

**University of Alaska Fairbanks**

**New Degree Program Request: Format 3**

**High Latitude Range Management Certificate**

31 Credits minimum

Submitted by  
Northwest Campus  
College of Rural and Community Development  
October 2006

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## **I. COVER MEMORANDUM**

### **A. NAMES OF PERSONS PREPARING REQUEST**

This request is prepared by Carrie Bucki, Adjunct Faculty, Northwest Campus, Greg Finstad, Program Manager, Reindeer Research Program, University of Alaska Fairbanks, and Dr. Lee Haugen, Director, Northwest Campus. Jodie Anderson, Curriculum Coordinator for the USDA Higher Education Project, Alaska Cooperative Extension Service also contributed to the preparation of this request.

### **B. BRIEF STATEMENT OF PROPOSED PROGRAM**

The High Latitude Range Management (HLRM) certificate proposes a two year academic program that directly meets the needs of the peoples of the Seward Peninsula region and other rural Alaska regions. In addition, this program carries out the mission of the University of Alaska Fairbanks (UAF) Northwest Campus (NWC) by providing a program of college instruction to teach students, who wish to continue their formal education, skills for employability that will assist in economic and community development of the region, while placing special emphasis on using the region's rich history, to build a sustainable future through higher learning.

The HLRM program will offer a rural-specific, culturally relevant and accredited Certificate through the College of Rural and Community Development (CRCDD). The HLRM program has developed an entry-level curriculum which will meet the skill needs for rural Alaska communities. Agency or corporation personnel educated and trained outside the state of Alaska conduct much of the management of natural resources in Rural Alaska. Many local people have a profound knowledge of the resource base but no formal training in which to participate or contribute to management decisions at the state or federal level. Students receiving the HLRM certificate will be trained in conventional field-based techniques used by agencies to inventory and monitor high latitude plant and animal populations. Students will also be trained in the ecological concepts of sustained yield and the manipulations and management of animal populations in northern ecosystems. The HLRM program will also serve as a bridge for students pursuing a science-related associate or baccalaureate program.

#### **Objectives:**

- To promote the development of a skill set in the local resource base that is relevant to local employability and promotes wellness, self-sufficiency, and community development.
- To prepare students for entry-level employment in the field of natural resources that will contribute to an educated Alaskan workforce by providing relevant coursework to residents of rural Alaskan villages.

- For students to actively participate in an informed stewardship of high latitude natural resources – a stewardship grounded in traditional knowledge combined with contemporary studies and research in the sciences.
- To utilize the HLRM certificate as a building block for advanced university coursework in an associate or baccalaureate program or other science coursework.

**C. APPROVAL SIGNATURES**

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Director, Northwest Campus Date

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Math/Science Division Coordinator,  
College of Rural and Community Development Date

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Curriculum Council Chair  
College of Rural and Community Development Date

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Dean, College of Rural and Community Development Date

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President, UAF Faculty Senate Date

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Chancellor, UAF Date

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President, University of Alaska Date

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Board of Regents Date

## II. IDENTIFICATION OF THE PROGRAM

### A. DESCRIPTION OF THE PROGRAM

1. **Program title:** High Latitude Range Management (HLRM) Program
2. **Credential level of the program:** Certificate
3. **Admissions requirements and prerequisites:**

A HLRM Program Certificate represents the completion of 31 credits in the conventional field-based techniques to inventory and monitor northern animal and plant populations combining traditional knowledge with contemporary studies necessary for entry-level natural resource jobs statewide. The certificate also emphasizes place-based domesticated ungulate husbandry and health, applicable regionally and statewide. This certificate may also serve as a bridge to a variety of natural science associate and baccalaureate programs.

Admission is open to all individuals, especially those employed by or interested in employment with state, federal or tribal agencies or other local entities in rural Alaska which provide natural resources management services.

Students should have a high school diploma or GED and an interest in science – related fields. It is strongly recommended that students seeking admission to this program have completed two high school, lab-based science courses preferably in biology, chemistry, or physics.

Students whose ACT/SAT scores are not high enough to place them into regular college level classes will be required to take the ASSET or COMPASS test and will be placed into the appropriate developmental level course.

To remain in good standing, students must:

- a) Maintain an overall 2.0 grade point average
- b) Maintain a C grade or better in all required courses

4. **Course descriptions of required and recommended elective courses**

### HLRM CERTIFICATE PROGRAM OUTLINE

1. **Complete the general university requirements**
2. **Complete the certificate general course requirements.....9 cr.**
  - a. Communication (complete one of the following): .....3 cr.  
ENGL 111X – Introduction to Academic Writing..... 3 cr

- b. Computation (complete one of the following):.....3 cr.  
 MATH 103X – Concepts & Contemp Aps of Math.....3 cr. OR  
 ABUS 155 – Business Math.....3 cr.
- c. Human Relations (complete one of the following):.....3 cr.  
 ANTH 100x/SOC 100x – Individual, Society & Culture.....3 cr. OR  
 ABUS 154 – Human Relations.....3 cr.

**3. Complete the HLRM program requirements.....22 cr.**

- NRM 101 - Nat. Res. Conservation and Policy.....3 cr.
- BIOL 104X - Natural History of Alaska.....4 cr.
- OR**
- BIOL 104 - Natural History of Alaska.....3 cr.
- AND**
- BIOL 104L - Natural History of Alaska Laboratory.....1 cr.
- HLRM 120 - History of Domesticated Alaskan Ungulates .....1 cr.
- HLRM 130 – Research Field Logistics .....2 cr.
- HLRM 140 - High Latitude Range Management.....2 cr.
- HLRM 150 - Alaskan Ungulate Husbandry.....2 cr.
- HLRM 160 - Meat Production.....2 cr.
- HLRM 170 - Health Issues in Domestic Herds.....2 cr.
- HLRM 201 - Field Techniques for Range Management.....2 cr.
- HLRM 205 – Report Writing in Range Management.....2 cr.

**Minimum credits required.....31 cr.**

**Course Descriptions**

**General Certificate Requirements (9 credits)**

*ABUS 154 Human Relations (3 credits):* Attitudes, self-concepts, personal communication styles, motivation, interactions, positive reinforcements, team building and leadership development.

*ABUS 155 Business Math (3 credits):* Review of basic math computation skills applied to various business areas. Emphasis on applications.

*ANTH/SOC 100X Individual, Society and Culture (3 credits):* An examination of the complex social arrangements guiding individual behavior and common human concerns in contrasting cultural contexts.

*ENGL 111X Introduction to Academic Writing (3 credits):* Instruction and practice in written inquiry and critical reading. Introduction to writing as a way of developing, exploring and testing ideas. Concentration on research methods and techniques. Prerequisites: Placement examination or DEVE F070.

*MATH 103X Concepts and Contemporary Applications of Math (3 credits):*

Applications of mathematics in modern society. Topics include voting systems, probability and statistics and applications of graph theory in management science; uses of probability and statistics in industry, government and science; and applications of geometry to engineering and astronomy. Problem solving emphasized. Prerequisites: DEVM F105 or DEVM F106 or placement; high school geometry and algebra II.

**Core Requirements (22 credits)**

*BIOL 104X Natural History of Alaska (4 credits):* The physical environment peculiar to the North and important in determining the biological setting; major ecosystem concepts to develop an appreciation for land use and wildlife management problems in both terrestrial and aquatic situations. May not be used as biology elective credit for a major in biological science. BIOL F104X (4 credits) fulfills the Natural Science Core requirement. BIOL 104 offered Spring and Fall via Independent Learning and by CRCD in Spring.

*BIOL 104 Natural History of Alaska (3 credits):* The physical environment peculiar to the North and important in determining the biological setting; major ecosystem concepts to develop an appreciation for land use and wildlife management problems in both terrestrial and aquatic situations. May not be used as biology elective credit for a major in biological science. BIOL F104X (4 credits) fulfills the Natural Science Core requirement. BIOL F104 offered Spring and Fall via Independent Learning. For section F01: This course may NOT be used to meet Core science credit. Enroll in BIOL F104X for Core science credit.

*BIOL 104L Natural History of Alaska Laboratory (1 credit):* Laboratory Section only of BIOL F104X. For non-science majors; cannot be used as a biology elective by biological science majors. Laboratory fee: \$50.00. Prerequisites: A natural science course with no laboratory and permission of instructor.

*NRM 101 Natural Resources Conservation and Policy (3 credits):* Conservation of natural resources including history, ecological and social foundations. Examines principles of sustained yield, carrying capacity, supply and demand, and world population growth as applied to agriculture, range, forest, wildlife, fisheries, recreation, minerals and energy management. A wide range of perspectives is presented to help students develop a personal philosophy toward natural resources. Prepare a multiple resource observation plan for an undeveloped area on campus. Optional all-day field trips take place the first two Saturdays of the semester. Prerequisites: Placement in ENGL F111X.

*HLRM 120 History of Domesticated Alaskan Ungulates (1 credit):* Review the history of domesticated ungulate populations, free-ranging and fenced systems, in Alaska beginning from the 1890s to present. Emphasis will be placed on traditional activities on the Seward Peninsula. Prerequisites: ENGL 111X OR permission of instructor.

*HLRM 130 Research Field Logistics (2 credits):* Learn the skills, techniques, and equipment used in remote scientific fieldwork in Alaska. Course includes methods for processing and storing animal/plant tissue samples, orienteering, navigation, GPS, wilderness first aid, arctic survival, bear safety, boat safety, as well as ATV, boat, and snowmachine operation, maintenance and repair. Prerequisites: none.

*HLRM 140 High Latitude Range Management (2 credits):* Policies and terminology of range and range management, specific to Alaska and the Arctic. Review current vegetation inventory techniques used by federal and state agencies. Identify and sample Alaska forage plants.

Examine range production systems in Alaska for a variety of species; domesticated and wild. Development of a high latitude range management plan. Prerequisites: NRM 101 AND BIOL 104X OR BIOL 104 AND BIOL 104L OR permission of instructor.

*HLRM 150 Alaskan Ungulate Husbandry (2 credits):* Students will be introduced to management skills, facilities design and nutritional needs for domesticated ungulates in Alaska. Provides exposure and examines traditional knowledge combined with contemporary research in herding and husbandry for open range and fenced systems. Field trips to reindeer, elk, bison, and/or cattle operations will demonstrate husbandry techniques and data collection procedures. Prerequisites: HLRM 140 OR permission of instructor.

