DEGREE OF SAFETY IN AIR TRANSPORTATION SYSTEMS.

Objectives:

- a) Evaluate the current system for collection and dissemination of weather information from villages;
- b) Explore ways to improve navigation into village air strips;
- c) Provide for adequate, reliable, year round air strip maintenance.

3. TO IMPROVE THE SAFETY AND CONVENIENCE OF TRAVELERS IN THE REGION.

Objectives:

- a) Explore ways to improve the safety of winter travel between villages;
- b) Design options to increase convenience of airplane passengers awaiting flights.

4. INCREASE LOCAL INFLUENCE ON LOCAL TRANSPORTATION DECISIONS.

Objectives:

- a) Ensure that opinions and comments of community people are included in all decisions affecting the region before beginning transportation project;

- ✓ b) Encourage government agencies to coordinate their planning with regional organizations such as Mauneluk Association and NANA Regional Corporation.

5. IMPROVE ACCESS TO VILLAGE WASTE DISPOSAL SITE.

EMPLOYMENT GOALS

1. TO PROVIDE EMPLOYMENT OPPORTUNITIES IN THE NANA REGION.

Objectives:

- a) To ensure maximum local hire on development projects in each village;
- b) To minimize conflicts between scheduling the availability of employment opportunities and the pursuit of subsistence activities;
- c) Create employment in seasons when there normally is none;
- d) Encourage the development of employment opportunities which allow periodic return to communities.

2. TO DEVELOP LOCAL TRAINING PROGRAMS FOR REGIONAL EMPLOYMENT OPPORTUNITIES.

Objectives:

- a) Encourage the school district to develop its curriculum in such a manner that High School courses offered are relevant to employment opportunities available;
- b) Provide opportunities for village residents to gain employment skills in their communities;
- c) Assure the provisions of local training programs in any economic development projects in the NANA Region;
- d) Encourage the transfer of traditional skills (e.g., boat and sled building, arctic survival and subsistence skills, customs, crafts, etc.) to young people.

SOCIAL GOALS

1. TO FOSTER A STRONG, HEALTH, COMMUNITY ENVIRONMENT IN THE NANA REGION

Objectives:

- a) To encourage family participation in community activities;
- b) Reduce the dependence on alcohol and drugs;
- c) Increase the level of independence, self-reliance and pride.

2. TO IMPROVE AND MAINTAIN THE HEALTH OF THE NANA PEOPLE.

Objectives:

- a) To minimize disease and health problems through the study of alternatives such as prevention programs;
- b) To provide high quality, locally available health services;
- c) To supply each community with an adequate number of well-trained health aides;
- d) Improve telecommunications between village health aides and medical personnel in Kotzebue.

3. TO ENCOURAGE THE DEVELOPMENT OF THE HIGHEST QUALITY LOCAL GOVERNMENT FOR EACH COMMUNITY IN THE REGION.

Objectives:

- a) To improve local management capabilities;
- b) To maximize cooperation and communication between city administrations and local IRA (traditional) councils;
- c) To maximize public participation in local and regional decisions.

4. TO PROVIDE MEANINGFUL, ENRICHING, EDUCATIONAL OPPORTUNITIES FOR ALL NANA RESIDENTS.

Objectives:

- a) To assure continued communication between the School Board and the village residents on issues such as local needs and curriculum;
- b) To enhance student and teacher motivation towards quality education;
- c) To provide diverse educational opportunities for students and adults.

HOUSING GOALS

1. TO PROVIDE SAFE, EFFICIENT, HOUSING AT REASONABLE COST FOR NANA RESIDENTS.

Objectives:

- a) Secure housing which is energy efficient in design;
- b) Provide flexibility in choice of building materials and fuel source;
- c) For prospective public housing residents, increase information about monthly costs associated with those homes;
- d) Assure that the distribution of low-income housing is equitable among villages in the NANA Region;
- e) Provide new housing to those in most need;
- f) Ensure that comments of local people are included in developing housing projects in their community.

APPENDIX A SCOPE OF SERVICES

This contract covers the second year of a three-year effort to develop a regional strategy. The first year consisted of developing processes to initiate the following tasks: issue identification, regional goals formulation, organization development, detailed work-planning, community education, and formulation of the planning process itself. The second year will focus on 1) identification of communities' preferred development locations and policies, and 2) the continued development of a regional strategy based on goals, priorities, policies and plans identified earlier. The third year will be completion of the plans, preparation of an implementation agenda, and review by communities.

The second year will apply the first year's goals, survey results, and planning process to the preparation of generalized community land use plans, and will relate these in a regional context, based upon regional goals, issues and policies.

I. Community Development Plan

Since the strategy is an early step in the long-range planning program of the region, much detailed development planning will take place in future years. All communities will be started this year. Products this year will be maps and texts showing preferred and feasible locations of future land uses and facilities in both the municipality and surrounding lands.

At least two sets of meetings will be held in each village. Community meetings will be conducted with the NANA Lands Department to review each district's economic development potential. These meetings will be with the city and IRA councils, staff and public to discuss:

1. Potential growth rates and patterns
2. Local development issues and housing and capital facility needs.
3. Local data collection needs.
4. Preferred development locations
5. Planning Process
6. A program for further local planning and implementation.

As a prelude to further planning, technical assistance will be provided to City and IRA staff by Mauneluk or coordinated through Mauneluk for the following:

1. Agency responsibilities and contact persons.
2. Identification of data needed for local planning and how to acquire it.
3. How to use the information for improved development planning.
4. Setting up consolidated record systems for land use maps, facility as-built plans, and other useful development data.

Products of the community meetings will be:

1. Local Issues List for each community.
2. A Status Report for each community, including map and text on preferred land uses and facility locations.
3. Carrying capacity of local facilities and selected resources.

Plans will be based where possible, on available data such as:

1. Flood plain location
2. Topography
3. Potential erosion areas
4. Land status and tenure
5. Soils and permafrost
6. Access
7. Proximity to utilities
8. Other data, as suggested in original scope-of-services.

This will result in preferred development plans which are based upon data that is available prior to plan preparation. Several communities are lacking basic data, such as soil surveys, so local decisions in those communities will have to be made on the basis of secondary data, such as PHS geologist reports, where available. It is assumed that further planning assistance will be provided to those communities under separate projects at a later date to make more complete use of new data.

II. Data Collection

Arrangements will be finalized with agencies for collecting or providing the following:

1. Soil surveys for all villages in FY-80 (except Kotzebue, Kobuk, and Deering, which already have surveys.)
2. Gravel resource maps
3. Land ownership maps
4. Topographic orthophoto quads
6. Vegetation assessment

Data used in other recent studies will also be examined, such as that collected on economic development, facilities, population, physical characteristics, and regional transportation costs for the Western Arctic Transportation Study.

Housing needs will be inventoried by examining appropriate authorities or sources, such as application records for the BIA Housing Improvement Program, and HUD Housing. Projections of future housing and facility needs will be based on population projections.

III. Projections

Projections will be prepared during FY-80 for the following:

1. Alternative scenarios of economic development.
2. Population growth due to natural demographic increase.
3. Population in-migration due to economic development.
4. Needs assessments.

Population projections will be sub-contracted to a consultant with experience both in the NANA Region and in technical forecasts related to recent developments in Alaska. Prior to consultant work, Mauneluk will:

1. Gather and organize existing data.
2. Sort population into age and sex categories.
3. Review other population forecasts for the region.
4. Develop procedures for a village-by-village census by the school district. (U.S. Census results will not be available until 1971.)

The consultant will then conduct the calculations of future population growth.

The consultant may also be asked to calculate facility and service needs. This is dependent upon the availability of standards suitable for emerging local policies on facility needs, appropriate technology, alternative energy sources, and other factors affecting service standards.

IV. Strategy Formulation

Agencies will be coordinated through three task forces--1) Lands 2) Facilities, and 3) Health/Education/Social Services. These task forces will engage in a joint review process, and assist in preparation of materials for the regional planning process.

Participating agencies will be asked to:

1. Review local goals and policies.
2. Review local problem statements.
3. Review community plans.
4. Develop evaluation criteria for projects.
5. Evaluate project proposals for consistency.
6. Analyze alternative means of overcoming barriers to achieving needs of the region's population. For example:
 - a. Financial barriers (by joint funding and other means)
 - b. Institutional barriers (by guidelines flexibility etc.)
 - c. Economic barriers (by infrastructure, market development, training, and education programs.)
 - d. Regulatory restrictions (by adjusting regulations or introducing legislative changes.)
7. Assist in "scoping" of potential impact problems.
8. Contribute available data.
9. Assist in preparation of background material which would be useful in a regional plan.
10. Jointly develop an implementation agenda.

The joint review process and implementation agenda will carry over into the third year.

The implementation agenda, prepared by each task force, will be a prioritized list and sequence of;

- 1) Study needs,
- 2) facility construction
- 3) funding priorities
- 4) new programs, and
- 5) Identified legislative and/or regulation changes, as appropriate.

The joint agency approach is expected to improve agency understanding of local problems, bring to bear agency expertise, and encourage agreement and further cooperation. Communities will review all products of task force efforts.

Agencies will be able to review project proposals through the A-95 Clearinghouse after consistent evaluation criteria have been set. To facilitate this review process, Mauneluk agrees to:

1. Send the State Clearinghouse a list of Strategy participants.
2. Develop a list of key words to be used by the Clearinghouse in a proposal title which may indicate that certain communities need to receive copies. (e.g., Kivalina-Red Dog, Wulik, Chukchi Sea OCS, Cape Thompson)
3. Assist communities to prepare comments for A-95 proposals, to improve local capability to respond.

V. Management System

The management system started in the first year will be continued and updated. Products will be:

1. Master Schedule of all proposed capital projects; also eventually research projects
2. Project Inventory
3. Program Directory
4. Regional Accounts on capacity and condition of village utilities, based on available information.

A procedure shall be developed for annual updating/and review by affected entities.

VI. Implementation Mechanisms

Investigation of implementation mechanisms will include:

1. Close work with the Coastal Resource Service Area Board.
2. Informal review at Mauneluk of local or regional entities which could assume certain program delivery responsibilities.
3. Investigate the establishment of the NANA Region as a planning service area.

Budget

The budget allocations for this second year effort are as follows:

<u>Total Budget</u>	<u>State Share</u>	<u>Local Match</u>
\$ 87,790	\$ 58,820	\$ 28,970

Of this total of \$87,790, one-third (33%) or \$28,970 will be provided by Mauneluk Association as local match. The amount of match provided as contractual shall be specified by written contracts or memoranda of understanding, indicating schedules and final products expected. These contracts or memoranda shall be submitted for Department review prior to execution.

Progress Report

The final product of this year's program will be a progress report detailing tasks undertaken, work elements completed and status of work started that is expected to carry over into the next year. The relationship between the first year's work and this year's shall be succinctly and thoroughly described. A work program for FY81 shall be developed and incorporated into the progress report.

The progress report shall address the major tasks as identified previously in the work program:

- I. Community Development Plans
- II. Data Collection
- III. Projections
- IV. Strategy Formulation
- V. Management System
- VI. Implementation Mechanisms

Separate reports or studies produced in conjunction with the regional strategy shall be referenced in the progress report and, where appropriate, included with it as appendices. Key maps produced (individual or composite, whichever is more useful) shall be included in the progress report, either full size or reduced, as appropriate and as funding permits.

A draft of the progress report shall be submitted to the Department for review by May 9, 1980. Written comments shall be returned by May 23, 1980. The camera-ready copy shall be submitted for review by June 6, 1980; written comments shall be returned by June 13, 1980. The progress report shall be printed, in quantity by June 30, 1980. A total of 350 progress reports, including appendices, shall be printed, of which 250 shall be provided the Department. Two sets of blueines and one set of mylar reproducibles of maps produced shall also be provided the Department.

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NANA REGIONAL STRATEGY FIRST YEAR PROGRESS REPORT

	<u>PAGE</u>
INTRODUCTION	1
BACKGROUND	5
OUTLINE OF PROGRESS	7
DETAILED DISCUSSION	
Regional Goals Formulation	8
Issues Identification	18
Data Base Identification	21
Program Inventory	23
Organization Development	33
Process Formulation	40
Community Information & Education	46
Data Collection Agreements	47
Carrying Capacity	48
APPENDICES	
Survey Results Summary	
Bibliography and Index Information on the NANA Region	
Past Facility Priorities	
Selected Responses From Program Inventory	



MEMBER VILLAGES

Ambler, Buckland, Deering, Kiana, Kivalina, Kobuk, Kotzebue, Noatak, Noorvik, Selawik, Shungnak

The preparation of this progress report was financed in part through a comprehensive planning grant from the Department of Housing and Urban Development, under the provisions of Section 701 of the Housing Act of 1954, as amended, and the Division of Community Planning, Department of Community and Regional Affairs of the State of Alaska.

June, 1979

PROGRESS REPORT
NANA REGIONAL STRATEGY

INTRODUCTION

The NANA Regional Strategy is a cooperative effort between the Federal, State, local governments, and private corporations to formulate an overall management program for the NANA Region. The management program will provide a guide for planning, construction, and delivery of programs and facilities for community development, economic development, transportation, and land management. The project may soon include health, education, and social services. To the extent that these last three (3) involve construction of facilities and land, they will already be involved.

The Regional Strategy will provide:

1. A coordination mechanism.
2. Facility programming assistance.
3. Regional development policies.
4. A continuing planning process.
5. Projections.
6. A set of projects appropriate for and consistent with local needs and conditions.

In short, the Regional Strategy will provide a mechanism to tie together the programs in the region, including Coastal Management, so that projects are formulated as an integrated set, consistent with the goals, objectives, and policies of the region. For the NANA Region, this would mean a package

of programs and projects which would promote regional self-sufficiency, subsistence protection, facilities within local ability to pay life cycle costs, local training and employment in appropriate sectors, and protection of future options.

Feasibility of the process will depend on as little deviation as possible from established procedures and mechanisms.

Implementation will require continuing coordination between agencies and communities. Coordination will be provided by Mauneluk, whose role will be to provide a central coordination point, prepare supporting information such as projections, help villages prepare long-term management plans, consolidate and distribute agency planning and programming information, establish agreements and commitments, and coordinate preparation of the final document. Coordination will also be through the A-95 Clearinghouse. Federal and State agencies will be expected to continue present planning efforts, submit requested information, comment on proposals, and participate in task force planning sessions. Communities will be expected to comment on proposals, prepare community land-use and facility plans with technical assistance and review the final strategy document.

The products of the strategy will include the following:

1. Summaries of existing information.
2. Data gaps.
3. Long-term projections and scenarios.
4. Maps of preferred development locations.
5. Upgraded data base.
6. A master schedule of proposed projects.
7. Lists of development issues.
8. An implementation agenda.

The implementation agenda will include recommended agency and community actions for a several year period. The implementation agenda will include a prioritized list and sequence for:

1. Facility construction.
2. Regulation changes.
3. Allocation changes.
4. Program changes.
5. Future studies.
6. Joint funding opportunities.
7. Proposed legislation.

Recommendations will be based on needs assessments and priority lists developed with the communities earlier in the process. The recommendations for meeting the needs will be based on comments from communities and agencies. A board of communities will be able to clarify the character and the extent of problems and provide local policy guidance.

Benefits of participation by agencies will be 1) improved information sharing, 2) economies of scale, 3) improved administrative efficiency, 4) targeted service delivery, and 5) accelerated permitting. For communities, the strategy provides 1) improved access to State and Federal planning and decision making processes, 2) influence on decisions, 3) an organized approach. Eventually these opportunities could lead to expanded program allocations, improved technical assistance, and improved effectiveness of programs.

Experience to date has demonstrated that most agencies are willing to cooperate. The Department of the Interior has incorporated subsistence policies into its land management regulations, the Public Health Service has opened up its facility design process to greater public involvement and new ideas, and the Alaska Public Forum has helped formulate a neutral

set of goals, accurately reflecting the attitudes and positions observed by residents at the public meetings.

The U.S. Soil Conservation Service has offered to provide soil surveys to every community in the region within a single year, including assessments of engineering and land use suitability. The Bureau of Indian Affairs (BIA) has provided cooperative study money to the U.S. Forest Service for a forest inventory and assessment which could become the foundation for further community development projects. The U.S. Fish and Wildlife Service has cooperated in reviewing with the Bureau of Land Management (BLM) the availability of timber on the proposed Selawik National Wildlife Refuge for local harvesting for log homes in Selawik. Economic development projects such as timber harvesting, distribution, and milling could be fostered by use of NANA lands and funding of mills by the Economic Development Administration (EDA). Secondary effects of such programs will help achieve goals of regional self-sufficiency by substituting wood for oil in household heating, provide employment opportunities, reduce imports of lumber and labor from outside the region, and reduce the costs of materials for future development projects.

The NANA Lands Department is providing land planners to accompany the Regional Strategy staff to over twenty (20) community meetings, so communities can plan land management to meet goals of local economic development, community population growth and facility needs, and subsistence protection. Assistance will be provided by NANA in preparation of resource maps on land ownership and gravel resources. NANA will also establish consistent procedures for gravel removal, purchasing, and usage for community development projects. Gravel shortage is a limiting factor for development projects such as transportation, community buildings,

housing projects, and water and sewer. The Department of Transportation & Public Facilities (DOT/PF) is contributing financially to help with such work. DOT/PF is also considering other means of obtaining gravel to help on development projects.

