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THE LEGISLATURE OF THE STATE OF ALASKA  
TWELFTH LEGISLATURE

FISCAL NOTE

I. REQUEST

Bill/Resolution No. \_\_\_\_\_  
 Title \_\_\_\_\_  
 Requested by \_\_\_\_\_ Date \_\_\_\_\_

II. FISCAL DETAIL

Agency Affected University of Alaska  
 Program Category Affected Arctic Environmental Information and Data Center  
 BRU, Program, or Subprogram(s) Affected Organized Research  
 (Note: If more than one budget component is affected, separate line-item amounts and funding for each component in the analysis section.)

EXPENDITURES (Thousands of Dollars)

	FY 81	FY 82	FY 83	FY 84	FY 85	FY 86
100 PERSONAL SERVICES		297,099				
200 TRAVEL		20,000				
300 CONTRACTUAL		23,000				
400 COMMODITIES		4,901				
500 EQUIPMENT		---				
600 LAND & STRUCTURES		---				
700 GRANTS, CLAIMS, ETC.		---				
<b>TOTAL</b>		<b>345,000</b>				

FUNDING (Thousands of Dollars)

GENERAL FUND		345,000				
FEDERAL FUNDS						
OTHER (Specify Fund Source)						

POSITIONS

FULL TIME						
PART TIME		8				
TEMPORARY						

III. ANALYSIS (See Fiscal Note Preparation Instructions, Section III)

Developing A Conceptual Framework  
For AEIDC'S Education Objective

Recently, the Board of Regents of the University of Alaska issued a statement detailing the University's educational mission to the people of the state.\* Broadly, its goals are accessibility, excellence and accountability. Within these categories are several areas of particular significance to AEIDC.

Accessibility

The University recognizes that the barriers to higher education experienced by Native students are not entirely external but may result from previous educational experience and background.

It is the responsibility of the University to reduce both the external and the internal barriers to higher education.

Excellence:

Excellence can be judged by the qualities of students, faculty, administration, facilities and the educational environment. It can be defined in terms of the excellence of research and public service activities.

Accountability:

Accountability reflects the concern of the University to respond to the needs of the State and relates to both the setting of priorities among competing goals and accomplishing goals as efficiently as quality and service considerations permit.

The University must also provide the broadest possible range of instructional programs, research talents and outreach services to the citizens of the State without needless and costly duplication. An efficient and rational allocation of functions and responsibilities to the various institutions within the University can be made so that they can, collectively, meet the needs for public higher education in the State.

A primary objective of AEIDC is to supply scientific information and data based on research and analysis concerning the environment of Alaska to a variety of audiences. Traditionally, these audiences have included federal, state, and local governmental agencies, industry, Native groups, the educational community and the general public. More recently, requests from teachers and educational curriculum planners for scientific information about Alaska's natural, physical and cultural environments have increased dramatically. These requests fall into two

\* Alaska Alumnus. "Mission Statement Sets UA Course." Spring, 1980.

broad categories: 1) services related to the dissemination of instructional materials for various grade levels, and 2) educational services in the form of direct interactions with the education community, e.g., teachers, students and institutional staffs. AEIDC has responded to these requests in the following ways.

## I. Instructional Materials

### A. Answers to specific scientific questions.

AEIDC answers many requests by teachers and public service personnel for scientific data and information, including requests for the most recent information on a particular topic in a scientific field, source information in the form of generalized and annotated bibliographies and identification of scientists studying particular topics or regional areas.

### B. Critique and dissemination of classroom materials.

Two central problems promote the need for assessment and development of environmental educational materials for classroom use: first, inaccessible scientific data and information to educators in various areas of the state, and second, the paucity of materials relevant to Alaska's environment. Most of the materials readily accessible to teachers and other interested individuals are developed outside of Alaska; some illustrate general principles which are universally applicable, but others use concepts which in varying degrees are inappropriate for application in Alaska. Teachers note that they are unable to assess the applicability of these materials prior to purchase. AEIDC collects these materials and reviews their applicability to Alaska. Reviews are disseminated to teachers and school districts throughout the state.