*HLRM 160 Meat Production (2 credits):* A study of the meat animal processing sequence. The production of meat-type domesticated ungulates in Alaska and the science and technology of their conversion to food, value-added products and by-products. A review of the current state regulations and methods on proper field slaughtering, and the preparation, handling and storage of meat will be introduced. Prerequisites: HLRM 140 OR permission of instructor.

*HLRM 170 Health Issues in Domesticated Herds (2 credits):* Ruminant anatomy and physiology specific to high latitude ungulates. Overall health issues and problem solving techniques for domesticated ungulates, including a review of indicators for disease or parasitic infections. Vaccinations and Rx treatments; including use in food animals. Field necropsy techniques and blood and tissue collection procedures. State monitoring and identification policies. Prerequisites: HLRM 150 OR permission of instructor

*HLRM 201 Field Techniques for Range Management (2 credits):* Provides hands-on instruction in field and laboratory techniques in range evaluation for domesticated ungulates. Basic methods for sampling and studying grazing systems at the high latitudes will be introduced. Students will participate in data collection and analysis procedures as part of an independent research project. Prerequisites: MATH 103 or ABUS 155 and HLRM 130 and HLRM 140 OR permission of instructor.

*HLRM 205 Report Writing in Range Management (2 credits):* Provides the basic technical reporting methods, writing, and research skills necessary to analyze, interpret, and document field and laboratory data. Incorporating field data collected in HLRM 201 and the skills, knowledge, and techniques learned in other required courses, the student will produce a written technical report and make a presentation. Prerequisites: ENGL 111 and HLRM 201 OR permission of instructor.

## 5. Requirements for the Certificate in HLRM

To receive a Certificate in HLRM, students must attain at least 31 credits of lower division courses. Nine credits will be met through general university requirements. The remaining credits will be met through completion of the program's required courses.

## 6. Course Sequence for the Certificate in HLRM

On the following pages the course sequence for the HLRM program is listed in table form for rural and urban students. While most university programs begin in the fall semester, this certificate program will better serve the needs of the

students with a spring semester start. The philosophy of this arrangement, while perhaps slightly unconventional, solves a host of potential concerns. The HLRM program is designed to be offered via distance delivery for rural Alaska students, but due to the goals of the courses and feedback received from the program's shareholders, portions of some courses and three summer intensives require face-to-face time for outdoor intensives. With the outdoor intensive time needing to take place during snow-free periods, this limits the time of year certain courses may be offered. In particular is HLRM 140 (High Latitude Range Management), which is a distance delivered course, but includes an intensive face-to-face three day practica session. This course can only be taught in the fall to ensure a snow-free face-to-face session early in the semester. If the course was offered in spring, a snow-free face-to-face session, in May on the Seward Peninsula, is unlikely. This course has two prerequisites (NRM 101 and BIOL 104X OR BIOL 104 and BIOL 104L) that students can take during the first semester (spring 1) of the HLRM program. Having students complete HLRM 140 early on in the certificate program is very important as it is a required course for HLRM 150, HLRM 160, and HLRM 201. For students to complete the certificate in two years, they must complete HLRM 140 early in the program. Starting the HLRM program in the fall, rather than spring, would mean students would not be able to take HLRM 140 until Fall 2 (due to prerequisites), making the completion of the degree take over 2 years.

Another argument for a spring start to the HLRM program is that the students have two summers to take the 3 required week-long intensive courses (rather than one summer with a fall start). In their first summer they will take Field Logistics (HLRM 130), which will prepare them for all of the other lab, practica, and field intensive sessions to follow in the program (also a pre-requisite for HLRM 201). Students will also be able to complete the program their second fall term with their capstone report writing class (HLRM 205), which will directly follow their field data collection course in summer 2 (HLRM 201). Other prerequisite classes for these 200-level courses fit nicely into the previous terms.

Lastly, a spring start to the HLRM program allows for greater flexibility to account for various student needs and academic levels. For example, NRM 101 requires placement into ENGL 111, which is also the communications requirement course for the HLRM certificate as well as a prerequisite for HLRM 120 and HLRM 205. If a student does not test into ENGL 111 upon entry into the program, they will have the fall semester prior to the program's start to complete any developmental studies courses they need. For advanced students, there are opportunities to take additional credit hours. For students who have various time or other employment constraints, there are options for completing some of the general course requirements that are not listed in the sample course of study here.

These same arguments hold true for the urban student, except for NRM 101, which is offered face-to-face in Fairbanks in the fall only. This may be a disadvantage having to take this course at the same time as HLRM 140. The

HLRM program does not anticipate many urban students enrolling in the program, and if this situation arises, the urban student may take NRM 101 via distance from CRCD in the spring or through advising be determined that they could take NRM 101 (taking advantage of the opportunity for a face-to-face class) and HLRM 140 simultaneously. This would be a case by case basis and determined by the HLRM 140 instructor.

*Sample Course of Study for full and part-time rural students*

**Fall 2007**

Students can use this semester to take Developmental Studies courses, if necessary, for placement into the required Math and/or English courses for the HLRM certificate.

**PROGRAM BEGINS**

**Year 1**

**Spring 1 (2008)**

NRM 101	3 cr.
ENGL 111X	3 cr.
BIOL 104	3 cr.

**Summer 1 (2008)**

BIOL 104L	1 cr.
HLRM 130	2 cr.

**Fall 1 (2008)**

MATH 103X	3 cr.
HLRM 140	2 cr.

**Year 2**

**Spring 2 (2009)**

HLRM 120	1 cr.
HLRM 160	2 cr.
ANTH 100X/SOC 100X	3 cr.

**Summer 2 (2009)**

HLRM 150	2 cr.
HLRM 201	2 cr.

**Fall 2 (2009)**

HLRM 170	2 cr.
HLRM 205	2 cr.

*Sample Course of Study for full and part-time urban students*

**Fall 2007**

Students can use this semester to take Developmental Studies courses, if necessary, for placement into the required Math and/or English courses for the HLRM certificate.

**PROGRAM BEGINS**

**Year 1**

**Spring 1 (2008)**

ENGL 111X	3 cr.
BIOL 104X	4 cr.

**Summer 1 (2008)**

HLRM 130	2 cr.
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**Fall 1 (2008)**

NRM 101	3 cr.
MATH 103X	3 cr.
HLRM 140	2 cr.

**Year 2**

**Spring 2 (2009)**

HLRM 120	1 cr.
HLRM 160	2 cr.
ANTH 100X/SOC 100X	3 cr.

**Summer 2 (2009)**

HLRM 150	2 cr.
HLRM 201	2 cr.

**Fall 2 (2009)**

HLRM 170	2 cr.
HLRM 205	2 cr.

*3 Year Rural Delivered Course Cycle*

Course	Fall 2007	Spring 2008	Summer 2008	Fall 2008	Spring 2009	Summer 2009	Fall 2009	Spring 2010	Summer 2010
ENGL 111X	X	X		X	X		X	X	
ANTH/SOC 100X	X	X		X	X		X	X	
ABUS 154	X	X		X	X		X	X	
ABUS 155	X	X		X	X		X	X	
MATH 103X	X	X		X	X		X	X	
BIOL 104		X			X			X	
BIOL 104L			X			X			X
NRM 101		X			X			X	
HLRM 120					X			X	
HLRM 130			X			X			X
HLRM 140				X			X		
HLRM 150						X			X
HLRM 160					X			X	
HLRM 170							X		
HLRM 201						X			X
HLRM 205							X		

*3 Year Urban Delivered Course Cycle*

Course	Fall 2007	Spring 2008	Summer 2008	Fall 2008	Spring 2009	Summer 2009	Fall 2009	Spring 2010	Summer 2010
ENGL 111X	X	X		X	X		X	X	
ANTH/SOC 100X	X	X		X	X		X	X	
ABUS 154	X	X		X	X		X	X	
ABUS 155	X	X		X	X		X	X	
MATH 103X	X	X		X	X		X	X	
BIOL 104X	X	X		X	X		X	X	
BIOL 104	X	X		X	X		X	X	
BIOL 104L	X	X		X	X		X	X	
NRM 101	X			X			X		
HLRM 120					X			X	
HLRM 130			X			X			X
HLRM 140				X			X		
HLRM 150						X			X
HLRM 160					X			X	
HLRM 170							X		
HLRM 201						X			X
HLRM 205							X		

## Proposed Catalog Description

### High Latitude Range Management Program Requirements

A HLRM Program Certificate represents the completion of 31 credits in the conventional field-based techniques to inventory and monitor northern animal and plant populations combining traditional knowledge with contemporary studies necessary for entry-level natural resources jobs statewide. The certificate also emphasizes place-based domesticated ungulate husbandry and health, applicable regionally and statewide. This certificate may also serve as a bridge to a variety of natural science associate and baccalaureate programs.

Admission is open to all individuals, especially those employed by or interested in employment with state, federal or tribal agencies or other local entities in rural Alaska which provide natural resource management services.

Students should have a high school diploma or GED and an interest in science – related fields. It is strongly recommended that students seeking admission to this program have completed two high school, lab-based science courses preferably in biology, chemistry, or physics.

Students whose ACT/SAT scores are not high enough to place them into regular college level classes will be required to take the ASSET or COMPASS test and will be placed into the appropriate developmental level course.

To remain in good standing, students must:

- a) Maintain an overall 2.0 grade point average
- b) Maintain a C grade or better in all required courses

#### 1. Complete the general university requirements

#### 2. Complete the general certificate university requirements..... 9 cr.

- Communication.....3 cr:
  - ENGL 111X – Introduction to Academic Writing .....3 cr
- Computation.....(complete one of the following).....3 cr:
  - MATH 103X – Concepts & Contemp Aps of Math .....3 cr OR
  - ABUS 155 – Business Math .....3 cr
- Human Relations.....(complete one of the following).....3 cr;
  - ANTH 100X/SOC 100X – Individual, Society & Culture .....3 cr OR
  - ABUS 154 – Human Relations .....3 cr

#### 3. Complete the following general HLRM requirements..... 22 cr.

- NRM 101 - Natural Resources Conservation and Policy.....3 cr.
- BIOL 104X - Natural History of Alaska .....4 cr. OR
- BIOL 104 – Natural History of Alaska.....3 cr. AND

BIOL 104L – Natural History of Alaska Laboratory.....1 cr.  
HLRM 120 - History of Domesticated Alaskan Ungulates.....1 cr.  
HLRM 130 - Research Field Logistics.....2 cr.  
HLRM 140 - High Latitude Range Management.....2 cr.  
HLRM 150 - Alaskan Ungulate Husbandry.....2 cr.  
HLRM 160 - Meat Production.....2 cr.  
HLRM 170 - Health Issues in Domesticated Herds.....2 cr.  
HLRM 201 - Field Techniques for Range Management .....2 cr.  
HLRM 205 - Report Writing in Range Management.....2 cr.