Other agencies have offered to make similar efforts to adjust policies, accelerate schedules, and increase allocations. The willingness demonstrated by agencies to adjust their programs to fit with the regional strategy is an affirmation of the feasibility of a cooperative approach. If the rest of the project continues with this kind of cooperation, substantial benefits will be achieved. So far it appears probable that future cooperation will even exceed original expectations in some categories. There have been some difficulties in communication among the twenty (20) agencies and eleven (11) communities, but we expect these to be worked out during the course of the project.

BACKGROUND

The NANA Region is the area covered by the Northwest Alaska Native Association. The region includes the drainage of the Noatak, Kobuk, Selawik, Buckland, and Wulik Rivers; the western Brooks Range, and the Seward Peninsula to Cape Espenberg on the Chukchi Sea. The region extends to the North Slope Borough boundary between Kivalina and Point Hope.

Eleven (11) communities exist in the NANA Region. Most are almost entirely Innupiat Eskimo. The communities are each isolated, connected only by air service by light plane to Kotzebue. Kotzebue is the regional transportation center and has a white population comprising 15% of the community. Until recently, townsite land management decisions were made

by a federal trustee.

Most people rely on a combination of part-time seasonal employment, commercial fishing, subsistence hunting and fishing, and governmental transfer payments. This makes the role of Federal and State development and land management decisions of crucial significance to the well-being of the regions residents.

Six (6) monuments or refuges are proposed for the region -- Gates of the Arctic, Noatak National Preserve, Kobuk Valley National Monument, Selawik National Wildlife Refuge, Cape Krusenstern National Monument, and Bering Land Bridge National Monument. The land management agencies of these lands are the National Park Service and the Fish & Wildlife Service. The combined lands managed by the State and Federal government will constitute almost two-thirds (2/3) of the region's land base, so their local hire policies on concessions and subsistence will affect the economy of the region. Economic development must take place on the NANA lands and State and Federal lands if the regions social and economic condition is not to stagnate and the residents go on permanent welfare.

Most agencies recognize the need to take the responsibility of some development and training to the extent agency policies will allow.

Social development will follow goals of local control and self-determination, which will require substantial training and technical assistance to upgrade local management capability.

Other agencies in facility and service delivery programs are interested in improving their programs, mostly through more coordinated capital facility programming.

As a result of meetings of NANA and Mauneluk over the past several years with communities in the NANA Region, regional leaders requested from

the Governor region-wide planning assistance. The Governor's Office obtained assistance from the U.S. Department of Housing and Urban Development, for funding a work plan developed by the State Department of Community & Regional Affairs - Division of Community Planning. Maunleuk was contracted to coordinate the development of the plan.

Formulation of a new kind of planning program has required considerable time for designing a process by which a strategic plan would be prepared and capital facilities programming coordinated. Therefore, the bulk of the first year's efforts were spent formulating a feasible process for coordinating so many agencies, trying alternative mechanisms, discussing acceptable approaches with community and regional leaders, gathering background information, and identifying existing activities, which could be forged into a strategy.

This progress report describes the work of the year and some of the frustrations, and provides samples of some of the intermediate products. Much of the text describes the structure and process for work during the second and third years, as these are important results that need to be distributed to as many agencies and communities as possible.

OUTLINE

The first year of the Regional Strategy consisted of work on the following:

1. Regional goals formulation.
2. Issues identification.
3. Data base identification.
4. Program inventory.

5. Organization development.
6. Process formulation.
7. Community information and education.
8. Data collection agreements.
9. Research on carrying capacity as a management concept.

Early this year, the Governor's Division of Policy Development & Planning sent the original workplan which was developed by the Department of Community and Regional Affairs to all agencies having potential programs in the region. An orientation meeting was held in Kotzebue to provide agencies with an overview of the project. The purpose was to have them hear the local and regional interpretations of past and pending community development problems, and to exchange information on programs.

Prior to the meeting, agencies were sent questionnaires asking for lists of programs, projects, data being collected, facilities being constructed, public participation schedules, and data distribution formats. The responses were limited in depth and scope.

The meeting was followed by activity by Community and Regional Affairs, Mauneluk Association, NANA Regional Corporation, and others in organizing and contracting imminent work and hiring a project planner.

1. Regional Goals Formulation

A survey was conducted in the Fall and Winter of 1978 to determine the goals and objectives of the region's residents relating to development. The purposes of the survey were to 1) develop a basis for identification of regional goals, and 2) develop a data base useful to the agencies operating in the region. A consolidated approach was used with an inter-agency panel, to ensure that just one (1) survey was conducted rather than the usual flood of surveys.

The Alaska Public Forum, an arm of the Governor's Office, was contacted to help with a goals setting process and to administer the survey. The interagency panel mentioned above was involved in the writing and final review of the survey questionnaire.

The survey was administered to three-hundred and fifty-five (355) residents in the eleven (11) communities in the region. Results of the survey were distributed to several agencies in hard copy with reference copy being retained on file at the Mauneluk Association office in Kotzebue. The entire set of results is on computer storage at the University of Alaska in Fairbanks, with the Institute for Social and Economic Research. Access to the survey data is possible by contacting Mauneluk Association for a copy of the original questionnaire and coordinating the project with the region.

At a series of community meetings, residents were told of the outcome of that survey. The meetings also provided the occasion to obtain additional issue information. Some of the original survey questions were re-asked in order to determine if they had been understood by the community. One such question had to do with the willingness to pay for facilities and service. A game was used to elicit the preferences in each community. Residents were grouped into "households" and given a fixed amount of money approximating the budget of a local household. They were shown a list of available and contemplated services, along with associated costs. Those attending were then asked to determine how they would allocate their money when faced with constraints of insufficient funds.

The exercise was an important research tool because it 1) related costs normally hidden from individuals, costs which are sometimes absorbed by municipalities and agencies; 2) required individuals to make the same

decisions facing municipal councils; and 3) provided a demonstration of the cumulative costs of expanding governmental services. The game was limited in that it did not portray all the costs facing a household nor all the services and programs a community might need. Dosts also have been limited in representing the final costs of facilities. The summary of the entire project is available from Mauneluk Association.

Results of the survey, community meetings, and past planning documents and statements of problems by mayors, councils, and staff were used to formulate statements of goals and objectives. The attached statement of goals and objectives was developed by the Alaska Public Forum and Mauneluk Association and has been tentatively approved by the Steering Committee and regional leaders. These goals and objectives will be submitted as a draft to communities for their review. The goals and objectives will be discussed during community meetings this winter.

DRAFT GOALS AND OBJECTIVES

(Formulated by the Alaska Public Forum and Mauneluk Association)
To be submitted to communities for review.

OVERALL QUALITY OF LIFE GOALS.

1. TO MAINTAIN FREEDOM OF CHOICE IN LIFESTYLE: WHETHER SUBSISTENCE, CASH ECONOMY OR BOTH;
2. TO MAINTAIN THE CULTURE OF THE INUPIAT PEOPLE;
3. TO PROTECT FISH AND GAME RESOURCES FOR SUBSISTENCE USE;
4. TO MAXIMIZE LOCAL CONTROL IN DECISIONS WHICH AFFECT LOCAL PEOPLE;
5. TO INSURE THAT THE COSTS AND BENEFITS OF COMMUNITY OPTIONS ARE PRESENTED TO THE COMMUNITY BEFORE DECISIONS ARE MADE;
6. TO ENCOURAGE THE FULL DEVELOPMENT OF THE HUMAN POTENTIAL OF NANA RESIDENTS;
7. TO IMPROVE COMMUNICATIONS AMONG VILLAGES SO THAT MUTUAL PROBLEMS AND POTENTIAL SOLUTIONS MAY BE SHARED;
8. TO ELIMINATE ALCOHOLISM IN THE REGION.

These goals provide the overall framework for planning in the NANA Region. Subsistence remains a key element in the lives of all communities in the NANA Region. Employment is being perceived as increasingly important to pay for basic goods and services. The survey results and village workshops repeatedly emphasized the desire of individuals, families and villages to pursue both subsistence and cash economy activities. To meet those needs, planning for government programs and development projects must be presented in a manner that allows choices to be clearly identified by each community. Time must be allocated in the planning process to allow adequate public involvement in decision making that effects local people. This includes time:

- a. To assess and to digest information.
- b. To discuss the advantages and disadvantages of various options.
- c. To discuss the consequences of any actions.

COMMUNITY SERVICE GOALS

1. TO PROVIDE FAST AND EFFICIENT MEANS OF LOCATING MISSING PERSONS.

Objective:

- a) Improve the regional system of search and rescue for people in need of aid;
- b) Establish communication links to assure responsive and efficient rescues.

2. TO ENCOURAGE THE ACQUISITION AND USE OF ONLY EFFICIENT AND RELIABLE UTILITIES. THESE UTILITIES SUCH AS WATER, SEWER, AND ELECTRIC GENERATORS, MUST BE APPROPRIATE TO THE ENVIRONMENT, THE NEED, AND VILLAGE ABILITY TO OPERATE AND MAINTAIN THEM.

Objectives:

- a) Allow each community the opportunity to have safe, sanitary waste disposal systems provided within their fiscal means;
- b) Provide electrification at a reasonable cost to users;
- c) Ensure that each community is presented with the cost and complexity of operations and maintenance of all new facilities before they are built.

3. UPGRADE THE QUALITY OF CRIMINAL JUSTICE AND PUBLIC SAFETY SERVICES PROVIDED IN THE NANA VILLAGES.

Objectives:

- a) Explore methods for expansion of jail facilities and local police;
- b) Explore methods to expand local ability to handle firefighting.

TRANSPORTATION GOALS

1. TO PROVIDE A RELIABLE, ALL WEATHER TRANSPORTATION SYSTEM, AT REASONABLE COST IN THE NANA REGION.

Objectives:

- a) Design options to minimize the cost of transporting fuel to villages;
 - b) Study the effects of frequency of transportation service on costs of moving goods and people;
 - c) Strive to provide a safe, dependable trail network in the region.
2. TO INCREASE THE DEGREE OF SAFETY IN AIR TRANSPORTATION SYSTEMS.

Objectives:

- a) Evaluate the current system for collection and dissemination of weather information from villages;
 - b) Explore ways to improve navigation into village air strips;
 - c) Provide for adequate, reliable, year round air strip maintenance.
3. TO IMPROVE THE SAFETY AND CONVENIENCE OF TRAVELERS IN THE REGION.

Objectives:

- a) Explore ways to improve the safety of winter travel between villages;
- b) Design options to increase convenience of airplane passengers awaiting flights.

4. INCREASE LOCAL INFLUENCE ON LOCAL TRANSPORTATION DECISIONS.

Objectives:

- a) Ensure that opinions and comments of community people are included in all decisions affecting the region before beginning transportation project;
 - b) Encourage government agencies to coordinate their planning with regional organizations such as Mauneluk Association and NANA Regional Corporation.
5. IMPROVE ACCESS TO VILLAGE WASTE DISPOSAL SITE.

EMPLOYMENT GOALS

1. TO PROVIDE EMPLOYMENT OPPORTUNITIES IN THE NANA REGION.

Objectives:

- a) To ensure maximum local hire on development projects in each village;
- b) To minimize conflicts between scheduling the availability of employment opportunities and the pursuit of subsistence activities;
- c) Create employment in seasons when there normally is none;
- d) Encourage the development of employment opportunities which allow periodic return to communities.

2. TO DEVELOP LOCAL TRAINING PROGRAMS FOR REGIONAL EMPLOYMENT OPPORTUNITIES.

Objectives:

- a) Encourage the school district to develop its curriculum in such a manner that High School courses offered are relevant to employment opportunities available;
- b) Provide opportunities for village residents to gain employment skills in their communities;
- c) Assure the provisions of local training programs in any economic development projects in the NANA Region;
- d) Encourage the transfer of traditional skills (e.g., boat and sled building, arctic survival and subsistence skills, customs, crafts, etc.) to young people.

SOCIAL GOALS

1. TO FOSTER A STRONG, HEALTH, COMMUNITY ENVIRONMENT IN THE NANA REGION

Objectives:

- a) To encourage family participation in community activities;
- b) Reduce the dependence on alcohol and drugs;
- c) Increase the level of independence, self-reliance and pride.

2. TO IMPROVE AND MAINTAIN THE HEALTH OF THE NANA PEOPLE.

Objectives:

- a) To minimize disease and health problems through the study of alternatives such as prevention programs;
- b) To provide high quality, locally available health services;
- c) To supply each community with an adequate number of well-trained health aides;
- d) Improve telecommunications between village health aides and medical personnel in Kotzebue.

3. TO ENCOURAGE THE DEVELOPMENT OF THE HIGHEST QUALITY LOCAL GOVERNMENT FOR EACH COMMUNITY IN THE REGION.

Objectives:

- a) To improve local management capabilities;
- b) To maximize cooperation and communication between city administrations and local IRA (traditional) councils;
- c) To maximize public participation in local and regional decisions.

4. TO PROVIDE MEANINGFUL, ENRICHING, EDUCATIONAL OPPORTUNITIES FOR ALL NANA RESIDENTS.

Objectives:

- a) To assure continued communication between the School Board and the village residents on issues such as local needs and curriculum;
- b) To enhance student and teacher motivation towards quality education;
- c) To provide diverse educational opportunities for students and adults.

HOUSING GOALS

1. TO PROVIDE SAFE, EFFICIENT, HOUSING AT REASONABLE COST FOR NANA RESIDENTS.

Objectives:

- a) Secure housing which is energy efficient in design;
- b) Provide flexibility in choice of building materials and fuel source;
- c) For prospective public housing residents, increase information about monthly costs associated with those homes;
- d) Assure that the distribution of low-income housing is equitable among villages in the NANA Region;
- e) Provide new housing to those in most need;
- f) Ensure that comments of local people are included in developing housing projects in their community.

The regional goals and objectives will be used as the basis for regional development policies. Draft development policies will be developed this winter to guide the actions of agencies during the strategy preparation phase, so they follow community preferences.

Regional development policies will be submitted to communities for review, and will be modified as necessary for the final strategy. Policies may change in the future, as goals and objectives change and will be updated as needed.

One example in which the emerging policies have already been applied is in the development of a sewer and water development project for Selawik by the U.S. Public Health Service. The mayor and vice-mayor of Selawik met with the Public Health Service and the State Department of Environmental Conservation staff to express the community's preferences that the life-cycle costs of the system (operation and maintenance) be considered in the design. Mauneluk was invited to attend and incorporate the results into the Regional Strategy.

Selawik residents have noted the high sewer and water costs, and difficult repair problems faced by other communities after they had accepted "free" facilities. Selawik residents said they were willing to forego some of the convenience of expensive and technologically sophisticated systems if they could keep the operation and maintenance costs down, and make sure the system could be repaired locally rather than requiring specialized repair services. Mauneluk helped by leading staff support including citing the support of the Regional Strategy project, and advocating that the Public Health Service incorporate Selawik's concerns explicitly into the design process, by establishing them as primary design criteria.

Several alternative design concepts were suggested by Selawik, and the Public Health Service agreed to provide cost projections for each design alternative. A public meeting was set so PHS could explain each option to the community along with the costs and benefits of each. The regional development policies will encourage the use of this planning approach by agencies for meeting community development needs and conditions in this region. The Selawik example by PHS exemplifies a cooperative attitude, flexible design and operation policies, and a public process.

The goals formulation process has been followed up with requests to participating agencies to provide lists of their goals and philosophies. The work of the Alaska Cooperative Land Manager's Task Force coordinated by the Alaska Federation of Natives and the Department of the Interior are helpful in this regard.

Mauneluk Association itself has undertaken a review of its organizational goals and is considering a re-organization for better program delivery and planning.

2. Issues Identification

Development issues were identified during public meetings over the last several years. Those issues are derived from residents' statements, planning documents, survey review, and official statements. Planning documents reviewed included those by the State, North Slope Borough, and others, which might indicate development pressures which could infringe on the region from adjacent geographic areas. An example of this is a pipeline which has been suggested for taking the oil from the National Petroleum Reserve across the NANA Region to Nome. The infringement comes with the bisecting of the region's normal transportation and caribou

migration routes. Outer Continental Shelf development and Brooks Range mining are other examples of those development potentials. Mining is the biggest potential economic development in the region and could induce secondary requirements of a deep-water port, a railroad or haul road, one or more new communities, and substantial labor force in-migration.

Many of the development issues are not part of the formal workplan for the Regional Strategy but have been suggested for inclusion by regional residents. The extent of consideration of these issues will depend upon the time available, budgetary and staff supplements, cooperation by participating agencies, and the preferences of the Steering Committee and community review board.

The issues list is being used as a starting point for agency discussion by the task forces. The issues list will be expanded and reorganized to identify cause-effect relationships and sort the issues into topic areas for better analysis and discussion.

One issue area deserves special attention because of its interrelationships with so many other facets of development. That issue is human resource development. Success of almost all other programs is dependent on solving problems of alcoholism and local management capability and to a certain extent, unemployment.