### C. Identification, dissemination, and development of supplementary science education material.

AEIDC recognizes and understands the pedagogical problems associated with the acquisition of appropriate Alaskan science materials by teachers and curriculum planners. AEIDC has helped to develop and distribute several projects which have filled demonstrated educational needs, such as a series of posters on southcentral Alaska's natural environment for the Fish and Wildlife Service.

## II. Educational Services

### A. Alaska orientation seminars and inservice training.

Institutional staff in various sectors, such as education, private industry and social service agencies, have requested orientation seminars and inservice training. For example, the high turnover rates of elementary and secondary

teachers (approximately 30 to 40 percent annually) has contributed to school districts' requests for information to familiarize new teachers with the cultural, natural and physical environmental context of their work and place of residence. These orientation and inservice seminars have presented information on both a regional and statewide basis and are designed to introduce new personnel to the environment and culture of their regions and explain how additional information can be obtained. Requests for orientation seminars have increased steadily.

B. Teaching specific college-level courses.

Because of AEIDC expertise and research experience, staff members have been requested to teach several undergraduate courses for the University of Alaska, Anchorage and the Anchorage Community College. Courses which have been taught include Cultural Anthropology, Contemporary Alaskan Issues, Natives of Alaska, Alternate Energy, Applied Climatology, Fisheries Biology, Wildlife Management, Introductory Ecology, and Advanced Ecology. Formal arrangements are being developed between AEIDC and the Anchorage academic campuses so that similar courses may be offered in the future.

C. Assessment and analysis of environmental education and human ecology programs with emphasis on Native cultural groups.

Such requests have been made by program and project directors responsible for delivering of oral and written instructional information about particular cultural and physical regions of the state. The directors usually request an assessment and analysis of the program content and appropriateness to a particular area or target population. AEIDC's analysis may result in program modifications through the development of supplementary natural, physical, or cultural environmental information, design and delivery of specific inservice seminars for local teachers, etc.

D. Classroom presentation.

Classroom teachers, particularly in the Anchorage area but also in other areas of the state, request that AEIDC personnel visit their schools to discuss particular aspects of Alaskan environmental science and human ecology (with emphasis on Native cultural groups) or to accompany their classes on field trips. All grade levels from kindergarten through high school have benefited.

## SYSTEM FOR AEIDC RESEARCH INFORMATION DISSEMINATION

Based on previous requests for services and the current practices for dissemination of Alaskan science information to educators, there is a clear need to develop and implement a systematic approach for the distribution of science information and education services available from AEIDC. (Compare Appendix A for educational materials and services available statewide.) The following matrix delineates the two major categories of services and format in which AEIDC will continue to respond to requests by various user groups. Each subcategory under the two major types of services, instructional materials and educational services, could include a number of components. For example, Alaskan orientation seminars may have natural, cultural and arctic survival components presented separately or combined, depending on what best meets user needs. Another example would be a one-unit college course on wildlife management or a summer institute offering six (one-unit) courses on specific subjects about Alaska's physical, natural and cultural environments.

AEIDC's Research Information Dissemination System<sup>1</sup>

User Group:

Instructional Materials:

Educational Services:

	Science Information	Bibliographies	Environmental Education Materials	Media Slides/ Films	Alaskan Orientation Seminars	Specific College Courses	K-12 Classroom Presentations	Assessment, & Analysis of Mat. & Programs
1. Students								
2. Teachers								
3. Administrators								
4. Other Institutions Public and private business /industry								

<sup>1</sup>This chart graphically illustrates AEIDC's dissemination plan.

## Review of AEIDC's Materials and Services

With reference to instructional materials, AEIDC should research, design and produce educational science materials that meet the following criteria.

- (1) Require a minimum of user training;
- (2) May be utilized as independent resource materials; and
- (3) May be easily disseminated to users upon request.

The subcategory "science information" refers to specific scientific information; "bibliographies" includes conventional bibliographic information but may also identify scientists researching topics or regional areas; "environmental education materials" refers to any cultural, natural, or physical environmental materials generated and disseminated for instructional purposes; and "media slides/films" as instructional materials will continue to be refined and redefined as AEIDC's media group conceptualizes and develops science materials for public dissemination.