**Minimum credits required.....31 cr.**

**B. PROGRAM GOALS**

**1. Brief identification of objectives and means for evaluation**

The High Latitude Range Management Program will provide students with quality academic instruction and entry-level skills for positions in natural resources-related fields. The HLRM Program will also provide a pathway for students to enter into a science-related associate or baccalaureate degree or other science coursework.

a). Objectives:

- To promote the development of a skill set in the local resource base that is relevant to local employability and promotes wellness, self-sufficiency, and community development.
- To prepare students for entry-level employment in the field of natural resources that will contribute to an educated Alaskan workforce by providing relevant coursework to residents of rural Alaskan villages.
- For students to actively participate in an informed stewardship of high latitude natural resources – a stewardship grounded in traditional knowledge combined with contemporary studies and research in the sciences.
- To utilize the HLRM certificate as a building block for advanced university coursework in an associate or baccalaureate program or other science coursework.

b). Evaluation:

- Students will complete a capstone project culminating work completed in three required courses.
- On-going tracking of graduates to assess their ability to gain employment and their job retention rates.
- Tracking of current student recruitment numbers.

- Discussions with regional employers and the review of State of Alaska job placement statistics.
- On-going tracking of graduates to assess their movement into subsequent science-related associate or baccalaureate programs and their subsequent academic performance.

## 2. Relationship of program objectives to “Purposes of the University”

*The University of Alaska Fairbanks, as the nation’s northernmost Land, Sea, and Space Grant university and international research center, advances and disseminates knowledge through creative teaching, research, and public service with an emphasis on Alaska, the North and their diverse peoples.*

The High Latitude Range Management Program was created by the Northwest Campus in cooperation with employers and educators. The program is focused on preparing rural students for immediate entry into natural resources-related employment and continued post-certificate education. This program relates to and supports the “Purposes of the University” by:

- Serving as a program of higher education for traditional and non-traditional Alaska Native students by using the local resources and traditional knowledge of the region to teach skills and techniques desired by employers without requiring students to change or leave their culture or heritage.
- Providing high quality undergraduate education in entry-level coursework, increasing the number of Alaska Native students, and increasing the number of degrees awarded to Alaska Native students with particular consideration given to the needs of permanent residents and students in non-traditional settings who seek skills and degrees suited to rural communities.
- Collaborating with organizations, state and federal agencies, communities, governments, and tribal entities to meet rural Alaska needs in the field of natural resources.

## 3. Occupational/other competencies to be achieved

Employment opportunities have increased throughout rural Alaska and the demand for relevant education within rural Alaska continues to grow as more money from state and federal legislation is being funneled through local governments to address local needs. The skills and techniques students will master through the HLRM Program represent an area of technical expertise that is increasingly desired and needed by rural Alaska’s industry demands. Agencies that currently have to bring in personnel from outside the region will now be able to hire locally trained persons as field technicians in the area of natural resources management. This degree will

provide students the opportunity to develop the training skills necessary for immediate employment in natural-resources fields in their local area or elsewhere.

#### 4. **Relationship of courses to the program objectives**

Courses directly serve the program objectives by:

- Providing culturally appropriate opportunities for the development of applied skills and techniques, which validate and draw upon traditional knowledge and principles.
- Providing opportunities to increase knowledge, skills, and techniques utilized by the natural resources industry in Alaska.
- Making extensive use of regional Native resources.
- Using a delivery format designed to accommodate Native learning styles and annual schedules.

### **III. PERSONNEL DIRECTLY INVOLVED WITH PROGRAM**

#### **A. LIST OF FACULTY INVOLVED**

1. University Fairbanks and Rural Faculty directly involved with the HLRM program:
  - a) Greg Finstad, Program Manager, Reindeer Research Program, School of Natural Resources and Agricultural Sciences, Fairbanks (non-grant faculty). Greg works closely with reindeer producers throughout the state and the Bering Straits Region. He will serve as the Interim HLRM Program Manager to assist with program delivery, student recruitment and offer extensive expertise and knowledge.
  - b) Dr. Claudia Ihl, Assistant Professor of Biology, Northwest Campus, Nome (non-grant faculty). Claudia will work closely with the HLRM program faculty to offer core science courses, teach courses in the biological sciences, participate in course development, program planning, curriculum development, and student advising and support.
  - c) Dr. David Smith, High Latitude Range Management Program Manager and Faculty, Northwest Campus, Nome (100% funded by USDA grant – starts June 1, 2007). This faculty position will be responsible for teaching students practical applications of science for natural resource management in northern regions, teaching undergraduate and preparatory courses in the sciences, and actively participating in course development, program planning, management, additional curriculum development, and student advising and support. This position will also work with all campus faculty to develop strategies to cope with developmental needs of students and cooperate with UAF on assessing student learning outcomes for core science courses.
2. University Fairbanks and Rural Campus Faculty indirectly involved by teaching non-HLRM courses:

- a) Judy Atkinson, Professor, Developmental Math, CRCD, Fairbanks.
- b) Jerah Chadwick, Professor, English, Interior-Aleutians Campus, Unalaska.
- c) John Creed, Professor, English, Chukchi Campus, Kotzebue.
- d) Carol Lee Gho, Assistant Professor, Math, Interior-Aleutians Campus, Fairbanks.
- e) Micheal Hannigan, Associate Professor, Social Work, Northwest Campus, Nome.
- f) Ronald Illingworth, Professor, English, Interior-Aleutians Campus, Fairbanks.
- g) Julie Maier, Assistant Professor, Biology, Interior-Aleutians Campus, Fairbanks.
- h) Edward Murphy, Professor, Institute of Arctic Biology, Fairbanks.
- i) Todd Radenbaugh, Assistant Professor, Environmental Science, Bristol Bay Campus, Dillingham.
- j) Susan Todd, Associate Professor, School of Natural Resources and Agricultural Sciences, Fairbanks.
- k) Sandra Wildfeuer, Assistant Professor, Mathematics, Interior-Aleutians Campus, Fairbanks.
- l) Victor Zinger, Assistant Professor, Math, Bristol Bay Campus, Dillingham.

**B. ADMINISTRATIVE AND COORDINATING PERSONNEL**

Resumes for key personnel (1-3) attached in Appendix A.

1. Dr. Lee Haugen, Director, Northwest Campus, Nome
2. Lou Brown, USDA Drum Beats Program Manager, Interior-Aleutian Campus, University of Alaska Fairbanks
3. Greg Finstad, Program Manager, Reindeer Research Program, School of Natural Resources and Agricultural Sciences, Fairbanks
4. Dr. David Smith, Faculty, Northwest Campus, Nome to serve as HLRM Program Manager (start date: June 1, 2007)

### **C. CLASSIFIED PERSONNEL**

1. Media Technician, UAF (20% from USDA grant)
2. Web Technician, UAF (2% from USDA grant)
3. Barb Oleson, Grant Manager, Northwest Campus, Nome
4. Staff support from the Northwest Campus is available to the program as needed for tutoring, facilitation, and other student needs.

## **IV. ENROLLMENT INFORMATION**

### **A. PROJECTED ENROLLMENT**

Results from a statewide survey of rural high school students show a strong interest in enrolling in science degree programs that precede a baccalaureate degree. High school biology students from Nome additionally expressed a strong interest in continuing with post secondary education along with an interest in science and science-related careers.

In addition to rural Alaska Native students and other students from around the state, there is a general interest from students and administrators from other circumpolar north nations to enroll and attend courses at UAF in the area of range management and ungulate husbandry, particularly reindeer. Specifically, the Educational Center of Sami Area in northern Finland has informally inquired about an exchange program to UAF HLRM courses for students enrolled in their reindeer husbandry vocational degree program.

Using an initial growth rate of 10 – 15 students per year, from Seward Peninsula communities, other villages, from increased Fairbanks enrollments, and students participating in an exchange from other circumpolar north nations, this program could be serving 30 students by 2010. This would include 10 grant supported students in cohort 1 (spring 2008 start), then a year later 10 additional grant supported students in cohort 2 (spring 2009 start), and then allowing for any additional students (up to 5 each year) that wish to enroll in the program cross-regionally, but are unsupported from NWC and may be supported from other UAF rural campus certificate programs or elsewhere.

### **B. HOW DETERMINED/SURVEYED**

A survey was sent to 220 high schools in rural Alaska communities in summer and fall 2005. The survey queried students, counselors, principals and teachers by asking a series of questions involving student interest in science degrees and careers.

A survey for the CRCDC United States Department of Agriculture (USDA) Alaska Native/Native Hawaiian Serving Higher Institutions Education Grants program identified needs and issues for science-related areas which this degree can address. These needs include requests for more science classes and greater access to science specific degrees at the rural campuses.

A survey was given to 42 high school biology students at the Nome-Beltz High School on November 23, 2005. The survey queried student interest in continuing with post secondary education, interest in science and science related careers. Respondents indicated an interest in science (85%) with 36% possibly pursuing a career in the sciences. The students indicated that they are planning to or will attend college (76%) with an additional 21% of the respondents expressing some interest in college. Almost three-quarters of the students indicated that they were interested in a bachelor degree or higher (71%).

#### **C. MINIMUM ENROLLMENTS**

There is no minimum number of students required to proceed with the program. Course will be taught regardless of the number of students enrolled.