Those three (3) problems are barriers to development and self-determination, and hence, a threat to the effectiveness of public programs in development. Alcoholism limits the stability of the labor force through limited ability of individuals to get and hold jobs. Economic development programs promoting industrial development and natural resource extraction, like mining, are not going to help the majority of residents of the region

until local people can get training, and get and hold jobs created by development. Therefore, the success of economic development programs will be limited until alcoholism is solved.

Local management capability problems will likewise limit the ability of the region's residents to get meaningful jobs, effectively manage utilities, manage municipal affairs or develop basic local businesses to serve village residents' needs. Stability of local government staff could also be improved.

Local management capability has to be a high priority for programs in order to make the public expenditures of time and money in planning programs effective. That may imply a need for agencies to re-order their priorities and perhaps even to restructure their programs or institutional structures.

Land use planning and municipal management at the local level will be limited in effectiveness until these human resource problems are improved. Implementation effectiveness of the strategy itself will be limited unless greater awareness of decision processes and regulatory principles are taught. State agencies should recognize these problems as ceilings on the effectiveness of their programs statewide and work with social service agencies to solve the problems of alcoholism and education to work within their own agency to expand field outreach training programs and consider joint funding arrangements.

Social services can be improved by contracting to local groups for delivery but training projects must become a high priority in programs.

A broad range of options and resources should be examined, possibly through the Regional Strategy task force structure. Mobilizing a combination of agencies in an effort to target specific resources should be the

responsibility of the agencies involved. Examples of agencies already involved in the area are Community & Regional Affairs, Alaska Federation of Natives, regional non-profits, university extensions, and the Community Enterprise Development Corporation. These groups should review their involvement, consider expanding it, and work with local and regional groups such as the school district and university to establish training courses. The university is already considering a program in land management and one in business management, with workshops in communities. Similar programs need to be established in public administration, utility management, and other areas. These areas will be the subject of review and will be outlined in detail by the consortium on secondary and higher education. The Regional Strategy task force on health, education, and social services will be asked to identify the barriers, highlight the problems, and recommend detailed actions in the implementation agenda.

3. Data Base Identification and Updating

To identify the existing data and isolate some of the gaps, a comprehensive search of the literature on physical and environmental resources affecting development locations was conducted. This element was contracted to the Arctic Environmental Information and Data Center and a National Science Foundation resident. They produced the following:

1. Bibliography and Index of Information on the NANA Region
(243 Citations, 38 current research projects.)
2. Wall-sized Display Sheets of Available Maps and Studies
 - a. Documented Subsistence Use Areas and Village Land Selections.
 - b. Historical and Archaeological Sites.
 - c. Climate, Coastal Geology, Soils, and Vegetation Studies.
 - d. Fish & Marine Mammal Distribution.

e. Furbearer Distribution.

f. Seabird and Waterfowl Distribution.

These will be useful for coastal management as well as permit review by agencies.

3. Summary of New Information since the Regional Profiles on a village-by-village basis

4. Summary of Data Gaps (Information Needs on NANA Region Environment

Key literature sources are available at the Mauneluk Association in Kotzebue. Two (2) additional bibliographies are being considered under separate contracts as a result of this project. One will be for educational literature on the region and one for health and social services studies in the region. The studies however, depend on funds coming available.

Eventually, all bibliographies will be put on computer storage at Mauneluk and will be extractable upon request by word processor.

Other important sources of information include the following:

1979 Village Sanitation Facilities Handbook.

1979 Public Facility Inventory by State Department of Transportation and Public Facilities.

1979 Integrated Service Plan for Northwest Arctic School District.

1979 Overall Economic Development Plan.

1979 Tribal Specific Health Plan.

1979 Community Survey by the Alaska Public Forum.

1976 Community Profiles by the Arctic Environmental Information and Data Center.

Data base updating included field-correcting the community profile maps prepared by AEIDC. The profile maps were corrected by local residents, often city council members or city administrators. Corrections included items like major re-routing of sewer lines, water lines, electrical lines,

new buildings, relocated buildings, major erosions, recent major land use changes, etc. This is an ongoing element of the project.

Profile corrections will be used when preparing maps of preferred development locations. The maps will be overlays for existing community profile maps held by agencies. Funds and staff were not made available for this project to re-issue corrected profiles. Overlay maps will be prepared on the basis of community meetings this coming winter. Because of new and updated information, agencies are encouraged to field-check their profiles whenever they anticipate a project for a NANA Region community.

4. Program Inventory

Mauneluk Association is conducting an inventory of planning, construction, and research projects going on in the region. The inventory is being developed in conjunction with a master schedule for capital facility programming. Together they form the basis for a regional management system which will be used for monitoring and coordinating activities. Local agencies and communities can expect to have increased local management capability when additional information is generated about anticipated programs and projects in the region. Copies of the inventory and master schedule will be available to interested and participating agencies.

Progress on the program inventory to date include the following:

- 1) Questionnaires distributed to agencies about projects in the region.
- 2) Presentations made by agencies on overall program purposes at orientation meeting for agency heads.
- 3) Written requests sent out for written products.
- 4) Written requests sent to Mauneluk staff members for goals and objectives, projects, and data needs.

5) Interviews of agency directors and administrators.

The only technique which provided significant information was the personal interview. Interviews consisted of a presentation of the topics listed in the original workplan under "Coordination and Capabilities of Key Actors." These included categories such as technical assistance, mission, lead times, project schedules, etc. Interviews were conducted with the following and will be compiled in the program inventory report:

Public Health Service

Chief, Sanitation Facilities

Chief, Environmental Services

Director, Kotzebue Service Unit

District Engineer, Sanitation Facility Construction

Department of Transportation & Public Facilities

Chief, Planning Section, Division of Facility Procurement

National Park Service

Deputy Director

Administrative Officer

Director of Administrative Services

U.S. Fish & Wildlife Service

Program Analyst, Administrative Services

Refuge Planner for Selawik Refuge

NANA Regional Corporation

President

Special Assistant to the President of the Development Section

Many more have been contacted and have attended meetings but lack of time has limited the number of formal interviews. Each interview took from forty-five (45) minutes to an hour and a half. To conduct interviews with all the participating agencies would be immensely time-consuming so a standardized form is being developed and sent to agencies. Obtaining written comments from agencies is usually difficult. Therefore, attempts to make our future requests clear and specific will be pursued.

For master scheduling, a uniform worksheet has been developed for distribution to participating agencies. The worksheet provides a common format in plotting project schedules. A composite of the schedules will be made to obtain an overview of scheduling patterns. Deadlines for projects will be shown in the final report but most agencies, even in interviews, were reluctant to get into a detailed listing of every project and its deadlines.

Some agencies seem reluctant to divulge the contents of their projects and schedules. They may have fears of becoming committed once a schedule is put on paper in public. Others have expressed problems with costs of projects going up after public announcements due to speculations on land around a site, or sudden increases in prices of materials, or reduced ability to negotiate low bid prices. Others do not seem to know what their own agency is doing. These comments have come from a wide variety of agencies, not necessarily any of the groups interviewed. Some agencies whose operations and planning are dependent on the outcome of D-2 legislation are not able to make any projections, plans, or commitments due to the uncertainty of programs, funding and land status.

Another widely used reason for agency reluctance is the federal budget process. Most referred to the federal budget process as their

primary planning deadline. Most technical and financial assistance requests need to be submitted by the deadline for the federal budget process.

This element of the work program is perhaps the most time consuming and the least productive so far. Another staff position should be funded for some of the more time-intensive work or a different method of interview used. An alternative would be expansion of agency cooperation in returning responses. Some of the more useful written responses are attached on the following pages. We hope that future responses will follow more closely the depth of detail displayed in these examples.

HUD PROJECTS - NANA REGION

Housing

Housing units reserved for the NANA Regional Housing Authority;
Noorvik - 10 units, Kiana - 15 units, Selawik - 18 units.

Community Development Block Grants

Current or proposed grants:

FY-77

1. Kiana - Rehabilitation of the community center.
\$23,000 - pending closure.
2. Kobuk - Housing winterization program
\$24,100
3. Selawik - Construction of firehouse/training center.
\$60,000

FY-78

1. Kivalina - Construction and equipping fire station.
\$52,000
2. Noatak - Construction and equipping fire station.
\$82,300

NATIONAL PARK SERVICE

Gates of the Arctic	Vegetation impact baseline investigations.	David J. Cooper, University of Colorado	Underway
Bering Land Bridge	Multidisciplinary survey of the Chukchi-Imuruk (Bering Land Bridge) area.	Dr. Herbert R. Melchior, Cooperative Park Studies Unit, University of Alaska plus eight (8) additional scientist.	Completed
Bering Land Bridge	Socio-Economic Study of Reindeer Herding.	Larry Naylor, et. al., University of Alaska Fairbanks	Completed
Bering Land Bridge	Archaeological survey.	W. Roger Powers, University of Alaska Fairbanks	Field work completed.
Bering Land Bridge	Historical overview.	Melody W. Grauman, NPS	Completed
Seward Peninsula	Tundra disturbance and recovery associated with drilling operations and AVT use in the Cape Espenberg area.	Dr. Charles H. Racine, The Center For Northern Studies.	Completed
Seward Peninsula	The origin and geologic setting of the Maars near Cape Espenberg.	Dr. Robert B. Forbes, Geophysical Institute, University of Alaska	Completed
Seward Peninsula	Archaeological Investigations for 14 (H) of ANSCA.	Kathryn Koutsky and Russell Sackett, University of Alaska, Fairbanks.	In progress.

Northwest Alaska	Home range use, social structure, and habitat selection of the Western Arctic caribou herd.	James L. Davis, and John W. Coady, Alaska Department of Fish & Game.	ADF & G Completed
Arctic Lowlands	Evaluation of ecological and geological sites for recognition as national natural landmarks.	Dr. David F. Murray, Institute of Arctic; Biology, University of Alaska.	Contract Underway. administration transferred to HCRS 5/78.
Interior and Western Alaska	Ecological and geological theme studies for national natural landmarks program.	Dr. Steven B. Young, The Center	Contract Underway. administration transferred to HCRS 5/78.

TENTATIVE WORK PROGRAM
FOR
REGIONAL WATER PLANNING GUIDES

WATER SECTION, ALASKA DEPARTMENT OF NATURAL RESOURCES

I. PROJECT INITIATION

- A. Define Region.
- B. Contact all organizations active in region.

II. DESCRIPTION OF REGION

- A. Physiographic, Socio-economic and resource inventory.
- B. Water Resources.
 - 1. Climatological data.
 - 2. Hydrological data (surface & ground).
 - a. Inventory of existing information.
 - b. Field investigations.
 - c. Data development and analysis.
 - d. Assessment of data gaps.

III. WATER USES WITHIN REGION

- A. Water Rights.
- B. Community Systems.
- C. Mining and Industrial Uses.
- D. Instream Flows.
 - 1. Anadromous streams.
 - 2. Federal reservations.
 - 3. Native Claims
 - 4. Fish hatcheries.
 - 5. National Park Service Monument facilities.

IV. PROBLEMS AND ISSUES

- A. Statewide
- B. Regional
- C. Local

V. MANAGEMENT GUIDELINES

TRIBAL SPECIFIC HEALTH PLAN OUTLINE

PREAMBLE

- A. Treaties - Legislation.
- B. Culture, Language, Tradition.

I. SCOPE OF PLAN

- A. Purpose of plan.
- B. Timeframe of plan.
- C. People to be served.
- D. Service area covered.
- E. Political and physical map.

II. DESCRIPTIVE DATA ON THE SERVICE AREA

- A. Geography, topography, climate, and seasonal variations.
- B. Transportation.

- 1. Private vehicles.
- 2. Highways, secondary roads.
- 3. Rail transportation.
- 4. Bus service.
- 5. Air.

- C. Communication.

- 1. Telephone.
- 2. Radio
- 3. Other.
- 4. CB radio.

- D. Housing Sanitation.
- E. Educational status of service population.
- F. Economic conditions:

- 1. Family income levels.
- 2. Sources of income.
- 3. Per capita income levels.
- 4. Unemployment rates.
- 5. Types of employment.

- G. Political structure and relationship.

III. DEMOGRAPHIC AND HEALTH DATA

- A. Age and sex distribution of the population.
- B. Morbidity and mortality.
- C. Major health problems.
- D. Population distribution.
- E. Leading cause of death.
- F. Migration.

TRIBAL SPECIFIC HEALTH PLAN OUTLINE

III. DEMOGRAPHIC AND HEALTH DATA (Continued)

- H. Community relationship.
- I. Industrial or agriculture hazards.
- J. Traditional medicine.

IV. TOTAL HEALTH NEEDS "FOR YOUR TRIBE"

A. Patient Care.

- 1. Hospital care.
- 2. Contract care.
- 3. Emergency Medical Services.
- 4. Patient transportation.
- 5. Extended skill care.

B. Ambulatory Care.

C. Preventative Health and Field Medical Services.
(Community Medical Services)

- 1. Sanitation.
- 2. Dental.
- 3. Public Health Nursing (Community Health Nursing).
- 4. Health Education.
- 5. Mental Health.
- 6. Social Services.
- 7. Public Health Nutrition.
- 8. Optometry.
- 9. Audiology.
- 10. Alcoholism.
- 11. Home Health Care.

D. Tribal Health Programs.

- 1. Implementation of Public Law 93-638.
- 2. Community Health Representative/Community Health Aide.
- 3. Training of Traditional Indian Practitioner.

E. Program Management.

F. Facilities Construction.

V. HEALTH RESOURCES CURRENTLY PROVIDED

VI. UNMET NEEDS.

VII. APPROACH AND PLAN FOR OVERCOMING THE UNMET HEALTH NEEDS

BN/lrg

5. Organization Development

As part of the first year's efforts, an organization structure was developed. The organization chart is shown on the following page.

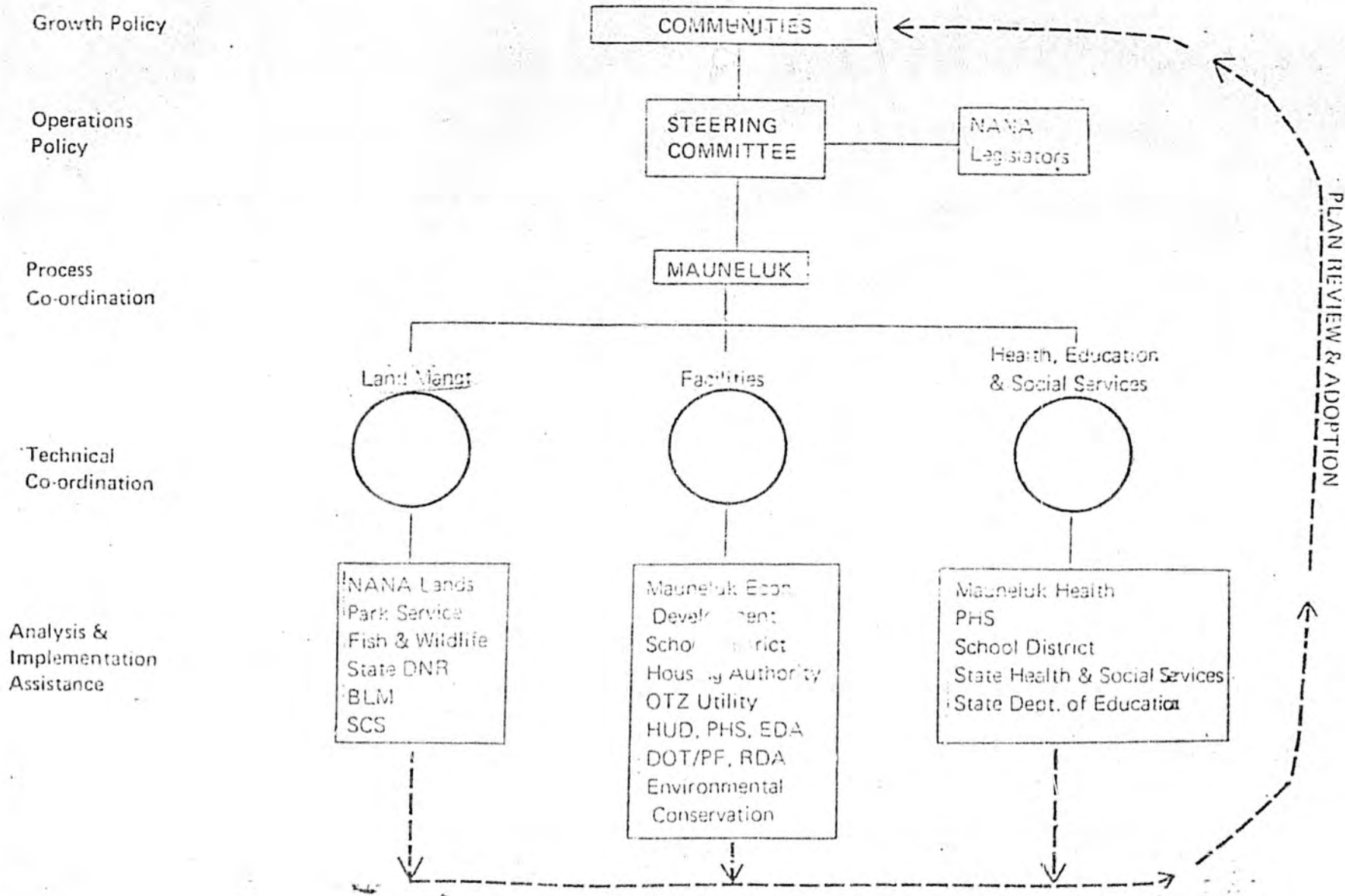
The organization chart was developed with assistance from residents of communities, regional leaders, and a management consultant. At this time, the chart has the tentative approval of the Steering Committee and has been presented to numerous local boards, all the city administrators, and staff of the three (3) regional entities.