Under the broad category of educational services, AEIDC performs distinctive activities: production (analysis, research and design) and dissemination of scientific research information. The first three subcategories under educational services (Alaskan orientation, specific college courses, and K-12 classroom presentations) are designed to provide a systematic approach for increasing scientific knowledge on general and individual levels by direct interaction between AEIDC staff and the user group. The last subcategory (assessment and analysis of materials and programs) expands AEIDC's existing activities of evaluating science materials for teachers and schools by assessing and analyzing the material content of programs, information transmission strategies, and the scope and objectives of education programs/projects. Although these programs/projects are varied in terms of the target population served, instructional approaches employed, scope and objective, each program/project has a single major purpose: to increase student awareness and knowledge about the local Alaska environment and human ecology. The more than 200 programs/projects in Alaska indicate the need for these services, but virtually no assistance is available to them. Assessment and analysis could result in program/project modifications utilizing such AEIDC resources as slides, photos, films, bibliographic information, inservice seminars for teachers and students, etc.

Consistent with the University's educational mission, AEIDC's educational objective is to disseminate scientific information and data based on research and analysis concerning the environment of Alaska to a larger sector of the education community in an efficient and cost effective method. AEIDC's recognition of the increasing demand by educators for Alaska environmental research information will require a methodical system for science information dissemination involving (1) services related to the dissemination of instruction science materials for various grade levels, and (2) educational services in the form of direct interactions between AEIDC scientists and the education community. Properly implemented, AEIDC's science research information dissemination services will complement and increase the University of Alaska's capacity to serve the people of Alaska.

Institutional Affiliation	Alliqual Materials K-12	Inservice Teacher/Educator Training	Native Leadership Training	College Courses A.A./B.A.+	Alaska Environmental Science Materials	Alaska Environmental Science Seminars	Educational Evaluation and Research	Alaska Environmental Science Research
University of Alaska Rural Education Affairs Materials Development Center Title VII Allilingual Education	X	X						
University of Alaska Community College Rural Education & Extension Alaska Native Language Center	X	X		X			X	
Northwest Regional Education Laboratory Portland, Oregon	X	X					X	
Alaska Dept. of Education Western Regional Resource Center	X	X		X				
University of Alaska Community Colleges, Rural Education Affairs & Extension Centers	X	X		X				
Alaska Dept. of Education Southeastal Resource Center		X					X	
University of Alaska Cooperative Extension Services Vollog Proje t			X	X				
University of Alaska School of Education Center for Cross-Cultural Studies		X		X			X	
University of Alaska School of Education Cross-Cultural Education Development		X		X				
University of Alaska Research and Advanced Study Arctic Environmental Information and Data Center					X	X		X
Alaska Pacific University Dept. of Education Title VII Allilingual Teacher Training		X						

<sup>1</sup> AP/HC is unique in the sphere of Alaska environmental science research and its close ties to the state's educational system.

Institutional Affiliation	Bilingual Materials K-12	Inservice Teacher/Educator Training	Native Leadership Training	College Courses: A.A./B.A.+	Alaska Environmental Science Materials	Alaska Environmental Science Seminars	Educational Evaluation and Research	Alaska Environmental Science Research
University of Alaska Rural Education Affairs Materials Development Center Title VII Bilingual Education	X	X						
University of Alaska Community College Rural Education & Extension Alaska Native Language Center	X	X		X			X	
Northwest Regional Education Laboratory Portland, Oregon	X	X					X	
Alaska Dept. of Education Western Regional Resource Center	X	X		X				
University of Alaska Community Colleges, Rural Education Affairs & Extension Centers	X	X		X				
Alaska Dept. of Education Southcentral Resource Center		X					X	
University of Alaska Cooperative Extension Services Kellogg Project			X	X				
University of Alaska School of Education Center for Cross-Cultural Studies		X		X			X	
University of Alaska School of Education Cross-Cultural Education Development		X		X				
University of Alaska Research and Advanced Study Arctic Environmental Information and Data Center					X	X		X
Alaska Pacific University Dept. of Education Title VII Bilingual Teacher Training		X						

<sup>1</sup> ARSIC is unique in the sphere of Alaska environmental science research information and data analysis compared to general education research.