#### **D. MAXIMUM ENROLLMENTS**

The maximum enrollment the program can accommodate is 30 students in various stages of program completion. This would include 10 supported students in cohort 1 (spring 2008 start), then a year later 10 additional grant supported students in cohort 2 (spring 2009 start), and then allowing for any additional students (up to 5 each year) that wish to enroll in the program cross-regionally, but are unsupported from NWC and may be supported from other rural campus certificate programs or elsewhere.

#### **E. SPECIAL RESTRICTIONS ON ENROLLMENTS**

None.

### **V. NEED FOR THE PROGRAM**

#### **A. REQUIRED FOR OTHER PROGRAMS**

While the HLRM certificate program is not required by any other program, it has the potential to influence students to enroll in a variety of natural science degrees within the University of Alaska Fairbanks educational system. The HLRM program will also serve as a bridge for students pursuing a science-related associate or baccalaureate program. It can be a first step in an educational career ladder or the only step for those needing and desiring job specific skills.

Face to face meetings with Dr. Carol Lewis and Dr. Stephen Sparrow, Dean and Associate Dean of the School of Natural Resources and Agricultural Sciences

(SNRAS), respectively, have resulted in their support for this program and the potential it brings for non-traditional students to enroll in SNRAS degree programs. They agree there is a need for an opportunity for rural students to begin their science degrees from their home campuses. Because the HLRM certificate is offered both via distance education and on the CRCD cross-regional schedule, SNRAS views this certificate program as a natural feeder into their science degree programs as well as other UA science degrees.

## **B. EMPLOYMENT MARKET NEEDS**

Historical impacts and state statistics prove there is a need for skills-based education programs in rural Alaska. Rural Alaska is changing at a rapid pace. As sustainable programs throughout the Bering Straits Region are developed by regional and local native organizations, the largest land owners in the region, more trained land managers knowledgeable of local resources will be needed (especially from federal and state agencies) to partner with these organizations in order to serve their needs and reach their sustainable program goals.

The Northwest Campus uses a bottom up procedure when developing new programs by determining what needs are not being met by local and regional employers. For example, an audio-conference with potential regional and other statewide employers of HLRM graduates was held in Anchorage in October 2005 to identify those needs (see results below). Information on Native knowledge and expertise from groups such as the Reindeer Herders Association is also utilized to augment program offerings. Northwest Campus then develops courses and programs to meet these needs which range from endorsements, certificates, or A.A.S., A.A. and B.A. degrees. This process ensures program sustainability.

Current efforts to educate rural Alaskans in natural resources management has been limited to workshops and non-accredited seminars held sporadically. There is no structured education program that addresses all aspects of range management specific to northern regions and teaches the techniques used by agencies to inventory and monitor high latitude plant and animal populations.

An informal survey was conducted with potential employers of graduates of the HLRM program in October 2005. Survey respondents included federal and state agencies, reindeer herders, university researchers and corporation members, such as the USDA National Resources Conservation Service (NRCS), the Alaska Department of Natural Resources, the Reindeer Herders Association, Kawerak, Inc., the Alaska Department of Environmental Conservation, and the University of Alaska Fairbanks. Questions about the local demand for skills, rural learning styles, general knowledge skills that are needed, and the willingness of the respondents to participate in guest lectures or presentations for the HLRM program informed us of their needs and ideas for the development of the curriculum. We concluded that the regional industry and state and federal agencies statewide are in need of locally trained personnel in range management issues pertinent to northern latitudes.

Current management of regional natural resources is often conducted by the above named agencies and corporation personnel educated and trained outside the local region and the state of Alaska. The local people served by this Northwest Campus program, who already have a profound knowledge of the resource base, will participate and contribute to regional management decisions at the state or federal level or with native and village corporations as a formally trained employee.

State statistics from the Department of Labor substantiate workforce and skill development needs in rural Alaska. The Department of Labor Website (<http://almis.labor.state.ak.us/>) illustrates an 11.9% increase in Professional, Scientific and Technical Services jobs by 2012. In addition, the Department of Labor predicts a 5.3% increase in jobs for Biological Technicians during the same timeframe.

The Biological Technician title is often used broadly and would include positions in the field of natural resources, which HLRM certificate holders would be qualified. Under the federal government qualification standards for biological technicians, HLRM certificate holders will be qualified for either a GS-3, GS-4, or GS-5 position (with a GS-4 requiring the successful completion of a 2 years of study with 12 semester hours in any combination of scientific or technical courses such as biology, chemistry, statistics, entomology, animal husbandry, botany, physics, agriculture, or mathematics and the GS-5 requiring the successful completion of a full 4-year course of study leading to a bachelor's degree with major study **or** at least 24 semester hours in any combination of courses such as those listed previously). Under the State of Alaska job classification standards, HLRM certificate holders will be qualified for Fish and Wildlife Technician and Natural Resource Technician I and II positions and perhaps a level III position for both depending on the level of other personal work experience.

The employability of the HLRM degree holder will be greatly enhanced in the Bering Straits Regions. More specifically, HLRM degree holders will be qualified for employment (as local hire) as field technicians or field assistants with agencies such as NRCS, Bureau of Land Management (BLM), Alaska Department of Fish and Game (ADFG), and Native Corporations. Currently, most agencies have to fly in personnel unfamiliar with the area from outside the region (Anchorage or other) to perform the work. After discussions with potential stakeholders in October 2005, they concluded that they would have a great interest in hiring local field assistants who are knowledgeable in the area with range management skills. This will save them travel costs and training time, while utilizing the local knowledge. HLRM certificate holders will be qualified to support natural resources research activities being conducted on the Seward Peninsula by UAF or other institutions, where currently most research activities hire field technician support from outside the region.

In addition to a field technician position, HLRM graduates will be qualified to work as butcher assistants in either their local grocery store or in any of the meat processing businesses. Although some of the HLRM courses focus on the

management of reindeer, the HLRM program teaches concepts and skills that can be applied to any natural resource management position, not just those connected to the reindeer industry.

A recent survey of courses offered at UArctic institutions that relate to global change indicates a lack in courses in agriculture, forestry, and fisheries among others (Global Change Education in the Arctic, Moore, Kinnunen, and Boone, EOS, vol. 38, no. 14, April 2007). While the HLRM program does discuss agriculture in the Arctic, it does not claim to instruct students on the effects of global change on high latitude range, but having local persons formally trained to monitor the current environment will make them quite qualified to monitor and observe change and trends over time, which will be highly valuable to the land managers of the region.

## VI. OTHER

The purpose of the HLRM Program is to offer a rural and culturally-relevant accredited certificate through the College of Rural and Community Development. The overall goals of the HLRM Program are to meet conventional field-based technique development in rural Alaska and to encourage rural residents to attain university credits that relate to the rural economy and cultural systems.

This proposal is the result of an on-going initiative by university centers and rural communities concerned about the lack of formal training available to the rural Alaska workforce so they can contribute to natural resource management decisions at the state and federal level. The guiding force behind this effort is the Northwest Campus and the HLRM Program Advisory Board.

Members of the Advisory Board are:

Rose Fosdick Nome	Reindeer Herders Association Natural Resources Division, Kawerak, Inc.
Tom Gray White Mountain	President, Reindeer Herders Association Reindeer herd owner
Dr. Lee Haugen Nome	Director Northwest Campus
Dr. Carol Lewis Fairbanks	Dean, School of Natural Resources and Agricultural Sciences, UAF
Karin Sonnen Homer	Rangeland Management Specialist USDA NRCS
Calvin Steele Palmer	Rangeland Management Specialist USDA NRCS

The Advisory Board has guided the development of the program from the beginning by creating a list of core competencies and basic skills required of a natural resource technician staff or other similar jobs. This group will continue to plan, guide, monitor, and assess the start up and continuation of the HLRM program.

This program directly addresses the University's stated commitment to serve Native populations in Alaska and emphasizes recruitment of Native students in an under-served academic area.

## **VII. RESOURCE IMPACT**

### **A. BUDGET**

Program development and implementation is supported by the USDA Alaska Native/Native Hawaiian Serving Higher Institutions Education Grants program. This project addresses the USDA goal of increasing the number of Alaska Native/Native Hawaiians engaged in USDA careers and continuing in science degree programs.

USDA support will provide funding for 10 Alaska Native students per year to complete the HLRM program within two years through 2010. Additionally, this grant will support one full-time science faculty member who will manage the program. Ultimately, this faculty position is a full time tenure track position which will come from fund 1 money, if continued grant support is not possible or unavailable. Another \$12,482 in salaries and benefits will come from the grant for support staff (web technician and media technician). USDA will also provide \$33,342 for travel, supplies, and computer networking.

While the Northwest Campus has developed this new program, other fund 1 faculty and staff from all campuses, both urban and rural, will potentially be involved with this program. The program will generate approximately \$9,000 per year with a minimum of 10 part-time students. As student participation increases, tuition income will increase, gradually replacing some of the grant funding.

While the current effort is supported for the next three years (through 2010), the long term sustainability (up to ten years) of this program through the USDA Alaska Native/Native Hawaiian Serving Higher Institutions Education Grants program is very promising. For example, the University of Hawaii is similarly funded by the USDA and has developed long-term projects with other universities in the American Pacific (Agricultural Development in the American Pacific Project). These collaborative projects, which work to develop agriculture in a sustainable, culturally appropriate and economically viable way, have been funded since 1988. While there is no absolute guarantee that the HLRM program will have funding past 2010, the USDA grant program is greatly committed to developing higher education and developing local sustainability in places like rural Alaska and rural Hawaii while utilizing local knowledge and culture, for the long term.

If USDA funding does not continue beyond 2010, NWC has committed fund 1 monies for the HLRM faculty position. Additionally, scholarship dollars are often available for Alaska Native students through their respective native corporations to assist with tuition and travel costs. These native corporations are the largest land

owners in the Bering Straits Region and have a vested interest in having more locally trained land managers in the region knowledgeable of the local resources. In addition, students who are already employed by a natural resources agency (such as the Natural Resources Division of Kawerak, Inc., Nome) may be able to receive assistance with tuition for courses that will greatly improve knowledge and skills in range management techniques and methods to make them competitive for higher level positions.

The Resource Commitment Form is attached in Appendix B.

#### **B. FACILITIES/SPACE NEEDS**

Office, classroom and lab space will be provided by existing University urban and rural campuses throughout Alaska. No new facilities or space will be required.