The structure is based on initiation of information flows (problem statements, goals, priorities) from the communities, through the region, to the agencies. The return flow to the communities consists of recommendations and technical information provided by the agencies and the regional staff.

Since considerable time spent developing the organization structure, this progress report section provides a detailed description of progress. The communities will be represented by a community review board consisting of mayors from the municipalities. City Administrators will be asked to attend whenever possible to provide technical back-up information to the mayors. The municipalities are represented because they have the authority under Title 29 of the Alaska Statutes for local planning, platting, zoning, service delivery, facility construction and elements of local transportation -- all tools for implementation of the plans at the local level. IRA Councils must also be included in order to ensure coordinated siting and programming of their capital facilities. But because of the size of the board (eleven [11] members) and the powers held by the municipality, IRA Councils will be included during community plan preparation and in policy decisions on management of NANA lands. The main contact point of Mauneluk's

NANA DEVELOPMENT STRATEGY

ORGANIZATION FOR REGIONAL PLANNING



assistance in community plan preparation will formally be the municipality but the IRA Council and staff will be encouraged to attend and participate.

The Steering Committee is made up of the chief executive officers of the three (3) regional entities: NANA Regional Corporation, Mauneluk Association, and the Northwest Arctic School District. These are management professionals who are familiar with both the problems in the region and mechanisms for dealing with the problems through corporate and bureaucratic means. The Steering Committee members have a responsibility to ensure that their organization's staff, plans, and policies are consistent with the Regional Strategy to the greatest extent possible. They stand to be in a pivotal position and therefore have the ability to ensure that the strategy components are implementable by their agencies and that their staff and boards will be able to provide consistency with goals and policies.

The Steering Committee has several ex officio members to ensure coordination with the legislative and administrative decision processes at the State level. Ex officio members consist of the legislative delegation from the region, and State and Federal groups involved in design and funding of the strategy.

Legislators have the ability to introduce and support legislative changes recommended by communities and agencies in the implementation agenda. Legislators will also be able to influence the State budgetary allocations to follow Regional Strategy recommendations for capital facility and program priorities. As ex officio members they can also use the Regional Strategy as a reference while in Juneau, and coordinate legislative priorities with the Steering Committee. They can also help

the project assess feasibility of alternatives and obtain cooperation from state agencies.

Other ex officio members of the Steering Committee include the Governor's Office, the Department of Community & Regional Affairs, the U.S. Department of Housing and Urban Development, and an independent planning professional with the University of Alaska. These groups are on the Steering Committee because they helped design and fund the project, can provide advice on useful procedures, and are interested in following the evolution of the planning process developed. But as ex officio members they are non-voting members, and will not directly influence the decisions of the region. These groups represent another potential source of leverage for ensuring compliance with the strategy by State and Federal agencies. Their participation, allocations, and facility construction practices and technical assistance will be important examples for other groups.

Task forces were created to establish coalitions among agencies which have common interests and responsibilities. The initial "working group" had difficulties because of the heterogeneity of the participants and the lack of common interests, so the working group has been recombined into these task forces. It is assumed that State and Federal agencies are committed to providing services and technical assistance to the project for the purpose of strategy formulation.

It is our hope that agencies will take an active role on the task forces by providing professional expertise and judgement in analyzing issues, cause-effect relationships, barriers to goals achievement, and mechanisms for overcoming those barriers. Participation by agencies is expected to bring about greater understanding of the complexities of local and regional issues and alternatives for solving the problems.

The three (3) task forces will be asked to conduct the following activities:

1. Review local policies and goals.
2. Review local problem statements.
3. Review community plans.
4. Develop evaluation criteria for regional review of plans, and projects and programs.
5. Evaluate plans, projects, and programs proposed.
6. Analyze alternative means of overcoming barriers to achieving goals and specific projects.
7. Assist in "scoping" of potential impacts and long-term implications of project alternatives being considered.
8. Assist in preparation of background material which could be useful in a regional plan.
9. Jointly develop an implementation agenda.

The task forces thus provide a forum for structured discussion of issues, and a mechanism for solving the field problems and bureaucratic problems facing the region. If agencies do not choose to participate actively, regional staff will have to provide analysis and recommendations. Since only one (1) planner is funded for the project, that work would fall on that one person, and the product would be correspondingly limited by the lack of input from other agencies. Each task force will have a technical coordinator representing the region.

The Lands Task Force was formed to embark on cooperative land management. This is a follow-through on earlier intentions of the land management agencies to conduct management planning for large ecosystem scale rather than individual monuments or selection areas. The Lands Task Force will be asked to follow the same general planning steps as

the other task forces but may continue on to develop a detailed regional land use plan. For purposes of the Regional Strategy, the task force should establish as much as possible the intended uses of large areas of land so that those plans can be passed on to other task forces for transportation and economic development planning. Detailed land use plans can be prepared at a later date. The technical coordinator for the Lands Task Force will be the Director of the NANA Lands Department.

The Facilities Task Force will be asked to follow the same basic planning steps but will focus on issues such as the following:

1. Facility costs.
2. Flexibility of design criteria.
3. Limitations on local ability to pay for facilities.
4. Priorities.
5. Technology suitable to bush communities.
6. Streamlining of permit requirements.
7. Specific opportunities for coordinating facility programming.
8. Arctic construction techniques found useful in the past.

These topics may stray from the focus on strategic planning per se but they relate to the regional development policies on facility construction and will be important topics for demonstrating that flexible approaches to design and construction in this region can be effective. Products will be a set of recommendations on construction programming coordination procedures, a suggested construction schedule, and other items mentioned for all the task forces. The technical coordinator for the Facilities Task Force will be the Economic Development Planner from Mauneluk Association.

The Health/Education/Social Services Task Force will be coordinated by the Director of Programs for the Northwest Arctic School District. That task force will have as starting information, the School District's Integrated Service Plan, the Tribal Specific Health Plan, and the Six (6) Year Capital Facilities Plan for the School District. Joint review of existing problems and solutions will follow the same process as used by other task forces.

The technical coordinators and the Regional Strategy planner will ensure that the task force efforts are coordinated so that important products of each task force reach the other task forces. An example would be the transfer of land management recommendations from the Lands Task Force to the Facilities Task Force for use in transportation planning. Another example would be the transfer of clinic and school construction priorities from the Health/Education/Social Services Task Force to the Lands Task Force; and targeting to communities in which the clinics and schools will be built so that they can reserve sites and easements in the communities. Likewise, the Facilities Task Force would need to receive notice of the proposed construction so that sewer hook-ups, electrical generating capacity and service lines can be planned early and extended to the site.

Mauneluk is developing step-wise procedural guidelines for task force participants and communities on A-95 reviews; will provide some technical assistance to communities; and, will target immediate products to groups needing to receive them. Mauneluk has recently established a Village Assistance Team in the Planning Department consisting of technical assistants with management experience and local government

leadership roles to run the housing planning and management assistance programs.

The structure developed during the first year provides a mechanism for strategy formulation that ensures community participation, professional analysis assistance, and feedback to communities for review. After the Regional Strategy is formulated, the Community Review Board will be able to monitor and evaluate the extent of compliance with the strategy recommendations.

An annual meeting will be held by Mauneluk to keep agencies up to date with progress and problems of the strategy. The structure will provide a long-term forum for on-going analysis and accountability.

6. Process Formulation

Time has been spent with staff and agencies trying to design a process which minimizes the amount of new meetings required and taking advantage of existing structures and programs to the greatest extent possible.

The overall framework for the process is the standard model of the planning process used in most planning literature.

This process will be used to guide the development of community plans, and as a reference for the task forces.

The process has the following major stages:

1. Problem definition.
2. Goals identification.
3. Data collection.
4. Analysis.
5. Identification of Alternatives.
7. Selection of a Plan.
8. Implementation.

This is an idealized process, so most of the steps are not discrete and sequential. Some of the steps are undertaken concurrently.

There is feedback between stages and the process can be repeated and updated. This progress report shows that the strategy project has already moved through parts of the first four (4) stages. We have defined problems, identified goals, begun the data collection on literature (in bibliographies), begun to identify existing programs and projects, and identified several data sources.

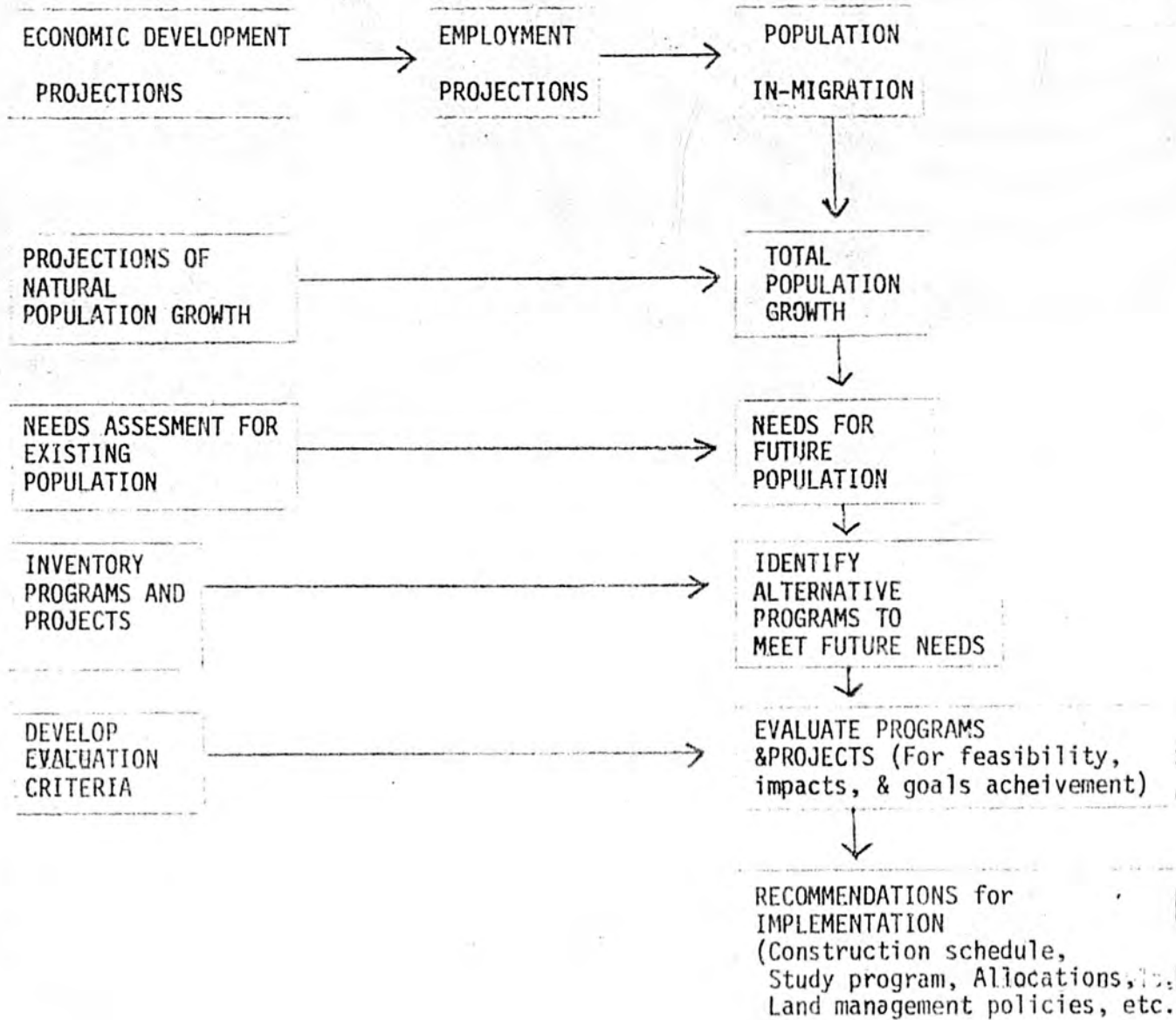
The next stage will be analysis of existing information by staff and task forces.

Existing data will be analyzed by staff and consultants to provide a basis for further development planning. An example is the use of the Overall Economic Development Plan which has already had substantial public input and analysis as the starting point for further analysis of economic development policies and projections. Staff research on alternative future economic development scenarios will be added to the OEDP research to form the foundation for projections of new employment, proportion of labor in migration and population increase due to outside forces.

At the same time, data is being analyzed for projections of natural demographic growth of the existing population. Natural population growth will provide an indication of baseline population levels for which facilities and services will be planned. Further detailed planning for additional growth can be delayed until the probabilities of other economic developments become more clear. The chart on the following pages shows the sequence of information analysis.

One of the advantages to taking a strategic planning approach is that detailed development planning can be forestalled until later, when more

SEQUENCE OF ANALYSIS
FOR REGIONAL STRATEGY PROJECT



accurate assumptions can be developed, based on evolving market conditions, regulatory policies, and land status changes. In the NANA Region for example, land status depends on D-2 which should be resolved next year. The Alaska Native Land Claims Settlement Act (ANSCA) land reconveyances and mineral exploration studies will be completed in the next few years. Right now, the world price of copper is holding down the feasibility of mineral extraction operations. The Western Arctic Transportation study findings and rapidly emerging energy policies will affect the feasibility of coal, oil, gas, and construction projects. As these changes occur, the effects on population growth and facility demands can be studied in greater detail in later studies.

The analysis phase includes both data analysis by regional staff and conceptual issues analysis by the task forces. The task forces will be asked to conduct an organized investigation of barriers to development, types, location, and timing of development projects, and economic, physical, and administrative constraints.

The joint review approach will also be used in the following stages: "Identification of Alternatives" and "Evaluation of Alternatives." After alternatives are identified by each task force, they will be evaluated according to criteria developed earlier. Evaluation criteria for policies, programs, and projects will include financial, administrative, and political feasibility. The legality, infrastructure availability, environmental impacts, social impacts, goals achievement, and long-term implications will also be examined.

If the joint review approach does not meet cooperation by the agencies

or communication difficulties are overwhelming, regional staff may have to conduct the work. However, the purpose of putting all this effort into the process is to provide public legitimacy to the findings of the task forces, to maximize the rationality and breadth of alternatives considered and to include agencies in the project.

Impact analysis for each project will be similar to the "scoping" of survey issues approach used by the Bureau of Land Management (BLM) Outer Continental Shelf (OCS) office.

Evaluation of projects is partially based on the extent to which individual projects contribute to the accomplishment of multiple goals. Each project will be evaluated for goals achievement and other factors before it is selected for inclusion in the strategy. By assessing the degree to which a project achieves the regional goals and the number of multiple goals achieved, all the projects are tied back to this first year's work. The projects proposed in the final package should therefore constitute a group which is well-screened, will have minimum impacts and will have maximum benefits in achieving the various goals. It should be an integrated hierarchy of goals, objectives, policies, programs, and projects.



The package should therefore be internally consistent (without major incompatibilities between projects and goals).

The rationality and understanding achieved by extensive participation by agencies should provide greater support by those agencies at later dates, as each of the previously studied projects is submitted for funding and permitting. Poorly conceived or muddled projects, especially those which are consistent with regional goals, agency regulations, and acceptable impact levels should be screened out early.

This should help to eliminate incompatible projects before they get so far underway that they are carried forward under their own momentum rather than rationality and public value.

Once criteria are set to guide the agency reviews, joint meetings may not be needed very often. The A-95 Clearinghouse will provide distribution of proposals to agencies and communities so that the only times meetings would be required is in the cases of controversial proposals.

The State Clearinghouse Coordinator has agreed to provide distribution of proposals to all agencies, State and Federal, who are participating on the NANA Regional Strategy. This should provide some incentive for Federal agencies, many of whom do not presently receive notice of proposals. Mauneluk will provide a list of agencies participating actively so that they can receive those benefits. Central offices of each agency will be asked to send proposals to their representative participating in the Regional Strategy affecting the NANA Region.

Mauneluk will also assist communities to prepare comments on significant proposals affecting the communities. This should improve

local management capability by developing awareness and skills for formal communications with the Clearinghouse. Eventually, an element of the process will be a regional clearinghouse. In support of this approach, Mauneluk is providing the above-mentioned service to communities, and providing reference and data services to agencies.

After the strategy is completed the Clearinghouse Coordinator should be able to compare a given proposal with the goals, policies, and projects in the final document. Further comments may be warranted but most questions on local preferences should be available.

7. Community Information & Education

Announcement of the Regional Strategy project was made during community meetings conducted by the Alaska Public Forum in each of the eleven (11) villages. However, in Kotzebue, while trying to obtain local match, it was discovered that understanding of the project was severely limited. Subsequently, presentations were made to all the regional boards, commissions, and staff. A total of eighteen (18) presentations were made in the villages and Kotzebue. One presentation was to the assembled city administrators and IRA administrators from every village.

The City of Kotzebue decided after two (2) presentations to contribute to the local match. The City negotiated in return a fixed amount of time to be provided by the Regional Strategy planner to the Planning Commission of the City of Kotzebue. The role of the Regional Strategy planner in these meetings is not to be staff to the City but to be available for advice on workplan development, factors to consider, and resources which can be sought for technical and financial assistance from the State

and Federal governments. The time spent working with the Planning Commission can be justified in that approximately half of the region's residents live in Kotzebue.

Much more time was spent in public education and information than was anticipated at the detriment of the schedule for other activities. However, the time spent is considered by Mauneluk to be important to the public acceptance and cooperation on the project and will have its payoff in long-term implementation.

Some time was also spent on considering the usefulness and feasibility of media coverage by radio, video, and local television interviews with regional leaders. Initial investigations have been made on the possibility of a slide-show or film on the region, its problems, and the alternatives available. The film or slide-show would provide a useful public participation and information tool, as well as a product which could be used outside the region and state for public information on the strategy and the region.

8. Data Collection Agreements

Efforts to commit agencies to participation include the formalization of agreements for data collection and programs. The examples mentioned in the first section on progress results are representative of the results. Soil surveys, forest assessments, gravel resource maps, land ownership maps, and other products useful for implementation will be outputs of the first years efforts. Other projects committed this year include a preliminary census to be conducted by the school district this fall to update population figures and a consultant contract to calculate population projections under various economic development scenarios.

Interagency cooperation has been exemplified by efforts by the State Department of Natural Resources Water Management Section in Anchorage which is formulating water planning guides for the region. Field reconnaissance water sampling was conducted on the Kobuk River and tributaries by an interagency team. During the study design phase of the project, coordination was kept up with the strategy project through offers by the Department of Natural Resources to collect data for other agencies projects. An outline of the water planning project was distributed at a working group meeting and several extensive phone conversations were held with various participants to coordinate efforts. Logistics were coordinated with Mauneluk and a detailed study design was submitted just prior to the field work. The Department of Natural Resources Water Section will base water demand projections on population and economic development projections to be made by the Regional Strategy staff and consultants next winter. Results will be passed out to all strategy participants for whom water planning guides will be helpful.

9. Carrying Capacity as a Regional Management Concept

An additional element of the strategy requiring time during the first year was research on the application of carrying capacity concepts to regional planning. Working with the National Science Foundation resident, a preliminary background paper was written reviewing the literature on carrying capacity, and the application to community situations. A copy of the paper is being rewritten now for distribution to the Steering Committee.

Potential exists for using the concept to determine temporary

limits on the growth rates and magnitudes of communities before substantial public investment is needed to relieve the strain on community resources. The approach may be applied in communities in which limiting factors such as gravel shortages, water shortages, financing ceilings, and lack of public investments are limiting further growth.

The carrying capacity approach may be useful in designing data collection programs. If the program is designed early enough with the appropriate measures, indicators can be collected from the beginning of the project for each village. The amount of surplus housing, unused sewer hookups, excess electrical generating capacity, and buildable land space available, are examples of such measures.

The effort is focused at a comparison of resource supply and demand to provide an early warning system for potential shortfalls. This approach will be of benefit in highlighting the need for early management attention to engineering, administrative, land use, and relocation alternatives.

Regional accounts for each village were started, which summarizes available data for each of the categories, so that managers and agencies will have a display of critical problems and impending shortfalls due to population growth.

STATE PROJECTS PROGRAMMED THROUGH
THE DIVISION OF FACILITY PROCUREMENT & POLICY
DEPARTMENT OF TRANSPORTATION

(Anticipated for construction in the next several years.)

Ambler Elementary School Remodel	\$ 890,000
Kotzebue Voc. Ed. & Gym Facility	4,500,000
Noatak High School	2,410,000
Noorvik Elementary School Remodel	1,135,000
Noorvik High School	945,000
Selawik Elementary School Remodel	875,000
Selawik High School	590,000
Kotzebue A.A.F.A.	2,337,000
Kotzebue Court Addition	298,000
Ambler High School Phase II (85% Complete)	456,125
Kotzebue Hatchery	5,000,000
Health Facilities at:	
Shungnak	100,000
Kivalina	100,000
Kobuk	100,000
Buckland	100,000
Ambler	100,000
School Facilities and equipment at Kiana	200,000
Maintenance Storage Buildings at:	
Noorvik	100,000
Kiana	100,000
Shungnak	100,000

COMMUNITY PROJECTS MATRIX - PLEASE PRINT IN BLACK INK OR USE TYPEWRITER

FORM FOR PROJECTS LISTED IN
CURRENT YEAR: 1978

FORM 2

Mauneluk Association/Nana Region
Name of Community

(A) PRIORITY	(B) PROJECT DESCRIPTION AND PURPOSE	(C) TYPE OF PROJECT	(D) FUNDING SOURCES	(E) AMOUNT FROM EACH SOURCE	(F) DATE OF COMPLETION	(G) WHEN WILL YOU APPLY FOR THESE FUNDS? WHAT PROBLEMS, IF ANY, ARE YOU HAVING WITH FUNDING?
1.	Gravel source - Kotzebue, Noorvik	Planning	BIA	\$ 10,000		
2.	Sno-go repair shop - Deering	Const.	EDA	\$ 66,000		February 1979
3.	Boat building/storage facility - Kotzebue	Const.	EDA	\$300,000		February 1979
4.	Heavy equipment - Buckland, Noorvik, Kiana	Const.	?			Contract available to utilize equipment for local project. Private financing to be pursued.
5.	Solid waste disposal - Selawik, Kiana, Kivalina, Shungnak, Noorvik, Buckland OTZ	Const./ Imp.	HUD, CDBG or USDA			April 1979
6.	Airport improvement - Buckland, Shungnak, Kivalina, Deering, Noatak, Noorvik	Const.	Fed. AA			Mid-1979
7.	Warm-up shelters airport - Kiana, Kivalina, Selawik, Ambler, Shungnak, Noatak	Const.	State DOT Private	\$ 10,000 10,000	May '79	
8.	Erosion Control - Noatak	Planning	?			Identification of funding agency.
9.	Firehouse - Noatak, Kivalina	Const.	HUD	\$130,000	Summer 1979	
10.	Bridge - Selawik	Const.	State DOT	\$2.5 Mil.	?	Bonding approved in State general election. Design to commence.

ADDITIONAL INFORMATION - (any CURRENT problems encountered by your community in obtaining funding):

EXPLANATION OF CODES

- (A) PRIORITY: Number 1 is your first priority project for this year, number 2 is second priority, etc.
 (B) PROJECT DESCRIPTION AND PURPOSE: Please name and describe the project and tell briefly how the community will make use of it.
 (C) TYPE OF PROJECT: Service, construction, improvement, personnel, planning. Select one of these which best identifies the project.
 (D) FUNDING SOURCES: What agency(s) or program(s)?
 (E) AMOUNT FROM EACH SOURCE: Please specify.
 (F) DATE OF COMPLETION: Please estimate.
 (G) WHEN WILL YOU APPLY? PROBLEMS?

Bob Knoll
 SIGNATURE
 EDA Planner
 TITLE
 Mauneluk Association
 ORGANIZATION
 January 22, 1979
 DATE

FORM FOR PROJECTS LISTED IN
CURRENT YEAR: 1978

FORM 2

Mauneluk Association/Nana Region
Name of Community

(A) PRIOR- ITY	(B) PROJECT DESCRIPTION AND PURPOSE	(C) TYPE OF PROJECT	(D) FUNDING SOURCES	(E) AMOUNT FROM EACH SOURCE	(F) DATE OF COM- PLETION	(G) WHEN WILL YOU APPLY FOR THESE FUNDS? WHAT PROBLEMS, IF ANY, ARE YOU HAVING WITH FUNDING?
11.	Regional forestry industry for local consumption.	Planning				When research finished.
12.	Water & sewer - Selawik	Planning Stage				
13.	New housing - Selawik, Iioorvik, Kotzebue	Const.	HUD Nana Reg.Hse. Authority.	\$2.5 Mil.	?	Bids were too high - project being re-evaluated.

ADDITIONAL INFORMATION - (any CURRENT problems encountered by your community in obtaining funding):

The priority rating is extremely difficult to assign due to the autonomy of each village; so I grouped them by project category. In-
dividual priorities may be extracted from OEDP.

EXPLANATION OF CODES

- (A) PRIORITY: Number 1 is your first priority project for this year, number 2 is second priority, etc.
- (B) PROJECT DESCRIPTION AND PURPOSE: Please name and describe the project and tell briefly how the community will make use of it.
- (C) TYPE OF PROJECT: Service, construction, improvement, personnel, planning. Select one of these which best identifies the project.
- (D) FUNDING SOURCES: What agency(s) or program(s)?
- (E) AMOUNT FROM EACH SOURCE: Please specify.
- (F) DATE OF COMPLETION: Please estimate.
- (G) WHEN WILL YOU APPLY? PROBLEMS?

Bob Knoll
SIGNATURE

EDA Planner

TITLE

Mauneluk Association

ORGANIZATION

January 22, 1979.

DATE

STATE OF ALASKA

JAY S. HAMMOND, Governor

OFFICE OF THE GOVERNOR

DIVISION OF POLICY DEVELOPMENT AND PLANNING

POUCH AD
JUNEAU, ALASKA 99811
PHONE: 465-3512

October 29, 1979

Dear Strategy Participant:

Enclosed is the agenda for the annual update meeting for the NANA Regional Strategy. The meeting will be held from 9:00 a.m. Thursday, November 15, until Friday, November 16, 4:00 p.m. in Kotzebue.

The Governor's Office has assisted in the initiation and support of the NANA Regional Strategy in conjunction with the U.S. Department of Housing and Urban Development and the State Department of Community and Regional Affairs. Last year, over 20 agencies attended the initial meeting to discuss the region's problems, the strategy concept, and each agency's activities in the region. This year we hope to update these reports, and to discuss problems and successes in formulation of the strategy. An important element will be discussion of needs and arrangements for the new fiscal year.

You will soon be receiving a package of materials produced for the NANA Regional Strategy during the first year of operation. The package will include a Progress Report, the Bibliography of Physical and Environmental Resources, and Results of the Village Survey on needs and priorities. We would appreciate your becoming familiar with its contents prior to the meetings.

You will also receive a questionnaire to update the information you may have provided last year. Some agencies did not return the questionnaire last year, or provided incomplete information. Included will be a form on which to outline the schedules for research and construction projects anticipated for this coming fiscal year, including completion of earlier projects. Please fill out all the materials and send them to Mauneluk Association by October 31. Do not wait until the meeting to send them. Mauneluk's address is: Mauneluk Association, P. O. Box 256, Kotzebue, Alaska 99752.

The materials will be redistributed in a compiled package at the meeting so that you will have a summary of all agency activities in the region. There have been earlier attempts at gaining much of this information, but they met with limited cooperation by several agencies. Please make sure you complete these in a timely manner, as thoroughly as possible.

The meeting will include work sessions at which you will have the opportunity to participate in analytical exercises to help identify innovative approaches to solving the complex problems facing the region.

(over)

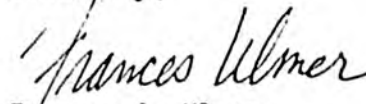
October 29, 1979

Printed materials prepared by regional staff will provide input to the workshop groups. A technical coordinator will be working with each group to ensure that analysis moves forward rapidly, and to ensure that specific management recommendations are produced from each workshop.

We hope you will make every effort to ensure that these working sessions are productive. This is an opportunity for you to demonstrate that agencies can work together. Please come prepared to provide detailed information on your entire agency's activities and projects in the work sessions.

Both Wien and Great Northern serve Kotzebue from Anchorage. Return arrangements on Friday should be made through Fairbanks on the 5:10 p.m. flight, for a connection to Anchorage. You should make your own reservations at the Nul-Luk-Vik Hotel. Please RSVP as soon as possible so Mauneluk, NANA and the School District know how many people to plan for.

Sincerely,


Frances A. Ulmer
Director

Enclosures

AGENDA

ANNUAL UPDATE MEETING
NANA REGIONAL STRATEGY
KOTZEBUE, ALASKA

Thursday, November 15

9:00 am INTRODUCTION - Dennis J. Tiepelman, President
Mauneluk Association
- Meeting objectives organization and products

BACKGROUND

The National Program for Strategies - John Duffy, Area Office Director
U.S. Department of Housing & Urban Development

State Involvement in the Strategy - John Halterman, Deputy Director
Governor's Division of Policy Development and
Planning

History of NANA Region's Strategy - John Schaeffer, President
NANA Regional Corporation

UPDATE

Planning Process and Products - Matt Conover, Regional Strategy Planner
Mauneluk Association

Economic Development Component: Justifying Projects & Program Proposals
Bob Knoll, Economic Planner
Mauneluk Association

Coordination of Review of Project & Program Proposals from the Strategy
Jerry Madden, State-Federal Coordinator
Governor's Division of Policy Development
and Planning

12:00 pm - L U N C H

(over)

1:00 pm - Task Force Working Sessions 1)Lands 2)Facilities 3)Health, Education
Social Services

- Update on Agency Activities

- Identifying Problem Relationships--(Barriers to Rural
Development in the NANA Region)--and Prioritizing

4:00 pm - Reassemble to present results of work sessions

5:00 pm - D I N N E R

7:00 pm - Mixer: Slide show of NANA villages and people.

- Casual gathering to discuss individual opportunities
for coordination.

Friday, November 16

9:00 am - General Session--Procedures for Identifying Alternatives

10:00 am - Work Session--Identifying Alternatives to Meet the Needs

12:00 pm - L U N C H

1:00 pm - Work Sessions Continued--Scheduling Multi-Agency Action for FY80

3:00 pm - General Session for Summary and Conclusion

4:00 pm - End

5:10 pm - Plane departs for Fairbanks to connect to Anchorage,
Juneau, and Seattle.

LANDS WORKSHOP AGENDA

NANA REGIONAL STRATEGY MEETING
Kotzebue, Alaska
November 15, 16, 1979

Objectives of this workshop

- A. Update on Agency Activities.
- B. Establish priority list for action in region
(eg., caribou management studies, monument facility plans,
etc.)
- C. Define goals and output format for a regional land
use plan. (How do you want to do it?)
- D. Establish schedule for this year for cooperative planning
sessions.

A. Update

- A. Regional activities: Forest assessment due December,
(preliminary findings) SCS village surveys, gravel mapping.
- B. Status of D-2 Monument Regs in NANA Region. Next steps.
- C. Status of Agency Planning.
- D. Status of State DNR planning for Ambler District.
- E. Status of BLM resources (schedule process, staff).
- F. Water planning guides (Report on fieldwork, date of
publication).
- G. Each agency should tell its schedule and draw it on board,
or submit a sheet.

D. Establish Schedule for Preparation of a Regional Land Use

Plan for this year to guide DOT/PF

- List stages, and activities needed.
- Needed frequency of meetings and reports.
- Establish deadlines.

E. Effects of Coastal Management - Discussion of Experience by

whatever agency has done work with a CZM plan

PRODUCTS

- A. Multi-agency schedule of activities for coming year.
- B. Priority list (adjusted alternatives list).
- C. Structure and Schedule for Regional Land Use Plan.

H. Effects of Coastal Management on Agency Land Planning.

B. Priority list for agency actions (Workshop will add items and develop a priority ranking)

- A. Monument Concept Plans.
- B. Monument Facility Construction Plans.
- C. Caribou Management Plans.
- D. Regional Land Use Plan to send to DOT/PF for Western Arctic Transportation Study.
- E. NANA Lands Management Plan.
- F. Forest Management Plan.
- G. Map indexing and sharing project.
- H. Aerial photo indexing and sharing.
- I. Flood plain identification study.
- J. Archaeological mapping.
- K. Land use plan for Ambler Mining District.
- L. Water use plan for Ambler Mining District.
- M. Same for LIK/Red Dog.
- N. Gravel and water problems for Kotzebue.
- O. Agricultural Studies.

C. Output Format for Cooperative Ecosystem Planning

- How to do it: - Sum of separate agency plans?
 - Work together on team like NPRA?
 - What budget?
 - What staff?

MANAGER
NUL-LUK-VIK HOTEL
BOX 336
KOTZEBUE, AK. 99752

WE WILL BE ATTENDING THE REGIONAL STRATEGY UPDATE MEETING ON
NOVEMBER 15 and 16.

THE NUMBER OF PERSONS ATTENDING THE CONFERENCE FROM OUR GROUP
WILL BE _____.

PLEASE RESERVE _____ SINGLES AND _____ TWINS FOR ROOM RESERVATIONS.