#### **C. CREDIT HOUR PRODUCTION**

The program will provide an increase in credit hours for the University and will draw new students in from an untapped pool by providing culturally relevant and skills-based education. Based on an average enrollment projection of 10 students per semester taking an average of 5 credits by 2008, the HLRM Program will generate approximately 50 credit hours per semester.

#### **D. FACULTY**

The primary faculty will be hired through the USDA grant. This person will be a HLRM faculty at the Northwest Campus and serve as the Program Manager. Current faculty of the College of Rural and Community Development and UAF will be supported by the Northwest Campus. With UAF approval, other faculty may be secured to teach specific subject areas as well as community experts and other professionals. HLRM program information and course requirements were sent, via email, to specific University departments that may have increased course enrollments due to the required existing university courses. Department response was favorable. Enrollment increases will be minimal as well as the demand on department faculty.

#### **E. LIBRARY/MEDIA**

Most of the information for this program has been created and developed by participating UAF programs. The impact on library resources will be limited to Internet based resources with information transmission and book mailing by library staff. Pauline Wilson of UAF Library Resources has reviewed the program on September 7, 2006 and concluded that there will be minimal impact on resources and materials. Pauline forwarded this program information to Anne Christie, Biosciences Librarian, to keep our program in mind as new acquisitions become available.

As the University continues to upgrade its capacity to address the growing need for adequate education in rural Alaska, specifically with regard to the distance delivery process and audio equipment, the HLRM Program will be made readily available to more students.

## **VIII. RELATION OF PROGRAM TO OTHER UNIVERSITY PROGRAMS**

### **A. EFFECTS ON ENROLLMENTS ELSEWHERE IN THE SYSTEM**

This program has the potential of impacting student enrollment in other programs within the University of Alaska system, but a majority of the students are non-traditional students who would not be otherwise enrolled in University programs or courses. Students who complete the HLRM program will be encouraged to continue their education in a science-related associate or baccalaureate program.

Departments that will see a slight increase in enrollment for some of their introductory courses are Biology, Math, Humanities, and SNRAS. On September 18, 2006 Department Heads (Rich Boone - UAF Biology, Judy Atkinson - CRCD Math Division, Susan Andrews – CRCD Humanities Division, Julie Maier – CRCD Science Division) were notified about the submission of this program and which courses HLRM students will be required to take in their respective departments. On September 13 and 14, 2006, face to face meetings were held with Dr. Carol Lewis and Dr. Stephen Sparrow, Dean and Associate Dean of the School of Natural Resources and Agricultural Sciences (SNRAS), respectively, about potential increases in NRM 101 for urban students and to discuss the positive opportunities available for HLRM students to bridge into SNRAS degree programs. Department response was favorable. Enrollment increases will be minimal as well as the demand on department faculty.

### **B. DUPLICATION/APPROXIMATION OF OTHER UNIVERSITY PROGRAMS**

At present there is no other Certificate programs designed to specifically serve students who desire training in conventional field-based techniques used by agencies to inventory and monitor plant and animal populations in northern ecosystems. This certificate will serve as a bridge for students pursuing a science-related associate or baccalaureate program.

Initially there may seem to be potential duplication existing between HLRM 140 (High Latitude Range Management) and NRM 312 (Range Management). HLRM 140 is specific to range management issues of the north, while NRM 312 spends significant amounts of time covering issues of the Lower 48 states. It is not possible for HLRM students to take NRM 312 due to the 300-level designation (not allowed for a certificate degree). Both Dean Lewis and Associate Dean Sparrow of SNRAS support the HLRM certificate program.

The Tanana Valley Campus does offer CAH 175 (Introduction to Meat Cutting) which is part of their culinary/hospitality program. Although the HLRM 160 (Meat Production) will cover meat cutting as part of the course, it is not the main component and will primarily focus on meat quality and production specific to high latitude regions. History of Alaska (HIST 461) is offered at UAF but does not cover history of domesticated ungulate populations like the HLRM 120 (History of Domesticated Alaskan Ungulates) course does. HLRM students could not take HIST 461 for their certificate degree because of its 400-level designation. The UAF Biology Department occasionally offers a Wildlife Diseases course, but again this course is not offered at the 100 or 200 levels and is also not offered for distance delivery. Although some topics covered in the Wildlife Diseases course may overlap with HLRM 170 (Health Issues in Domesticated Herds), HLRM 170 is more specific to overall health issues, including disease of high latitude domesticated ungulates, fenced and free-ranging. This course will also teach technical skills with demonstrations.

### **C. RELATION TO RESEARCH OR SERVICE ACTIVITIES**

#### **1. Contributions to research or service**

While research is not the primary focus of this program, students will have the opportunity to participate in ongoing projects conducted by the UAF Reindeer Research Program in cooperation with local Native reindeer herders as part of an independent study, internship, or as a volunteer. Other internships or independent study opportunities will be arranged on an individual basis with other agency or university projects for interested students.

This program will be an individual model in the academic community of rural university education, producing information from student outcomes assessments, teaching styles, and information related to skill and workforce development in rural Alaska. Results of the individual student outcomes assessment (grading rubric from the final writing report/presentation, the graduate survey, and discussions with regional employers) will be compiled by the HLRM Program Manager and shared with peers, students, the UAF community, the HLRM Advisory Board and stakeholders through written reports, oral presentations, and meetings.

The HLRM certificate will provide a much needed service to the rural and urban Alaska employers by providing them with a formally trained rural resident able to contribute to management decisions by using the knowledge, skills and techniques developed while enrolled in the program.

#### **2. Benefits from research or service activities**

Research activities will benefit the natural resource land managers, reindeer herders, and other domestic livestock owners in Alaska by providing them with information to make informed, knowledgeable decisions.

A benefit of this service to employers is that a trained individual is living in the area that work is to be performed. This will save employers on travel time and money while simplifying logistics.

Additionally, the HLRM certificate is part of a comprehensive plan to spread academic education throughout the State and into every rural community. The certificate will provide a much needed and sought-after service to rural Alaska's tribal and local government employer base and workforce as well as to urban and State employers.

UAF has recently submitted the UAF Interim Accreditation Report 2006. Recommendation Five is focused on better integration of teaching, research and service activities between the Fairbanks campus and the CRCDC campuses. This certificate program as well as the Cooperative Extension Service (CES)/CRCDC USDA Higher Education Project have served as a catalyst of change and collaboration between the Fairbanks-based SNRAS, the Reindeer Research Program within SNRAS, the College of Natural Sciences and Mathematics, and the CES.

Standard Two, Section Two of this report suggests a response to the development of new programs, which is the current goal in this phase of HLRM certificate program. The HLRM certificate is working to develop place-appropriate science that brings traditional ecological knowledge together with Western science at the rural campuses. This development is not only bringing rural students to science in their communities but it is also bringing Fairbanks-based programs to CRCDC campuses.

## **IX. IMPLEMENTATION/TERMINATION**

### **A. DATE OF IMPLEMENTATION**

The program is expected to be in the University of Alaska Fairbanks catalog and available the spring semester of 2008. Courses will be piloted in the summer and fall semesters of 2007. HLRM students will be able to use the fall semester of 2007 to take developmental studies courses, if necessary.

### **B. PLANS FOR RECRUITING STUDENTS**

The promotion of this new program throughout the state will be done in cooperation with the Northwest and Fairbanks campuses. In addition, cooperation with rural tribal councils, regional nonprofits, and regional for-profit corporations will be encouraged to organize and support students in this endeavor. Upon approval, the

Northwest Campus is prepared to market the program with brochures, a website, and other conventional methods of student recruitment.

**C. TERMINATION DATE**

This is an ongoing program with no termination date.

**D. PLANS FOR PHASING OUT PROGRAM IF UNSUCCESSFUL**

As this program does not involve new equipment or other major program investment, the phasing out process should only involve the assurance of program completion by existing students. If it becomes necessary to close the program, HLRM Program students will be provided the opportunity to complete the University requirements for the certificate.

**E. ASSESSMENT OF THE PROGRAM**

The program will be assessed through ongoing and periodic student, faculty, alumni, and employer evaluations. Given this is a new and unique program, it is anticipated that various programmatic changes are forthcoming over time and will require flexibility, reliability and cooperation. On September 14, 2006 the HLRM Student Outcomes Assessment Plan was sent to Peter Pinney at CRCDC, who then forwarded it to Susan Heinrich, Vice Provost, for review. Suggestions were received and incorporated into the Student Outcomes Assessment Plan which follows this section in Appendix C.

**F. PROGRAM MANAGEMENT**

This program will be incorporated within the normal academic structure of CRCDC and will be assigned to the Math & Sciences Division. Academic program oversight and program coordination will be housed at the Northwest Campus, which has identified Dr. David Smith, one full-time faculty, as Program Manager. This HLRM faculty person will begin his NWC assignment June 1, 2007. In the meantime, Greg Finstad will serve as Interim Program Manager of this program. Northwest Campus will provide the necessary support staff as well.

The Program Manager will be responsible for:

- oversight and coordination of the program including cross-campus communication,
- student advising, support, and recruiting,
- program advertising and marketing both internally and externally,
- course scheduling and content consistency,

- travel and accommodation arrangements for intensives,
- instructor review and approval,
- credit for prior learning evaluation (CPL),
- petition and waiver review and approval
- continual review of both human and fiscal resource sufficiency to ensure that necessary faculty and student support is available to meet program growth
- coordination of on-going internal management, evaluation, and revision
- implementation of the Student Learning Outcomes Assessment

Additionally, the Northwest Campus will:

- provide advising and other support as needed from their in-house student support functions and from existing faculty,
- hire adjunct instructors using the existing CRCD and university approved policy

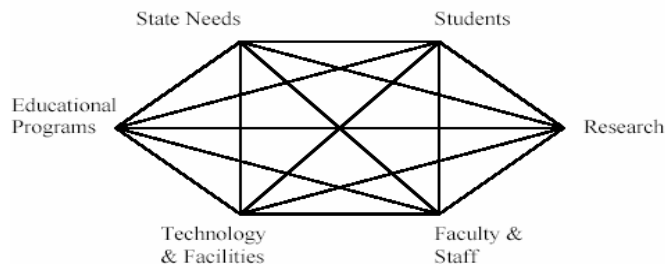
## X. REGENTS GUIDELINES

### University of Alaska Board of Regents Program Approval Summary Form

University of Alaska Fairbanks  
College of Rural and Community Development  
Northwest Campus

#### Certificate in High Latitude Range Management

Target admission date: Spring semester 2008



#### How does the program relate to the **Education** mission of the University of Alaska and the MAU?

The High Latitude Range Management Program (HLRM) was created by the Northwest Campus in cooperation with external employers and both internal and external educators. The program is focused on preparing rural students for immediate entry into natural resources-related employment and continued post-certificate education.