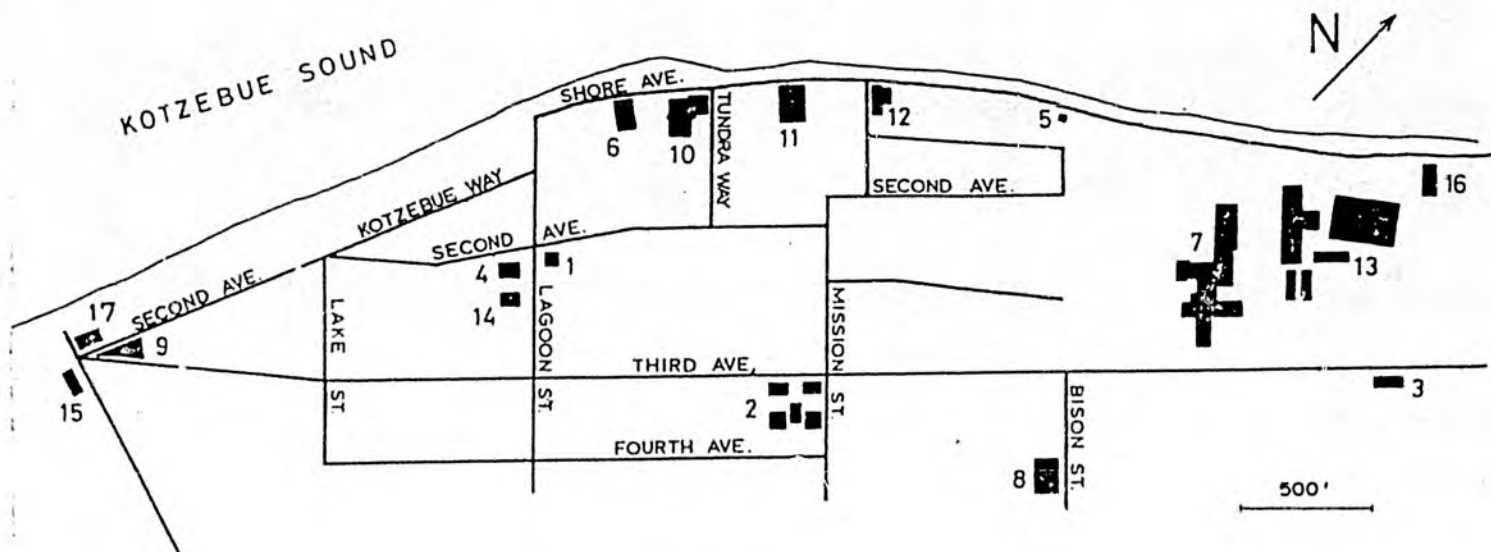
PLEASE RESERVE THE ROOMS UNDER THE NAMES BELOW:

THANK YOU.

Signed _____

Agency _____

Date _____



- 1. Bank
- 2. City Buildings
City Hall
Fire Dept.
Police Dept.
- 3. Community College

- 4. Dairy Queen
- 5. Hamburger Hut
- 6. Hanson Trading Co.
- 7. Hospital
- 8. Kotzebue Square
- 9. N.A.N.A. Museum
- 10. Nul-luk-vik Hotel

- 11. Post Office
- 12. Rotman's Store
- 13. School
- 14. Val-U-House
- 15. Wien Air Alaska
- 16. Wien Hotel
- 17. Northwest Arctic
School District Central
Office

The Alaska Public Forum



NANA Survey Summary

March, 1979

INTRODUCTION

In the spring of 1978, NANA requested state assistance in order to begin a process to establish an overall regional strategy plan. In an effort to establish goals and priorities with the villages, a survey was conducted in November/December 1978. It was designed and conducted by the Alaska Public Forum in conjunction with Mauneluk and NANA.

The categories involved included: subsistence; employment; community services; transportation; and community ties.

The following analysis provides a synopsis of the survey results which may be used in policy planning by and for the NANA region.

Public meetings which will be held in April, will serve as a follow-up to the survey to cover any areas villages may feel need to be added or emphasized; and, to provide to the individual communities an overview of the survey results of the region as a whole.

The funding for this project was provided by:
Alaska Public Forum, Office of the Governor;
Alaska Department of Transportation and Public
Facilities; and, the U.S. Department of
Housing and Urban Development.

TABLE OF CONTENTS

SUBSISTENCE PAGE 1
EMPLOYMENT PAGE 5
COMMUNITY SERVICES PAGE 12
TRANSPORTATION PAGE 16
COMMUNITY TIES PAGE 19

SUBSISTENCE

SUMMARY: The leadership of the NANA region has indicated that the maintenance of subsistence activities is of the highest priority. Overall, the survey seems to show that a large portion of the NANA population still depends on subsistence as a major source of food. Two-thirds of the people interviewed indicated that they hunted for at least one-half of their meat. The young are continuing the subsistence lifestyle. Sharing seems to be prevalent among the hunters and gatherers with 91% indicating that they share food. It appears that people who have jobs for pay continue to participate in subsistence activities.

TABLE 1: COMPARISON OF WORK PATTERNS
AND TYPE OF FOOD EATEN

Proportion of Meals where Meat Is Purchased at the Store

	<u>No Meals Purchased</u>	<u>¼ Meals Purchased</u>	<u>½ Meals Purchased</u>	<u>More Than ½ Meals Purchased</u>
Unemployed	19%	58	19	4 = 100
Part-time employed	11	63	24	2 = 100
Full-time employed	0	61	39	0 = 100

Proportion of Meals where Meat Is Hunted or Gathered

	<u>No Meals Gathered</u>	<u>¼ Meals Gathered</u>	<u>½ Meals Gathered</u>	<u>More Than ½ Meals Gathered</u>
Unemployed	4	29	35	32 = 100
Part-time employed	5	37	36	22 = 100
Full-time employed	5	35	30	30 = 100

Looking at different age groups, subsistence activities seem to be maintained by the youth. Roughly, half of each of the five age groups are doing 5-10 activities throughout the year, while only 1-5% don't hunt at all. See Table 2.

TABLE 2: DIFFERENCES IN SUBSISTENCE ACTIVITY
AMONG FIVE AGE GROUPS

<u>Number of Subsistence Activities</u>	<u>Age</u>				
	<u>15-24</u>	<u>25-34</u>	<u>35-44</u>	<u>45-54</u>	<u>Over 54</u>
None	1%	2	4	0	5
1-4	39	27	27	22	29
5-10	42	56	52	61	50
11 or more	18	15	17	17	16
	<u>100%</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
No. of Respondents:	74	89	48	51	56

Longtime residents are a bit more likely to be active in subsistence activities. There was almost no difference between men and women, and the unemployed and employed in subsistence activity. Although the unemployed are slightly more intensely involved in hunting and gathering, it is interesting to note the continued participation of the full-time employed in subsistence activities. See Tables 3 and 4.

TABLE 3: DIFFERENCE IN SUBSISTENCE ACTIVITY
BY YEARS LIVED IN THE COMMUNITY

<u>Number of Subsistence Activities</u>	<u>Years</u>			
	<u>0-5</u>	<u>6-10</u>	<u>11-20</u>	<u>Over 20</u>
None	3%	0	2	3
1-4	34	13	42	25
5-10	48	81	42	54
11 or more	15	6	14	18
	<u>100%</u>	<u>100</u>	<u>100</u>	<u>100</u>
Number of Respondents:	60	16	67	175

TABLE 4: NUMBER OF SUBSISTENCE ACTIVITIES
IN RELATION TO WORK PATTERNS

	<u>No</u> <u>Activities</u>	<u>1-4</u> <u>Activities</u>	<u>5-9</u> <u>Activities</u>	<u>10 or more</u> <u>Activities</u>	
Unemployed	3%	32	45	20	= 100%
Part-time employed	2	31	52	15	= 100
Full-time employed	5	24	57	14	= 100

¹These include: caribou, moose, seal, 5 species of fish, birds, whale, bear, berries, trapping, crafts, eggs and plant gathering.

We know that 91% of NANA residents share food, but only about 15% of those sharing food also trade. Thus, sharing appears to be a significant way that those who do fewer subsistence activities add large amounts of subsistence foods to their diets. From Table 5 it appears that those with higher incomes are more likely to trade for food, but it is generally not done.

Percent of those who share food that also trade for food.

Income	TABLE 5:	Yes, we trade for food	No, don't trade for food		
\$ 5000 or less		14%	86	=	100% 58
\$ 5000-14,999		17	83	=	100 110
\$15000 or more		19	81	=	100 106
				n =	274

The survey results confirm the assertion that NANA residents are heavily engaged in subsistence activities and that the food hunted and gathered accounts for over half of the food consumed by the respondents. Since young people are actively engaged in subsistence activities, it may be projected that continual use can be anticipated as long as the resource base is maintained.

EMPLOYMENT:

SUMMARY: The survey results seem to indicate people are more willing to work inside the NANA region rather than relocating outside the region. Among the untapped skills are fixing machinery and welding which fall into the category of trades and teaching, typing, care of others, which fall into the area of services as well as some regional skills such as skin-sewing and ivory carving.

Preference for working for pay at different times of the year was clearly expressed. One-fourth of the respondents indicated a preference for not working during the summer months when subsistence gathering and hunting are done. With only 8% of the native population employed full-time, the current situation is that the vast majority of the native population is either working part-time (45%) or are unemployed (47%). When asked "how does this household meet their daily needs," multiple answers were given by most respondents. In addition to jobs, almost 42% of the Kotzebue respondents indicated that subsistence hunting and fishing was important, while slightly over 80% of the village respondents said subsistence activities helped meet their families' daily needs. Eighteen point six percent of the Kotzebue respondents said food stamps and other forms of government aid contributed, while 24.8% of the village respondents said they relied on some sort of government assistance.

ANALYSIS: One of the options open to NANA residents is to manage commercial resource development and the corresponding job opportunities. At this time in the NANA region there is a pool of skills and labor available for work.

In Table 6, 18% of the respondents reported that they have skills in the trades and are not working now. Likewise, on support services, 12% of the respondents are skilled people who are not currently working. Half of the respondents said they had not worked in the past year. The availability of jobs is unknown.

TABLE 6: COMPARISON OF TYPES OF SKILLS PEOPLE HAVE
AMONG THREE EMPLOYMENT GROUPS

(figures represent percentage of total number of native respondents)

	<u>Trades</u> ¹	<u>Services</u> ²	<u>Regional Skills</u> ³	<u>Other</u>
Unemployed	18%	12%	14%	8%
Part-time employed	13%	15%	7%	6%
Full-time employed	2%	3%	1%	1%

Number of respondents = 254

¹Trades--fixing machinery, welding

²Services--teaching, helping sick, typing, taking care of children

³Regional skills--ivory carving, basket making, skin sewing, sewing.

Table 7 shows that about one-quarter of NANA residents do not want to work for pay during the summer and would like to be employed in the winter months.

Table 7 shows the proportion of people who expressed a preference for working in certain months in each village. In every case two to three times more people want work during the winter months. In important subsistence months: June; July; and August only 10% of the people report they want to work for pay.

TABLE 7: PERCENT OF PEOPLE STRONGLY WANTING WORK DURING THE MONTHS IN EACH VILLAGE

	<u>Kotzebue</u>	<u>Kivalina</u>	<u>Ambler</u>	<u>Kobuk</u>	<u>Buckland</u>	<u>Deering</u>	<u>Selawik</u>	<u>Noorvik</u>	<u>Kiana</u>	<u>Noatak</u>	<u>Shungnak</u>
January	32%	11%	12%	0%	6%	8%	16%	12%	39%	23%	33%
February	32	11	12	0	6	8	16	15	35	28	33
March	28	11	12	0	6	8	16	15	39	23	33
April	25	16	12	0	0	8	19	9	35	28	22
May	18	5	0	0	6	0	16	15	23	28	11
June	8	11	0	12	6	16	19	12	4	19	11
July	5	11	0	12	6	8	25	12	4	14	0
August	8	22	12	12	0	8	25	18	12	14	0
September	18	11	12	12	6	0	19	15	15	28	0
October	24	16	12	12	6	0	16	15	27	33	11
November	29	11	12	0	6	0	22	18	31	23	33
December	29	11	12	0	6	0	16	18	31	19	33
No. of Respondents:	161	18	17	8	18	12	31	32	26	21	9

Tables 8 and 8a show the relationship between subsistence activities and desired time for work more clearly. These Tables show that those most active in subsistence, especially in the summer, are the ones who do not want to work for pay during the same time.

TABLE 8: MONTHLY COMPARISONS OF ACTIVITY
IN SUBSISTENCE AND DESIRE TIME FOR WORK

	<u>Want Work</u>	<u>No Preference</u>	<u>Don't Want to work</u>	
<u>January</u>				
Not active	28%	61	11	= 100%
Active some of month	21	71	8	= 100
<u>February</u>				
Not active	28	62	10	= 100
Active some of month	21	70	9	= 100
<u>March</u>				
Not active	26	63	11	= 100
Active some of month	20	68	12	= 100
<u>April</u>				
Not active	27	63	10	= 100
Active some of month	14	71	15	= 100
<u>May</u>				
Not active	18	65	17	= 100
Active some of month	16	66	18	= 100
<u>June</u>				
Not active	10	63	27	= 100
Active some of month	11	63	26	= 100
<u>July</u>				
Not active	9	65	26	= 100
Active some of month	9	63	28	= 100
Active most of month	0	83	17	= 100
<u>August</u>				
Not active	10	67	23	= 100
Active some of month	13	63	24	= 100
Active most of month	12	60	28	= 100
<u>September</u>				
Not active	18	67	15	= 100
Active some of month	16	65	19	= 100
Active most of month	37	38	25	= 100
<u>October</u>				
Not active	20	64	16	= 100
Active some of month	23	67	10	= 100
Active most of month	33	67	0	= 100
<u>November</u>				
Not active	25	63	12	= 100
Active some of month	24	68	8	= 100
Active most of month	33	67	0	= 100
<u>December</u>				
Not active	25	62	13	= 100
Active some of month	21	69	10	= 100
Active most of month	50	50	0	= 100

Number of Respondents: 318

Table 8a:

	MONTHLY SUBSISTENCE ACTIVITY IN THE VILLAGES (percentage)										
	Kotzebue	Kivalina	Ambler	Kobuk	Buckland	Deering	Selawik	Noorvik	Kiana	Noatak	Shungnak
<u>January</u>											
Not active	80	61	53	75	61	50	84	66	77	67	89
Active part of month	20	39	47	25	39	50	16	34	23	33	11
	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>February</u>											
Not active	83	66	53	75	67	50	84	66	73	71	56
Active part of month	17	34	47	25	33	50	16	34	27	29	44
	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>March</u>											
Not active	77	61	59	75	61	58	81	59	62	52	44
Active part of month	23	39	41	25	39	42	19	41	38	48	56
	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>April</u>											
Not active	70	72	47	75	72	42	77	63	73	43	56
Active part of month	30	28	53	25	28	58	23	37	27	57	44
	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>May</u>											
Not active	62	44	29	50	56	33	42	47	58	38	33
Active part of month	38	56	71	50	44	67	58	53	42	62	67
	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>June</u>											
Not active	42	11	29	0	6	33	19	34	31	24	33
Active part of month	56	89	71	100	94	67	77	66	69	71	67
Active most of month	2	0	0	0	0	0	4	0	0	5	0
	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>July</u>											
Not active	30	17	0	13	17	0	36	34	15	9	33
Active part of month	67	83	100	87	83	100	60	66	81	81	67
Active most of month	3	0	0	0	0	0	4	0	0	10	0
	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>August</u>											
Not active	25	6	0	0	6	0	13	13	15	5	11
Active part of month	68	78	59	100	88	58	84	87	73	81	78
Active most of month	8	16	41	0	6	42	3	0	12	14	11
	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>September</u>											
Not active	37	17	6	0	17	8	36	13	12	5	11
Active part of month	61	83	94	100	83	92	64	87	88	86	78
Active most of month	2	0	0	0	0	0	0	0	0	9	11
	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>October</u>											
Not active	42	17	12	25	17	17	55	44	39	29	22
Active part of month	57	83	88	75	83	83	45	56	61	71	78
Active most of month	1	0	0	0	0	0	0	0	0	0	0
	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>November</u>											
Not active	43	56	59	38	50	58	32	41	46	33	22
Active part of month	56	44	41	62	50	42	68	59	54	67	78
Active most of month	1	0	0	0	0	0	0	0	0	0	0
	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>December</u>											
Not active	65	61	59	75	83	42	45	50	92	52	67
Active part of month	34	39	41	25	17	58	55	50	8	48	33
Active most of month	1	0	0	0	0	0	0	0	0	0	0
	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>

Willingness to work and available skills do not complete the employment picture. Resource development may mean relocation of a single individual, household or a village.

Table 9 shows the percent of people in each village who are willing to work in three likely places: Kotzebue, in a city outside NANA, and a camp outside NANA. Preference depends on the village, but there is more desire to relocate in Kotzebue rather than any place outside NANA, and generally a greater preference to remain in the region than to go outside, even if the job was located at a camp.

TABLE 9: WILLINGNESS TO WORK OUTSIDE VILLAGE (percentage)

	Kotzebue	Kivalina	Ambler	Kobuk	Buckland	Deering	Selawik	Hoorvik	Kiana	Noatak	Shungnak	all Villages
Willing to work in Kotzebue	DNA	61	81	63	67	33	86	72	67	81	56	66.7
Willing to work in a city outside NANA	68	56	63	38	67	67	61	75	62	62	44	59.5
Willing to work in a camp or village outside NANA	68	67	80	38	61	58	71	78	77	76	44	65
Number of Respondents:	157	18	16	8	18	12	28	32	24	21	9	186

If we compare what people want with what they actually did, a similar pattern exists. Table 10 shows the different locations where people actually worked in the past year. The vast majority of work sites was in NANA. See Table 10.