While the HLRM Certificate Program is not required by any other program, it has the potential to positively influence students to enroll in a variety of natural science degrees within the University of Alaska Fairbanks educational system. The proposed program is aligned with the UA mission to meet state and local needs and to provide opportunities to all who can benefit from educational programs of high quality.

This program relates to and supports the Education Mission of the University of Alaska by:

- Serving as a program of higher education for traditional and non-traditional Alaska Native students by using the local resources and traditional knowledge of the region to teach skills and techniques desired by employers without requiring students to change or leave their culture or heritage (UA Strategic Plan 2010, Goal 1 and 2).
- Providing high quality undergraduate education in entry-level coursework, increasing the number of Alaska Native students, and increasing the number of degrees awarded to Alaska Native students with particular consideration given to the needs of permanent residents and students in non-traditional settings who seek skills and degrees suited to rural communities (UA Strategic Plan 2010, Goal 3).
- Collaborating with organizations, state and federal agencies, communities, and governments to meet rural Alaska needs in the field of natural resources (UA Strategic Plan 2010, Goal 4).

#### What **State Needs** are met by this program?

Current efforts to educate rural Alaskans in natural resources management has been limited to workshops and non-accredited seminars held sporadically. There is no structured education program below the baccalaureate level that addresses aspects of range management specific to northern regions, and teaches the techniques used by agencies to inventory and monitor high latitude plant and animal populations.

Federal agencies, state agencies (including the University of Alaska), natural resource management corporations, commercial enterprises (meat processing, grocery stores) and

environmental consulting firms hired over 800 biological technicians or meat processors in 2004 in Alaska (Alaska Division of Labor Statistics). For example, a natural resource management corporation such as Kawerak (based in Nome) hires 14 biological technician staff members per year. A State agency such as the Alaska Department of Fish and Game hires 6-8 biological technicians per year. A federal agency such as the Bureau of Land Management and the National Park Service hires 3 and 4 biological technicians per year, respectively

Historical impacts and state statistics demonstrate a need for a statewide skills-based education program in Alaska and the HLRM program will contribute positively to that goal. The Department of Labor Website (<http://almis.labor.state.ak.us/>) illustrates an 11.9% increase in Professional, Scientific and Technical Services jobs by 2012.

What are the **Student** opportunities and outcomes? Enrollment projections?

The HLRM certificate will provide students with the opportunity to develop the skills and training necessary for entry-level natural resources jobs statewide or to continue their formal education in a variety of natural science associate and baccalaureate programs. Students will receive quality academic instruction and training, and be adequately prepared with a skill set in conventional field-based techniques to inventory and monitor northern animal and plant populations combining traditional knowledge with contemporary studies.

The general university course requirements for the certificate (ENGL 111, MATH 103, ABUS 155, ANTH/SOC 100, and ABUS 154) are already available to students throughout the state; therefore no additional resources are required.

For the general HLRM course requirements, the course delivery mode will be as follows (distance delivered will use Blackboard and Elluminate Live software and the intensives will be face-to-face):

NRM 101 – distance delivered from NWC, also face-to-face in Fairbanks

BIOL 104 – distance delivered from NWC, also taught both face-to-face and distance delivered statewide

BIOL 104L - five day intensive lab session at NWC

HLRM 120 – distance delivered from NWC

HLRM 130 – week long summer intensive at NWC

HLRM 140 – distance delivered semester course plus a 3-day intensive at NWC

HLRM 150 – week long summer intensive at NWC

HLRM 160 - distance delivered semester course plus a 3-day intensive at NWC

HLRM 170 - distance delivered semester course plus a 3-day intensive at NWC

HLRM 201 – week long summer intensive at NWC

HLRM 205 – distance delivered from NWC

The students enrolled in this program must be able to travel to Nome for the intensive portion of many of these courses, including the 3 summer courses. Much of the material being presented to the students needs to happen in the field and in a face-to-face environment. In addition, the weather restricts much of this activity during the traditional Spring and Fall semester school year, therefore these field intensive courses need to take place during the summer (i.e. snow-free) months.

The enrollment projections for the HLRM certificate are 10 students per year. These students will begin the program together and move through the certificate requirements as a cohort. For example, spring 2008 will have 10 students beginning the program and then in spring 2009 an additional 10 students will begin the program and so on. All of these students will be part-time students, as the HLRM certificate is designed as a part-time program but still allows the student to complete it within 2 years. The traditional student enrolling in courses and programs at the rural campuses is not an 18-year old, single, full-time student. The traditional student is a middle-aged person with a family, who often has another job, therefore cannot afford to attend school full-time. The HLRM certificate program and the NWC strive to meet the needs of these people in the region.

Using an initial growth rate of ten students per year, from Seward Peninsula communities, other villages, from increased Fairbanks enrollments, and students participating in an exchange from other circumpolar northern nations, this program could be serving 30 full and part-time students by 2010.

	Full-time	Part - time
Year 1		10
Year 2		20
Full Implementation		30

Describe **Research** opportunities:

While research is not the primary focus of this program, it is a unique model which will be documented and shared throughout the academic and regional community. This program will produce information in student outcomes assessments, teaching styles and other information relating to workforce and skill development in rural Alaska. Increased scientific inquiry and research opportunities may increase on a local basis along with a stronger collaboration between the scientific community and local entities.

Individual students may have the opportunity to participate in ongoing research projects conducted by the UAF Reindeer Research Program in cooperation with local Native reindeer herders or with another agency or other university projects as part of an independent study, internship, or as a volunteer.

Describe **Fiscal Plan** for development and implementation:

Program development and implementation is supported by the United States Department of Agriculture Alaska Native/Native Hawaiian Serving Higher Institutions Education Grants program. This project addresses the USDA goal of increasing the number of Alaska Native/Native Hawaiians engaged in USDA careers and continuing in science degree programs. This grant will fund the current effort until at least 2010, plus funding for 10 Alaska Native students to complete the HLRM program within two years. In addition, one science faculty member (100% salary from grant, \$70,748, then fund 1) will have primary responsibility for program coordination and management. Another \$12,482 in salaries and benefits (web technician and media technician) will come from the grant for support staff.

While the Northwest Campus has developed this new High Latitude Range Management certificate, other fund 1 faculty and staff from all campuses (urban and rural) will potentially be involved in this program. Primary faculty are already employees of the University; both faculty from the College of Rural and Community Development as well as Fairbanks-based UAF faculty. The Northwest Campus will provide classroom, lab, and office space with existing resources and facilities.

If USDA funding does not continue beyond 2010, NWC has committed fund 1 support for the full-time HLRM faculty position; in addition NWC will provide support for students in the program.

## **APPENDICES**

Appendix A: Resumes for key personnel

Appendix B: Resource Commitment Form

Appendix C: Student Outcomes Assessment Plan

## APPENDIX A

### Curriculum Vitae #1

Dr Lee Haugen  
Director, Northwest Campus  
University of Alaska Fairbanks  
Nome, Alaska 99762  
907-443-8401  
nfillh@uaf.edu

#### EDUCATION

- 1999 University of Arizona, Ph.D. (Language, Reading and Culture)
- 1978 University of Arizona, M.Ed. (Reading Specialist)
- 1972 University of Arizona, B.F.A. (Major: Sculpture & Three Dimensional Design)

#### Doctoral Dissertation

- Haugen, L. L. (1999). Middle school content literacy and art: A semiotic study of beliefs, practices, and environments. The University of Arizona.

#### PROFESSIONAL EXPERIENCE

- 2006 – present Director, Northwest Campus University of Alaska Fairbanks,  
Nome, Alaska
- 2001 – 2005 Assistant Professor of Education, Department of Language,  
Literacy and Culture, University of Alaska, Fairbanks.
- 1999 – 2001 Reading Specialist/ Language Arts, Art, Social Studies  
Northwest Arctic Borough School District, Aqqaluk High  
School, Noorvik, Alaska.
- 1998 -1999 Assistant Professor of Education, Director of Reading,  
Idaho State University, Pocatello, Idaho
- 1995 -1998 Graduate Teaching Assistant, the Department of Teaching  
and Teacher Education, University of Arizona, Tucson,  
Arizona.
- 1988 –1994 Assistant Professor of Education, Director of Learning Center, University off Alaska Southeast
- 1982 –1988 Project Director, Instructor, Special Services Grant, U.S. Department of Education Grant,  
Alaska Native Studies/Cross Cultural Communications, University of Alaska, Fairbanks.
- 1978 –1981 Director, Learning Skills Program, Fort Lewis College, Durango,  
Colorado.

#### PUBLICATIONS

- *NCATE Philosophy Document (UAF, 2002) (with Mareen Hogan & Debi McLean)*
- NCATE Reading Endorsement Folio (UAF, 2002) (with Joan Parker-Webster)
- Haugen, L. L. (1985). Effective Study Skills. Fairbanks, AK: Upward Bound.
- Haugen-Nichols, L. (1983). Reading as a reasoning process: An activity to improve reasoning skills. The Journal of the College Reading and Learning Association, 3(1).

**Research Grant Awards:**

- Rasmuson Foundation 2006: Pre Development Grant for Consortium Library
- USDA 2006: Drumbeats II
- HUD2006: Raise the Roof For Jobs (Pending)
- Title III 2006: Systemic Program Development and Support for Native Scholars
- USDA 2005: Drumbeats
- HUD 2003: Strengthening Communities Through Collaborative Training
- Alaska Schools Research Funds 2002-2003: Developing a Knowledge Base for Reading: Case Studies in the Alaska Context (with Joan Parker Webster & Mary Claire Tarlow).
- UA Foundation President's Special Project Fund 2003: Northern Latitudes Literacy Journal Editorial Board Organizational Planning and Training Project. (with Joan Parker-Webster).