TABLE 10: Percent of People Working in 6 Different Locations

Nana village	41%
Other village	2%
Kotzebue	43%
Nome	.5%
Somewhere else in Alaska	0%
Pipeline camp	13%

Employment opportunities would be more useful inside the NANA region, either in a village or in Kotzebue.

Table 11 shows employment patterns in each village, and the number of unemployed in each village. "Unemployed" means those respondents who said they didn't have a job in the last year. As noted earlier, the vast majority of people interviewed were either unemployed or had part time jobs.

TABLE 11: WORKING PATTERNS IN THE VILLAGES

	<u>Kotzebue</u>	<u>Kivalina</u>	<u>Ambler</u>	<u>Kobuk</u>	<u>Buckland</u>	<u>Deering</u>	<u>Selawik</u>	<u>Noorvik</u>	<u>Kiana</u>	<u>Noatak</u>	<u>Shunonak</u>
Unemployed	46%	50	24	50	50	50	48	56	46	71	22
Part-time employed	46	50	52	50	44	50	39	38	46	29	56
Full-time employed	8	0	24	0	6	0	13	6	8	0	22
	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Number of Persons											
Unemployed	74	9	4	4	9	6	15	18	12	15	2
Number of Respondents	161	18	17	8	18	12	31	32	26	21	9

If the NANA labor force is to be used and developed, future economic development projects should be directed to locate within the NANA region and encouraged to generate jobs in both the areas of trade and services. If possible, job opportunities should accomodate the seasonal committments of subsistence hunters.

COMMUNITY SERVICES

Summary:

In recent years many new services have been provided in the NANA communities. Items such as water and sewer systems or cross-wind runways. Often times these things are initially paid for by the federal or state government, but the cost of operating and maintaining them is the responsibility of local people. Therefore, participants in the survey were asked how important the service was in light of local responsibility to pay for its maintenance.

Included in the list were services that local communities have supported for a long time, such as search and rescue and volunteer fire fighting.

The highest priorities for the villages appear to be search and rescue and airport maintenance. Kotzebue residents agree with those but add fire fighting equipment to the top two. Villages vary in their priorities which points up the differences in needs from community to community. Responses were measured against those who were employed versus unemployed, and by income levels. Only slight changes were apparent with these variables.

ANALYSIS:

Each of the villages had a choice of services they thought were important and would be willing to pay for. In all but two cases the villages ranked search and rescue as the most important community service. Overall, the highest priority went to: 1) search and rescue, 2) maintaining the airport, 3) fire protection, and 4) community center activities. There were considerable differences among the villages, as displayed in the following table.



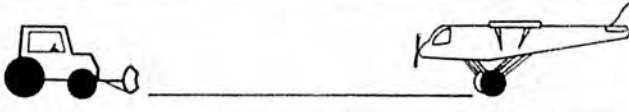
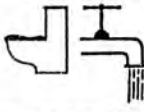
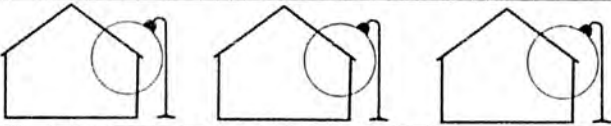

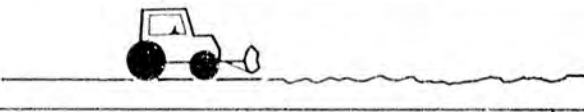

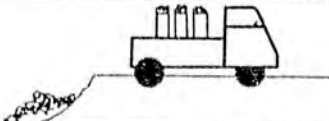
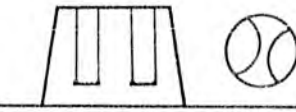
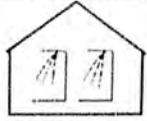


TABLE 12: RANKINGS OF COMMUNITY SERVICES BY EACH VILLAGE IN THE SURVEY

	<u>Kotzebue</u>	<u>Kivalina</u>	<u>Ambler</u>	<u>Kobuk</u>	<u>Buckland</u>	<u>Deerfoot</u>	<u>Selawik</u>	<u>Noorvik</u>	<u>Kiana</u>	<u>Nostat</u>	<u>Shunnak</u>	<u>All Villages</u>
Search and rescue	1	3	1	5	2	1	1	1	1	1	1	1
Fire fighting equipment	2	5	3	1	5	2	7	10	1	2	5	4
Maintain airport	3	1	1	1	1	1	3	2	3	2	2	1
Sewer	4	5	4	3	4	4	4	8	2	4	6	6
Street lights	5	6	2	8	6	2	6	4	2	2	5	5
Community center activities	6	4	3	1	2	3	4	3	2	3	1	2
Maintain roads	7	7	1	3	5	5	10	7	6	5	5	10
Jail	8	2	2	7	3	8	9	5	5	5	4	9
Garbage	9	5	2	2	3	2	8	4	4	8	7	7
Playground	10	6	2	6	4	3	4	9	2	5	5	8
Community shower	11	6	4	2	3	6	5	12	8	6	3	10
Heated shelter	12	5	1	4	6	5	2	6	3	2	1	3
Firemen (paid)	13	7	5	6	7	7	11	11	7	7	8	11

1 means very important and willing to pay a lot
 13 means least important and not willing to pay for

Ranking of Community Services - Kotzebue


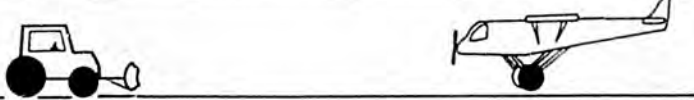
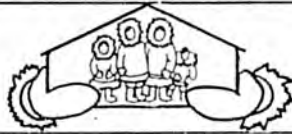


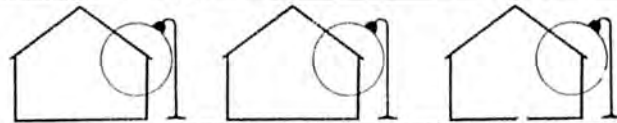
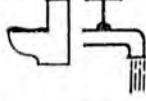
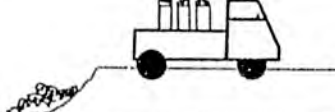
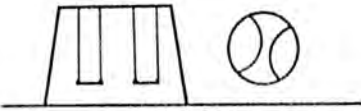




table 12

search and rescue priority 1*	
firefighting equipment priority 2	
maintain airport priority 3	
sewer (and water) priority 4	
street lights priority 5	
community center activities priority 6	
maintain roads priority 7	
jail priority 8	
garbage priority 9	
playground priority 10	
community shower priority 11	
heated airport shelter priority 12	
paid firemen priority 13*	

* Priority 1: Very Important, community would be willing to pay a lot for maintenance.
Priority 13: Least Important, community not willing to pay for maintenance.

Ranking of Community Services - All Villages

table 12

search and rescue priority 1*	
maintain airport Priority 1*	
community center activities Priority 2	
heated airport shelter priority 3	
firefighting equipment priority 4	
street lights priority 5	
sewer (and water) priority 6	
garbage priority 7	
playground priority 8	
jail Priority 9	
maintain roads priority 10	
community shower priority 10	
paid firemen priority 11*	

* Priority 1: Very important, community would be willing to pay a lot for maintenance.
Priority 11: Least important, community not willing to pay for maintenance.

To see if different subgroups rate services differently, three variables were used: income, employment status, and village size. As in the subsistence section, the greatest differences exist between the higher income group (more than \$15,000 a year) and the others.

Higher income people gave more importance to fire protection, airport, sewers, community center activities, and jails. Their interest probably lie more with protection of property and assets, since they are more likely to own property.

TABLE 13: RANKING OF COMMUNITY SERVICES
BY THREE INCOME GROUPS

	<u>Less Than \$5,000</u>	<u>\$5,000- \$14,999</u>	<u>\$15,000 & Up</u>
Search and rescue	1	1	7
Maintain airport	2	2	3
Street lights	3	5	6
Community center activities	4	3	4
Sewer	5	7	4
Garbage	6	10	9
Fire fighting equipment	7	4	2
Heated shelter	8	6	10
Maintain roads	8	8	7
Playground	9	9	8
Jail	10	11	5
Community shower	11	12	11
Paid Firemen	12	13	12

1. most important and willing to pay a lot
13. least important and not willing to pay

There are also differences between the full-time workers and the unemployed. Like the highest income group, the fully employed people are concerned with property related services. This tendency is not a major difference though. Community showers, playgrounds, and paid firemen are considered less important by all groups.

See Table 14.

TABLE 14:

RANKINGS OF COMMUNITY SERVICES
COMPARING THREE EMPLOYMENT GROUPS

	<u>Unemployed</u>	<u>Part-time Employed</u>	<u>Full-time Employed</u>
Search and rescue	1	1	1
Maintain airport	2	2	3
Community center activities	3	4	2
Street lights	3	7	8
Fire fighting equipment	4	3	2
Sewer	5	4	1
Heated shelter	6	8	5
Maintain roads	7	5	4
Jail	8	9	2
Garbage	9	10	2
Playground	10	6	5
Community shower	11	11	6
Paid Firemen	12	12	7

1. most important and willing to pay a lot.
12. least important and not willing to pay for.

From Table 15, the larger city, Kotzebue, differs from the villages in that there is slightly more emphasis on the services of airport maintenance, sewers, and road maintenance than in the villages. These differences probably serve to highlight the variation in conditions between outlying villages and Kotzebue.

TABLE 15: RANKINGS OF COMMUNITY SERVICES
COMPARING KOTZEBUE AND OTHER NANA VILLAGES

	<u>Kotzebue</u>	<u>Other Villages</u>
Search and rescue	1	1
Fire fighting equipment	2	5
Maintain airport	3	2
Sewer	4	6
Street lights	5	7
Community center activities	6	3
Maintain roads	7	10
Jail	8	12
Garbage	9	9
Playground	10	8
Community shower	11	11
Heated shelter	12	4
Firemen	13	13

- 1 = most important and willing to pay a lot
- 13 = least important and not willing to pay for

All agencies responsible for the provision of capital improvements should be aware of the current preferences of NANA residents. New facilities and services should be planned based on the ability and interest of the community to pay for the maintenance and operation of the structure or service.

TRANSPORTATION

Summary:

Overall the survey indicates that the majority of the travel done by NANA residents is within the region and the most common mode is by air. When transportation facilities were ranked, both Kotzebue and village respondents gave the highest preference to 1st, trail markers, second, trail shelters and third, airport shelters. It appears that most surface and water travel is subsistence related, while air travel is largely for work and to visit. Individual villages varied their rank order.

ANALYSIS:

The transportation needs of a community may depend on what kind of equipment is available.

Table 16 shows a sample of the types of vehicles in each village. In all but Kotzebue, cars and trucks are not used much. Sno-gos and boats appear to supply most of the needs. As expected, the types of vehicles owned is stratified by income and employment: the wealthier owning planes and cars.

TABLE 16: EQUIPMENT IN EACH HOUSEHOLD OF NANA COMMUNITIES
(figure represents number owned)

	<u>Kotzebue</u>	<u>Kivalina</u>	<u>Ambler</u>	<u>Kobuk</u>	<u>Buckland</u>	<u>Deering</u>	<u>Selawik</u>	<u>Noorvik</u>	<u>Kiana</u>	<u>Noatak</u>	<u>Shungnak</u>
Car, truck	52	0	0	2	0	2	0	2	5	0	2
Sno-go	98	12	16	5	12	9	22	24	19	18	7
Cycle	48	1	7	2	2	4	1	5	4	2	0
Boat	76	13	14	5	11	7	24	26	18	18	6
Plane	11	0	1	1	0	0	1	1	2	0	0

Table 17 shows that private airplanes are not as subsistence related as are boats and sno-gos. Those individuals most active in subsistence, though, appear to have access to all modes of transportation.

TABLE 17: EQUIPMENT OWNERSHIP BY INTENSITY OF ACTIVITY IN SUBSISTENCE

<u>Equipment</u>	<u>No Activities</u>	<u>1-4 Activities</u>	<u>5-10 Activities</u>	<u>Over 10 Activities</u>	<u>Number of Respondents</u>
Car-truck	3%	26	59	12 = 100%	65
Sno-go	2	28	56	14 = 100	214
Cycle	5	30	54	11 = 100	67
Boat	2	22	60	16 = 100	193
Plane	0	44	38	18 = 100	16

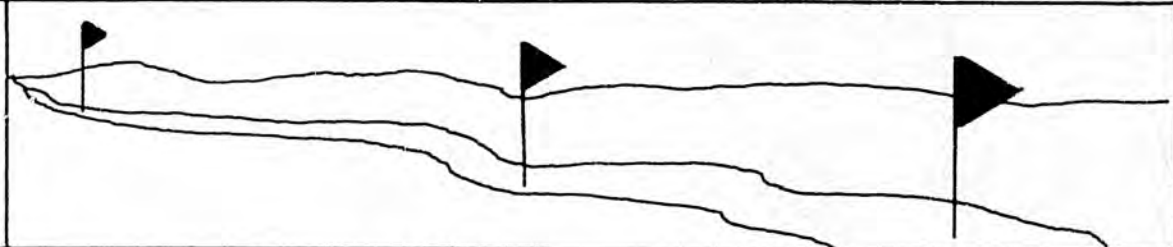
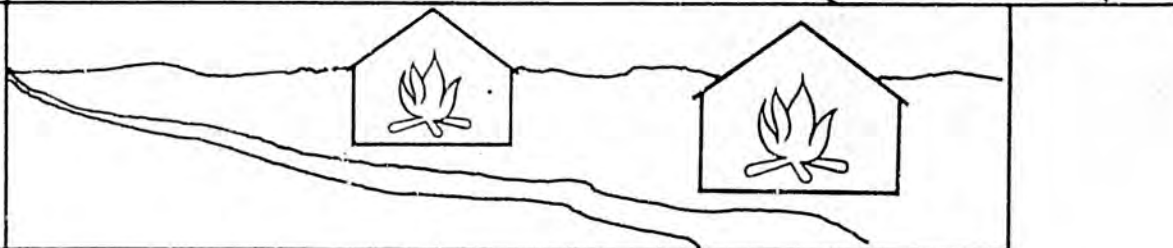
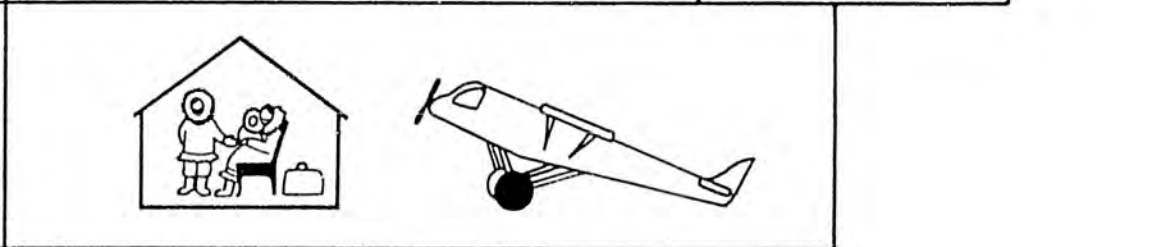
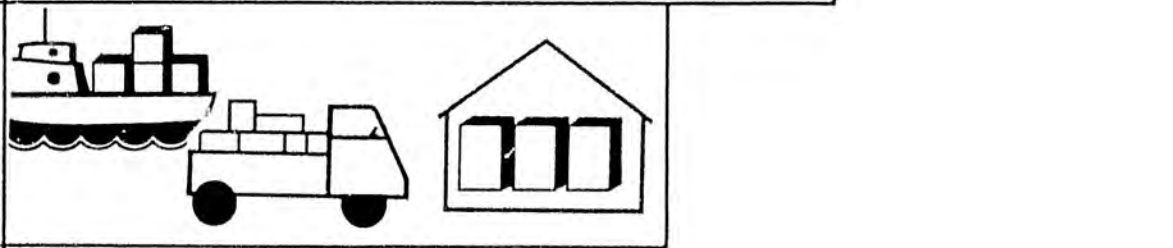
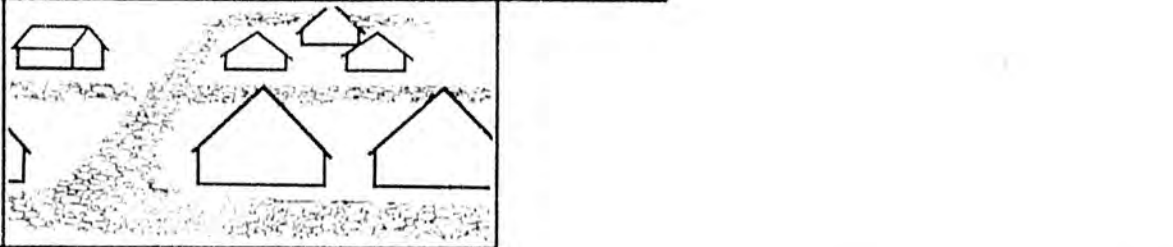


The kind of equipment available then, may determine the kind of transportation services and facilities desired in each community. Table 18 shows that even though more cars and planes are available, trail markers and shelters are still very important. This trend is consistent with the need for search and rescue services also. The development of roads and streets is not overwhelmingly important, and transportation more suited to the arctic environment is valued. There are variations in ranked preference from village to village, however a common trend is evident.