**Papers Presented:**

- Haugen, L.L. (1999). Art and content literacy. National Reading Conference, Orlando, FL.
- Haugen, L.L. & Mullin, A. (1999). Linking literacy: Cross training writing/reading tutors in the writing lab. National Writing Centers Association Conference: Bloomington, IN.
- Haugen, L.L. (1997). When two signs go walking, they both do the talking, National Reading Conference: Scottsdale, AZ.
- Haugen, L.L. (1996). Multiple ways of knowing, International Reading Association National Conference: New Orleans, LA.
- Haugen, L.L. (1991). Critical Thinking, College Reading and Learning Association: Irvine, CA
- Haugen, L.L. (1984). Reading activities to improve reasoning skills, International Reading Association Western Regional Conference: Reno, NV.
- Haugen, L. L.(1983). Culturally implicit assumptions in literature: Bridging the comprehension gap, Alaska State Reading Conference: Anchorage, AK.
- Haugen, L.L. (1983). Reading and the role of metacognition, Western College Reading Association: Portland, OR.
- Haugen, L.L. (1982). Comprehension and reasoning processes: Instructional methods, The Sixth Annual Institute for Directors and Staff of College Learning Centers: Berkeley, CA

**Conference Presentations:**

- 2004 Alternative Session: Developing A Knowledge Base for Reading: case Studies in the Alaska Context. National Reading Conference, Miami, FL.
- 2003 Roundtable: Teaching As A Researching Profession: Statewide Teacher Researcher Consortium. International Reading Association, Orlando, FL.
- 2002 Symposium: Come into the Future of Rural Teacher Education with UAF. Bilingual Multicultural Education Equity Conference, Anchorage, AK

**Research:**

- 2001 Thinking in Two Sign Systems: Using Art in Language Arts To Represent Comprehension With Alaska Native Students
- 1999 We Are Not Reluctant Readers: A Study of How Sixth Graders Taught Their Parents To Perceive Them As Willing Readers
- 1998 Middle School Content Literacy and Art: A Semiotic Study of Beliefs, Practices, and Environments
- 1996 Elementary Teachers Beliefs and Practices: Using Art in Language Arts Instruction
- 1995 A Study of Teachers Beliefs About Themselves As Artists and Teachers of Art

## Curriculum Vitae #2

Greg L. Finstad

Reindeer Research Program

School of Natural Resource Management and Agricultural Sciences

University of Alaska Fairbanks

Fairbanks, Alaska 99775-7200

Phone:(907) 474-6055

Email: ffglf@uaf.edu

### Education:

2007– Ph.D. Range Ecology (expected) University of Alaska Fairbanks

1981 – B.S. Wildlife Management, University of Alaska Fairbanks

### Primary Research Interests:

Wildlife ecology, range management, plant-animal interactions, climate-vegetation dynamics, stable isotope chemistry, reindeer management

### Professional Experience:

April 2000-present	Instructor/Program Manager Reindeer Research Program School of Natural Resources and Agricultural Science, University of Alaska Fairbanks
Sept. 1998-Apr 2000	Research Associate, Reindeer Research Program
Feb., 1995-Jan. 1997	Interim Head of Reindeer Research Program, Research Coordinator, Budget Manager , Supervisor
Apr.1991-Feb.1995	Research Associate, Reindeer Research Program Research Coordinator, Supervisor, Logistical Support
1981-1991	Research Assistant, Reindeer Research Program, Institute of Arctic Biology, University of Alaska Fairbanks:Technician, Logistical support

### Additional Experience:

1981-present	25 years experience living, working, and traveling with Alaska Natives. Responsible for designing and initiating research projects that were complementary to both the needs of the University of Alaska and to rural communities of Alaska.
1995-present	Guest Lecturer University of Alaska Natural Resources Management courses. Educational outreach presentations at Fairbanks and Nome public schools
1991	Workshop Leader. Reindeer Herd Health Workshop, Nome, Alaska.
2001-2003	Taught NRM 312. Introduction to Range Management. NRM 105 Practicum for Natural Resources: Reindeer Husbandry and Management.

**Relevant Publications:**

- Bader, H. R. & Finstad, G.L. 2001. Conflicts between livestock and wildlife: An analysis of legal liabilities arising from reindeer and caribou competition on the Seward Peninsula of Western Alaska. *Environmental Law*. 31 (3) 549-580
- Duffy, L.K., Duffy, R.S., Finstad, G. and Gerlach, C. 2005. A note on mercury levels in the hair of Alaskan reindeer. *Sci. Total Environ.* 339:273-276.
- Finstad, G.L., Bucki C. S., Bechtel, P. J., & Moore, K. Animal performance and palatability of an Alaskan produced reindeer feed.
- Finstad, G., Bechtel, P. Wiklund E. and Long, K. 2005 Sensory and technological properties of meat from free-ranging reindeer (*Rangifer tarandus tarandus*) or reindeer fed soybean meal or fishmeal-based rations. Institute of Food Technologist Meeting Book of Abstracts. #89F-29.
- Finstad, G. L., Kielland, K., and Schneider, W. S. In press. Reindeer herding in transition; historical and modern day challenges for Alaskan reindeer herders. *Nomadic Peoples*.
- Finstad, G. L. Kielland, K. 2005. Climate change, environmental variation and reindeer productivity on the Seward Peninsula. Proceedings: 2005 Arctic Science Conference, September 27 – 29, Kodiak, Alaska.
- Finstad, G.L., Bader, H., & Prichard, A.K. 2002. Conflicts between caribou and reindeer in western Alaska. *Rangifer: Special Issue No. 13*: 33-38.
- Finstad, G.L., Berger, M., Kielland, K., and Prichard, A.K. 2000. Climatic Influence on Forage Quality, Growth and Reproduction of Reindeer on the Seward Peninsula I: Climate and Forage Quality. *Rangifer: Special Supplement Proceedings of the 8<sup>th</sup> North American Caribou Workshop, Whitehorse, Yukon, Canada*
- Finstad, G.L., Berger, M., Kielland, K., and Prichard, A.K. 2000. Climatic Influence on Forage Quality, Growth and Reproduction of Reindeer on the Seward Peninsula II: Reindeer Growth and Reproduction. *Rangifer: Special Supplement. Proceedings of the 8<sup>th</sup> North American Caribou Workshop, Whitehorse, Yukon, Canada.*
- Finstad, G.L., and A.K. Prichard. 2000. Growth rate and body weight in free-range reindeer in Alaska. *Rangifer* 20 (4): 221-227.
- Prichard, A.K. & Finstad, G.L., 1999. Model to evaluate potential production and income responses of reindeer herds under different management strategies. *Circular 116. Agricultural and Experimental Forestry Station University of Alaska Fairbanks.*

Rincker P.J., P.J. Bechtel, G. Finstad, R. van Buuren, and F.K. McKeith. Submitted. Similarities and Differences in Composition and Selected Sensory Attributes of Reindeer, Caribou, and Beef. *Journal of Muscle Foods*.

**Grants and Contracts Awarded:**

- Legal Implications Concerning Reindeer-Caribou Interactions On The Seward Peninsula, Alaska. 1998. Co-PI. \$17,760. Bureau of Indian Affairs.
- Landscape patterns of radiocesium and heavy metal concentrations in reindeer and caribou tissue in northwestern Alaska. 1998. Co-PI. \$18,350. Natural Resources Fund.
- Reindeer herding in transition: Feedbacks between climate, caribou, and local communities in Northwest Alaska. 1999. Co-PI. \$1,248,402. National Science Foundation.
- Satellite radio-telemetry for monitoring reindeer locations. 2000. PI. \$35,000. Natural Resource Conservation Service USDA.
- Satellite telemetry and reindeer range management: Workshop. 2002. PI \$40,000 Natural Resource Conservation Service USDA.
- Educational outreach with rural communities. 2002. PI. \$9,800. USDA
- Reindeer range management; satellite telemetry, supplemental feeding and technology transfer to support the reindeer industry in Alaska. 2002. PI. \$36,000. BIA.
- Curriculum development in local schools. 2003. PI. \$30,000. USDA
- Using satellite telemetry for reindeer management and evaluating West Nile Virus vaccine in reindeer. 2003. PI. \$29,313. BIA
- Feasibility of Utilizing Grazed Forages and Alaskan Produced Feed Ingredients in Reindeer Diets. 2003. PI. \$165,000. Hatch. USDA.
- Trace minerals in animal health. 2003. PI. \$3,219. Animal Health. USDA.
- Determining saleable yield of the reindeer carcass and increase economic value of forequarters through electrical stimulation and value-added processing. 2003. PI. \$49, 197. CSREES. USDA.
- Food Products Development. 2004. PI. \$132,000. USDA.
- Diet and selection of calving sites by Alaskan reindeer. 2005. PI. \$37,000. BIA.

### **Curriculum Vitae #3**

Linda (Lou) S. Brown  
2630 Home Run  
Fairbanks, AK 99709  
(907) 479-5629  
loubrown@gci.net

#### **Qualifications**

- Twelve years of writing and editing experience with an emphasis on grant proposals for a variety of organizations serving Alaska Natives, the Deaf community, women, students and youth, seniors, arts and historic preservation organizations and environmental groups.
- Proposals developed for submission to a wide array of local, state and federal funding agencies, private foundations, corporations and service organizations.
- Extensive experience in event coordination including development, advertising, media, volunteer coordination and logistics.
- Excellent organizational skills and detail orientation; reliable and efficient completion of assigned tasks; self-starter.

#### **Education**

- BA Italian, 1984: San Francisco State University

#### **Experience**

- **4/04- present: Program Manager, College of Rural and Community Development: Interior Aleutians Campus**  
Manage Development Office and two federal programs: Department of Education (Title III) grant and USDA Alaska Native and Native Hawaiian Serving Institutions grant. Develop, write and edit grant applications for federal funding opportunities; coordinate objective attainment for federal programs; write and submit reports to funder; coordinate program meetings (coordinate staff activities, call meetings, develop agendas, supervise program assistants, etc.); attend national and statewide meetings. Assist Campus Director with special projects as assigned (one-time funding opportunities, reports and projections for Dean of College of Rural and Community Development, etc.)
- **2/04- 3/04: Contractor, College of Rural Alaska- Interior Aleutians Campus**  
Assist with preparation of Department of Education grant application including proposal development, writing and editing.
- **2/03- 11/03: Project Manager, Fairbanks Neighborhood Housing Services**  
Assistant to the Executive Director responsible for grant proposal development, writing, and editing, event development and coordination, data collection and funder reports, program development, funding strategy development and other tasks as assigned.
- **9/02-12/02: Content Editor, Grant Station**  
Writing and editing of content for company website including a weekly feature story, weekly notices on funding news, training, new funders and summaries of federal funding opportunities available from all federal agencies.