TABLE 18: RANKING OF TRANSPORTATION SERVICES WITHIN EACH VILLAGE

<u>Transportation Services</u>	<u>All villages except Kotzebue</u>											
	<u>Kotzebue</u>	<u>Kivalina</u>	<u>Ambler</u>	<u>Kobuk</u>	<u>Buckland</u>	<u>Deering</u>	<u>Selawik</u>	<u>Noorvik</u>	<u>Kiana</u>	<u>Noatak</u>	<u>Shunonak</u>	<u>Kotzebue</u>
Trail Markers	1	1	1	1	1	1	2	1	1	1	2	1
Trail shelters	2	1	1	4	2	2	1	1	2	2	1	2
Airport shelter	3	1	1	2	3	3	3	2	1	3	1	2
Freight shelters	4	2	2	2	5	4	4	4	3	3	2	3
Streets	5	2	2	3	4	6	5	3	4	5	3	4
Docks	6	3	3	5	6	5	6	6	5	6	4	5
Roads to other villages	7	3	4	3	7	7	7	5	6	4	5	5
Number of Respondents:	161	18	17	8	18	12	30	30	26	21	9	189

Ranking of Transportation Services - Kotzebue

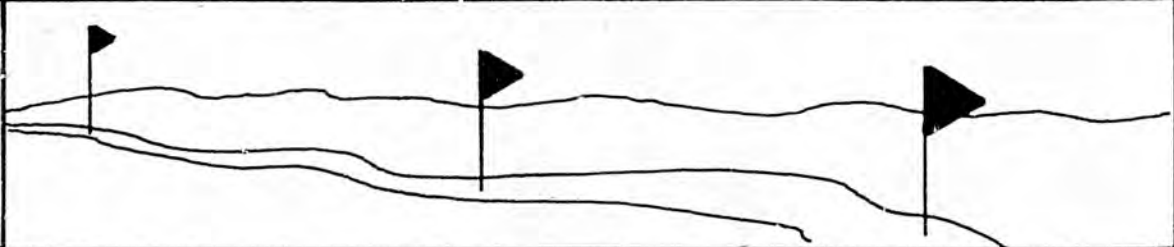
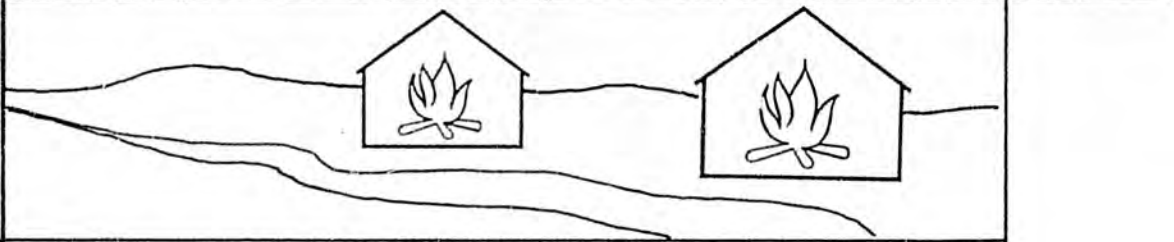
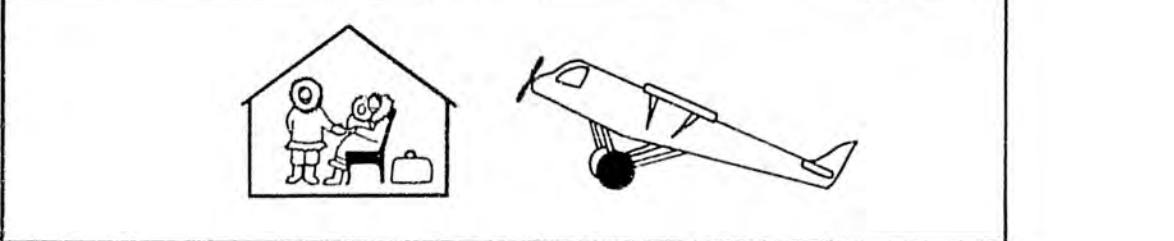
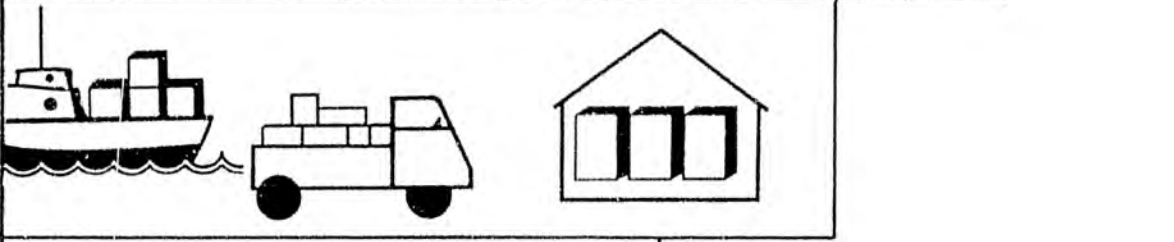
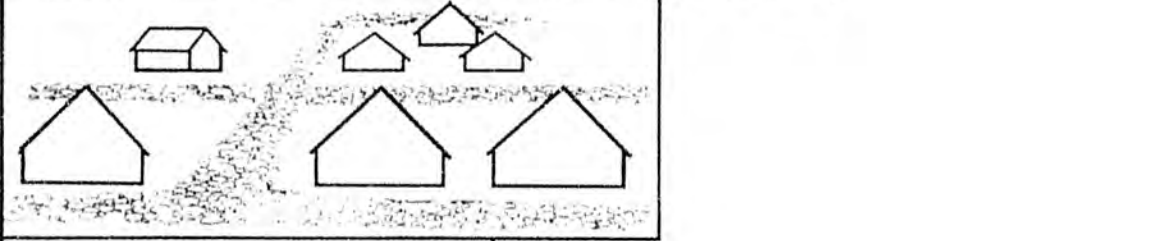
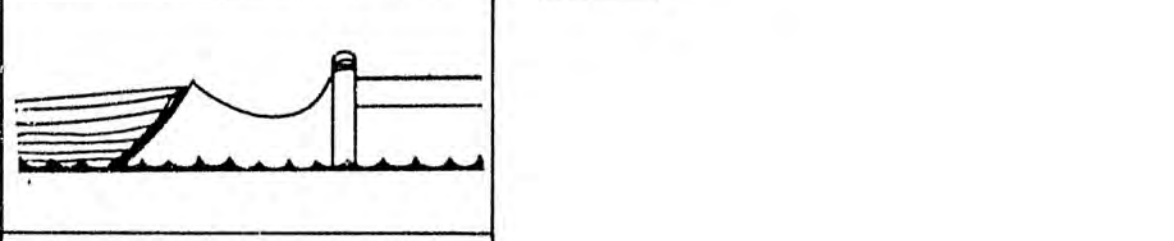
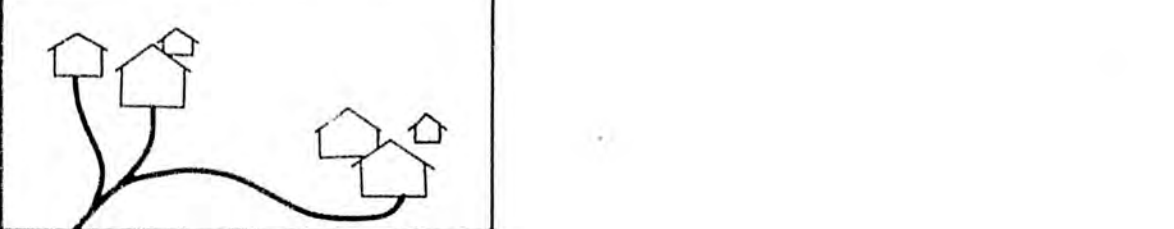
table 18

<p>trail markers priority 1*</p>	
<p>trail shelters priority 2</p>	
<p>airport shelters priority 3</p>	
<p>freight shelter priority 4</p>	
<p>streets priority 5</p>	
<p>docks priority 6</p>	
<p>roads to other villages priority 7*</p>	

* Priority 1: Most Important transportation services
Priority 7: Least Important transportation services

Ranking of Transportation Services- All Villages except Kotzebue

table 18

<p><i>trail markers priority 1*</i></p>	
<p><i>trail shelters priority 2</i></p>	
<p><i>airport shelters priority 2</i></p>	
<p><i>freight shelter priority 3</i></p>	
<p><i>streets priority 4</i></p>	
<p><i>docks priority 5</i></p>	
<p><i>roads to other villages priority 5*</i></p>	

* Priority 1: Most important transportation services
Priority 5: Least important transportation services

Those who make frequent trips by air want more "conventional" services like roads and streets, freight shelters, and airports. While air travel cannot be substituted for land travel, it appears that mobility in many forms is on the increase.

Nearly half of the respondents traveled within the region, and one-third went outside the region. Table 19 describes all the trips reported by NANA respondents. More than half (65%) of the traveling is done within the region and by air, for either work or visiting. Trips made for purely subsistence reasons don't seem to have shown up here judging from the 10% reported for snowmachine and 8% for hunting. Given this great amount of air travel, and yet the desire for trail markers and shelters, it suggests that air travel and land travel belong in two different spheres of interest: work and social life on one hand, and traditional subsistence life on the other.

TABLE 19: Description of All Trips Taken by NANA Respondents

<u>Where</u>		<u>Why</u>		<u>How</u>	
village in NANA	38%	visit	32%	commercial airline	60%
Kotzebue	20%	work	30%	charter airline	20%
Anchorage	12%	shopping	17%	boat	10%
fish camp	7%	hunting or		snowmachine	10%
village outside		fishing	8%		100%
NANA	7%	illness	5%		
Nome	4%	vacation	5%		
Fairbanks	4%	school	3%		
other	8%		100%		
	100%				

(this table does not show the relationships among where-why-how)

Future projects designed to improve transportation facilities and services should be directed towards upgrading trails and airports. Development of connecting roads does not appear to be of current high priority. Such plans, however, should be developed in conjunction with preferences for the location of employment opportunities.

COMMUNITY TIES

Summary: Forces of change have come to bear on the residents of NANA. Influence such as population growth, increased mobility for such activities as employment and education as well as increased cost of living are perceived as both positive and negative influences by NANA residents. Several variables were combined to indicate the relative strength of the ties individuals have to their communities. These were measured against the variables of age, level of participation in subsistence activities and occupational skills.

In addition, general attitudes about the quality of life in NANA were examined with an emphasis of the effects of new people coming to live in the NANA region. The two major problem areas appear to be increased alcohol abuse and unemployment. Many residents may be looking to education as a solution to these problems, since the majority in all communities believe that a college education is very important.

ANALYSIS: Potential development of resources poses decisions about many facets of village life. One central issue is the degree to which NANA residents are tied to their village--the place where they have grown up. Over half the respondents have lived in their village 21 years or more. Only 20 percent have lived there 5 years or less. From Table 3, it is clear that long time residents become more dependent on the land for their daily needs. The longer a person has lived in a village, the more likely they are to depend on subsistence and exclude a work for pay life style. In addition, Table 2 shows that the youth in the NANA region are continuing the subsistence tradition. So what then are the elements of the ties that hold people to their land?

Age is one element. Table 20 shows that the young are more willing to relocate; they have looser ties to their village, especially for men. Although there is not much difference between income groups, lower income groups have looser ties than the higher income groups. The same pattern applies to the unemployed and full-time employed.

TABLE 20:¹ TIES TO HOME: OLD AND YOUNG COMPARED

	Age		
	15-24	25-44	45+
Looser ties	56%	46	45
Average	32	26	15
Strong ties	12	28	40
	<u>100%</u>	<u>100</u>	<u>100</u>

Table 21 shows that the more loosely tied individuals see changes in the village in a more positive light. The traditional ways of doing things appear to be not quite as important to them. Having an allotment appears to make no difference in how tied people are to their village, nor does owning or renting a house.

TABLE 21: EFFECT OF TIES TO VILLAGE ON OPINION OF CHANGE

	Things Are Worse Now	Things Are About the Same	Things Are Better Now Than 10 years ago
Looser Ties	49%	36	57
Average	20	39	25
Strong ties	31	25	18
	<u>100%</u>	<u>100</u>	<u>100</u>

Another element of the community ties is participation in subsistence. Table 22 shows that those who are least active in subsistence have stronger ties to the community. This group may include the elderly who are no longer as active as they used to be or these results may be confounded by the difference in men's and women's responses.

TABLE 22: EFFECT OF SUBSISTENCE INTENSITY ON TIES TO VILLAGE

	Number of Subsistence Activities			
	0	1-4	5-10	11 or More
Looser ties	38%	40	51	54
Average	12	30	23	18
Strong ties	50	30	26	28
	<u>100%</u>	<u>100</u>	<u>100</u>	<u>100</u>

¹. Ties were sum of the times people said they would not move away from the village for work.

Ties to home appear to have little relationship to mobility. Whether or not a person travels has little to do with his desire to remain in the village. This result is easily understood considering many trips are made for visiting. However, occupation does make some difference (see Table 23).

The people with construction-related skills are more willing to move away from their village since they cannot work all year round in one place.

TABLE 23: EFFECT OF OCCUPATION ON TIES TO VILLAGE

	<u>Trades</u>	<u>Services</u>	<u>Native Skills</u>
Loose ties	72%	31	45
Average	14	30	18
Strong ties	14	39	37
	<u>100%</u>	<u>100</u>	<u>100</u>
Respondents:	84	74	47

When it comes to overall quality of life, there is much agreement about the problems and the joys of living in the NANA region. Table 24 shows that even among the three employment groups, everyone feels that the availability of natural resources, human closeness and a sense of freedom make the quality of life worthwhile. Conversely, the major problem was identified as alcohol abuse with unemployment mentioned second. The positive elements appear to be outweighed by the negative forces since overall, the majority of people see things getting worse. Particularly the unemployed believe that things were better ten years ago. (see Table 24)

TABLE 24: COMPARISON OF THREE QUESTIONS ON SATISFACTION WITH VILLAGE LIFE AMONG EMPLOYMENT GROUPS

	<u>Unemployed</u>	<u>Part-time Employed</u>	<u>Full-time Employed</u>
<u>Rank of Things Liked the Best</u>			
Hunting & fishing	1	3	3
Friends & family	2	2	1
Freedom	3	1	2
<u>Rank of Things Disliked the Most</u>			
Alcohol abuse	1	1	1
Unemployment		2	
Cost of living		3	
<u>Percent Thinking Things Were Better 10 Years Ago</u>			
	74%	61%	57%

Those who think life was better ten years ago in their village do see some positive change: when asked about new people coming to live in the community, they like the new ideas and learning, and the added business that a population increase brings. But the new people are believed to be taking jobs from long time residents. NANA residents voiced this concern more strongly than the advantages of new people. See Table 23. Even the 40% who believe that losing jobs to outsiders is a problem, believe that alcoholism has a greater negative impact, and that it affects all areas of village life.

Table 25: OPINIONS OF NANA RESPONDENTS WHO THINK VILLAGE LIFE WAS BETTER TEN YEARS AGO

<u>Good Things About Change</u>		<u>Bad Things About Change</u>	
News ideas & learning	28%	People take jobs	40%
More business	22%	Changes life style	17%
More services	9%	People bring disease and alcoholism	12%
Can't stop people	16%	Too crowded	10%
Other	25%	Take land	9%
	<u>100%</u>	Other	12%
			<u>100%</u>

While population growth has brought changes, most people think that subsistence opportunities have not changed much. See Table 24. Only one quarter see much of a difference and they are evenly divided. Those who are most active in subsistence think game has stayed the same or multiplied, while those least active think available game has decreased.

TABLE 26: VIEWS ON CHANGES AND PERCEPTION OF WILDLIFE ABUNDANCE

<u>Change in Wildlife Abundance</u>	<u>Opinion of Village Life Now</u>		
	<u>Worse Now</u>	<u>Same</u>	<u>Better Now</u>
Less	15%	21%	11%
Same	73	71	75
More	12	8	14
	<u>100%</u>	<u>100%</u>	<u>100%</u>

When asked about the importance of a college education, nearly all respondents believe that a college education is very important. This is particularly true of village residents. Variables of income, and participation in subsistence activities did not change the emphasis on education. The unemployed placed slightly higher emphasis on it than did the employed. The response of NANA residents to the question of importance of a college education can be compared to the responses of a national survey. While 60% of Kotzebue respondents and 74% of village respondents believe that a college education is very important, only 36% of the respondents in the nation felt that it was very important. See Table 25.

TABLE 27: PERCENT OF RESPONDENTS WHO THINK
A COLLEGE EDUCATION IS VERY IMPORTANT

All Villages Except Kotzebue	Kotzebue	Kivalina	Ambler	Kobuk	Buckland	Deering	Selavik	Noorvik	Kiana	Noatak	Shungnak	National ²
74%	60%	72%	75%	75%	83%	67%	58%	72%	69%	81%	89%	36%

As future plans for resource development, the creation of employment opportunities or other economic development projects are developed, decision makers should address the reasons why people choose to live in their communities, as well as the problem areas identified. Social and economic variables of alcoholism, family closeness, subsistence and the emphasis on education should all be included.

2. Tenth Annual Gallup Poll of the Public's Attitudes Toward the Public Schools. September 1978 -- Phi Delta Kappan -- page 39.

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