- **6/01-8/02: Time for life and adventure...**  
Lived a year in a cabin we built in a remote part of Prince William Sound. Time for writing, reading, thinking and ski adventures.
- **2/01-6/01: Sole-proprietor, WordPlay Writing and Editing Services**  
Freelance writing and editing of grant proposals for Fairbanks North Star Borough School District (US Dept. of Education) and Fairbanks Native Association (Dept. of Health and Social Services.) Miscellaneous editing work for individuals.
- **11/00-2/01: Time for life and adventure...**  
Built and paddled a canoe to explore a remote river of Guyana.
- **11/98-11/00: Grant Specialist, Fairbanks Native Association**  
Writing and editing of grant proposals to local (City, Borough); state (Dept. of Community and Regional Affairs, Dept. of Health and Social Services, Dept. of Administration- Division of Senior Services, Dept. of Education, Dept. of Labor, Mental Health Trust Authority, Dept. of Mental Health and Developmental Disabilities); federal (Substance Abuse and Mental Health Administration, Dept. of Education, Dept. of Health and Human Services, Bureau of Indian Affairs); and numerous private foundations. Duties included assisting with prioritization of company financial needs and development of funding strategies with associated fundraising activities. Other tasks included a variety of writing projects (letters of intent and interest, newsletter articles) and other projects as assigned.
- **1995- 1998: Sole-proprietor, WordPlay Writing and Editing Services**  
Freelance writing and editing of grant proposals for Alaska-based nonprofit organizations. Duties and funders similar to those described above.
- **1993-1995: Grant Specialist, Deaf Community Services**  
Funding strategy and grant proposal development for nonprofit agency serving the Deaf Community. Duties and funders similar to those described above.
- **1992-1993: Freelance Issues Writer, Northern Alaska Environmental Center**  
Review and assessment of environmental impact statements, draft position papers and reports for a variety of audiences; also responsible for articles for organization newsletter on issues related to these projects.

### Additional Experience

- Over the years my work and volunteer activities have provided me with many opportunities to add to my professional development. These opportunities have included strategic planning, a feasibility study, a needs assessment, conference coordination, leadership and advocacy trainings, membership on a board of directors, lobbying, fundraising trainings and the development and coordination of numerous events. I also write for my own pleasure: journals, essays, poems and screenplays. Finally, having helped my husband build our home, two rental cabins and a recreational cabin, I am quite familiar with building and am handy with power tools.

### Volunteer Activities

- My long and diverse volunteer history is born of a desire to be a useful person and to continue my informal education. Some of the highlights of my volunteer life include six years on the local women's shelter board of directors (executive and finance committees); regular volunteering for our public radio station; regular volunteering for local environmental causes; coordinator of many fundraising and educational events and efforts for a variety of organizations including a benefit concert, panel discussions, public display of AIDS quilt, assisting with a congressional campaign, workshops, petition drives and Women's History Month observances. I also helped build houses in Nicaragua for people displaced by the war. I am popular among friends and family for my grant proposal writing skills.

### **Writing Samples for Resume of Linda (Lou) S. Brown**

- Five sovereign countries, forged into an amalgam called Yugoslavia in 1929, dissolved into an ethnic and religious minefield in 1990, resulting in five years of widespread destruction, ethnic cleansing, rape, torture and forced exile. The heart of the conflict is the Federation of Bosnia and Herzegovina (Bosnia,) which, after the signing of the Dayton Peace Accords, ceded territory to a newly-created Serbian Republic. In the aftermath of the conflict, power lines, roads and water systems lie in shambles. Sixty percent of the houses, half the schools and a third of the hospitals have been razed or damaged, fields and vineyards are abandoned, rivers are contaminated by toxic wastes from bombed-out plants and the soil is sewn with millions of mines.

While the NATO Implementation Force (IFOR) tries to hold the lid on the demilitarized zone between the two regions, it falls to others to rebuild. But it is not only the physical infrastructure that must be reconstructed, monumental though this task will be. Another element vital to the permanent cessation of war will be the building of trust in the process through the arrest and prosecution of war criminals. These outwards proofs of re-emerging order and civilization are the signposts a physically and psychologically shattered populace will follow to a long-lived peace.

- Until 50 years ago, the rumblings of technology, mass media and the global economy were only a distant thunder in the Arctic regions of Greenland, northern Canada, Alaska and Siberia. Protected for thousands of years in a harsh and remote homeland, Inuit culture, until recently, remained substantially intact. As western culture moves north, however, bringing with it extensive technical and social innovations, the clash of tradition and transition creates a kind of schizophrenia for the generations of Inuit who live in the midst of rapid change. It would belie common sense for a people living in an unforgiving land to shun the advantages offered by the open hand of progress, yet, as amply demonstrated by rising and omnipresent problems of alcoholism, teen pregnancy, violence and suicide, the hand hold both a blessing and a curse.

If Inuit culture should be absorbed into mainstream western culture, we are wise and honest to ask ourselves what traditional wisdom will disappear that has relevance to the spiritual and physical survival of modern human beings. The popularity of depictions of aboriginal life in films, novels, biographies— these are indications of a hunger in the increasingly genericized Euro-American community for understandings that arise from cultures that experience an uninsulated relationship with the Earth. What do we sense we must learn about stewardship of the planet from people who assume an egalitarian relationship with animals, the seasons and the weather? Even the cult of the individual, so venerated in the west, is subordinate in Inuit culture to the imperative of the survival of the community. So it is that as the doctrines of competition and the supremacy of the individual threaten social units from the family to

the global village, the Inuit may offer us perspectives useful to the causes of equality, peace and justice in increasingly divisive times.

**APPENDIX B**

*Resource Commitment to the Proposed Degree Program*

Resources	Existing	New		Total
		College/School	Others (Specify)	
Regular Faculty (FTE's & dollars)	Two to three additional faculty per semester will be involved in providing courses which will be used by students in this program. The amount of effort will vary per instructor based on the number of HLRM students in their classes.		<b>USDA Grant = 100% HLRM Faculty: 9.5 months @ \$46,000 + benefits @ \$24,748 (This will be a fund 1 position by NWC if USDA funding is not continued past 2010)</b>	\$70,748
Adjunct Faculty (FTE's & dollars)				
Teaching Assistants (Headcount)				
Instructional Facilities (in dollars and/or sq. footage)	NWC Bio Science Lab = 804 sq. ft.			
Office Space (Sq. footage)	2 NWC offices = 118 sq. ft. + 98 sq. ft.			
Lab Space (Sq. Footage)				
Computer & Networking (in dollars)			<b>USDA Grant = \$5,000</b>	\$5,000
Research/ Instructional/ office Equipment (in dollars)				
Support Staff			<b>USDA Grant =</b>	\$12,482

(FTE's & dollars)			Media Technician: 20% @ 12 months = \$7,268 + benefits @ \$3,634 (\$10,902 total)  Web Technician: 2% @ 12 months = \$1,132 + benefits @ \$448 (\$1,580 total)	
Supplies (in dollars)			<b>USDA Grant =</b> \$8,032	\$8,032
Travel (in dollars)			<b>USDA Grant =</b> \$20,310	\$20,310

Signature \_\_\_\_\_  
 Dean of College and Rural Community Development

\_\_\_\_\_ Date

**APPENDIX C**

**UAF Student Learning Outcomes Assessment**  
 High Latitude Range Management (HLRM) Certificate Program - October 2006

Expanded Statement of Institutional Purpose	Intended Objectives/Outcomes	Assessment Criteria and Procedures	Implementation (what, when, who)
<p><b>MISSION STATEMENT:</b>                      The HLRM certificate program is designed to provide students with quality academic instruction and training applicable for entry-level natural resources jobs statewide and is responsive to industry needs throughout Alaska.</p> <p><b>GOAL STATEMENT:</b>                      To assure that our HLRM certificate holders are the most attractive job candidates by being adequately prepared with a skill set in conventional field-based techniques to inventory and monitor northern animal and plant populations combining traditional knowledge with contemporary studies necessary for entry-level natural resources jobs statewide or to continue their formal education in a variety of natural science associate and baccalaureate programs.</p>	<p>1. Students completing the HLRM certificate program will possess a skill set to prepare them for entry-level employment in the field of natural resources in rural Alaska.</p>	<p>1a. Students will be required to complete a capstone project (which will include a written report and an oral or poster presentation based on a regional research question grounded in traditional knowledge) culminating work conducted in:</p> <p><i>HLRM 201- Field Techniques for Range Management</i></p> <p><i>HLRM 205 – Report Writing in Range Management</i></p>	<p>1a. Program instructors will evaluate each student’s completed capstone project at the end of <i>HLRM 205</i>. A rubric developed specifically for this project assessing the quality of project and skill set development will be completed for each student.</p> <p>1b. Program Manager and other program instructors will examine rubrics collectively annually.</p>
	<p>2. Students completing the HLRM certificate program will be prepared for entry-level employment in the field of natural resources in rural Alaska.</p>	<p>2a. Graduates will be surveyed to assess their satisfaction with their education and success in securing satisfactory employment.</p> <p>2b. Employer perception of student hires.</p>	<p>2a. Every two years a graduate survey will be administered and analyzed by the Program Manager or designee.</p> <p>2b. Program Manager will conduct discussions with regional employers and review State of Alaska</p>

			<p>job placement statistics annually.</p>
	<p>3. Students completing the HLRM certificate will be encouraged to utilize their certificate as a building block for an associate or baccalaureate program or other course work in the sciences.</p>	<p>3. Each new student will be contacted by a program advisor to determine student's goals and objectives.</p>	<p>3. Students will meet at least once per semester with a program advisor to evaluate their academic plan.</p>