

## **V(A). Planned Program (Summary)**

### **Program # 2**

#### **1. Name of the Planned Program**

Natural Resources and Community Development

#### **2. Brief summary about Planned Program**

Alaska is a state whose major resource development activities are headquartered in the urban centers with access to various transportation and advanced communication systems. These activities primarily focus on oil and gas exploration, development and export. Processing for in-state use provides gasoline, home-heating fuel and aviation fuels. Urban communities lack infrastructure to engage in value-added activities that would enhance development of resources not directly related to the petroleum industry. Most rural communities are off the road/rail system and communication infrastructure is still improving. Many smaller rural communities with populations under 500 may not have even the most basic amenities such as adequate sanitation and efficient energy sources that would attract appropriate resource developers. Many of these communities are working to enhance facilitation skills as a mechanism to translate local cultural values into the dominant cultural policy-making activities. Research is needed that will provide knowledge to give both urban and rural communities the opportunity to diversify their economies. Research and outreach provide underserved populations in rural areas real options for economic development and improved quality of life. Research and outreach priorities will be determined through joint collaboration with stakeholders in communities, industry, and state and federal agencies. Focus will be on identifying emerging natural resource issues in energy, climate change, food security, agriculture and horticulture, forestry, mining, water and community development for stakeholders. Research and the education and outreach growing from that research will provide Alaskans with unbiased, science-based information for both urban and rural populations to assist in understanding issues and making informed decisions. SNRE will continue to provide traditional programs in education and outreach, but will enhance these programs with a focus on energy, food security, positive youth development and a sustainable quality of life for individuals, families and communities. Our goal is to engage communities, bringing ideas back to the university to assist in establishing future research and education activities.

**3. Program existence :** Mature (More than five years)

**4. Program duration :** Long-Term (More than five years)

**5. Expending formula funds or state-matching funds :** Yes

**6. Expending other than formula funds or state-matching funds :** Yes

**V(B). Program Knowledge Area(s)**

## 1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
111	Conservation and Efficient Use of Water	10%		0%	
112	Watershed Protection and Management	20%		0%	
122	Management and Control of Forest and Range Fires	10%		20%	
123	Management and Sustainability of Forest Resources	10%		25%	
131	Alternative Uses of Land	10%		5%	
134	Outdoor Recreation	5%		15%	
605	Natural Resource and Environmental Economics	15%		15%	
608	Community Resource Planning and Development	15%		10%	
610	Domestic Policy Analysis	5%		10%	
	<b>Total</b>	100%		100%	

**V(C). Planned Program (Situation and Scope)**

## 1. Situation and priorities

Effectively addressing natural resources issues will depend on forming partnerships with credible, research-based organizations and other land-grant institutions as well as schools and colleges within UAF. Other units within the University of Alaska Fairbanks include the School of Management, School of Fisheries and Ocean Sciences, College of Natural Science and Mathematics, College of Rural and Community Development, the Institute of Arctic Biology and College of Engineering and Mines. Partnership interests include providing multi-resource planning and the process of determining public resource policy, resource economics and policy impact assessment, rural community culture and economic development analysis, environmental law and policy, and outdoor recreation. Research is multidisciplinary and includes the physical and social science arena, forestry and agricultural sciences, law and policy, land and resource planning, resource economics and outdoor recreation management. As Alaska matures there will be changes in the state's demographics, economy, social structure and land use. In planning public resource policy, most agencies tend to use methods of involving the public that were developed over 30 years ago such as public meetings, open houses and public hearings. The work being done in this planned program will increase the level of awareness of new public involvement techniques as well as their advantages and disadvantages. Federal land management policies are set by national priorities, which at times conflict with Alaskan interests on state-owned lands. Additionally, 44 million acres of Alaska's lands are owned by Alaska Native regional and village corporations and use of the resources on them is controlled by the corporations. Including the Native lands, approximately 10% of Alaska's total land mass is in private ownership. The Natural Resources and Community Development planned program will provide information for stakeholders on issues related to forest and land resources, mineral and nonpetroleum energy, water resources and rural communities. It will provide skill training in topics such as agriculture, horticulture, alternative energy, water quality monitoring, management of local water resources, identification of rocks and minerals of economic importance, and use of Global Positioning

Systems and Geographic Information Systems to locate, inventory and monitor important resources. Economic analysis information will assist in planning and managing natural resources, evaluating economic options for rural communities, and use of natural resource microbusiness opportunities for rural and urban communities.

## **2. Scope of the Program**

- In-State Extension
- In-State Research
- Multistate Research
- Multistate Extension
- Integrated Research and Extension
- Multistate Integrated Research and Extension

## **V(D). Planned Program (Assumptions and Goals)**

### **1. Assumptions made for the Program**

Resource management in Alaska will continue to be constrained by expectations and perceptions of the public. Despite public opinion, these desires must follow processes that meet the substantive requirement of state and federal law and policy. Costs of extracting, harvesting and processing Alaska resources must be evaluated in the context of global markets. Energy sources are a major concern in extracting, harvesting and processing Alaska resources and must be considered in remote communities that will require a local source of energy supply. Multiple uses of Alaska's lands are necessary for a diversified economy but its infrastructure is minimal to support this goal. Global competitiveness will remain an issue and Alaska must exploit its competitive advantage in transportation routes and raw natural resources. Conflict resolution will continue to be necessary in a state whose land is primarily federal parks, reserves or preserves and where urban versus rural needs continue to conflict. World markets for mineral resources have spurred mineral exploration and mine development in Alaska. Resource extraction and population growth will affect Alaska's water resources, also influenced by other regions' increased need for water. Rural communities will increasingly look to nearby forest and land resources for economic and personal use. Recreation opportunities exist in all regions of Alaska's northern forests and tundra lands and sustainable development of those tourism and recreation resources will benefit the state. Melting sea ice will influence shipping routes, commerce and natural resources will be impacted.

### **2. Ultimate goal(s) of this Program**

- Develop regional economic models for Alaska resource development impact on communities
  - Develop and examine public involvement processes that meet public expectations
  - Determine the effectiveness of natural resource and environmental laws
  - Create and develop long-term partnerships both in and outside Alaska. Assist stakeholders in making informed decisions regarding utilization of valued natural resources
    - Increase number of Alaska youth receiving basic natural resource skill training for early entry into natural resource management jobs and assist youth in choosing careers managing Alaska's natural resources
    - Facilitate product development of timber and forest management for fuel production
    - Assist stakeholders in realizing the connection between recreation and human well-being
    - Establish CES as a clearinghouse of unbiased, research-based and consumer-friendly information.
- This will include the areas of climate change, food security, agriculture and horticulture, alternate energy

and energy conservation, water quality, mineral resources, GIS climate modeling, economic analysis, small business start-ups and options for facilitation training for rural communities based on community interest with an emphasis on transferring Alaskan-developed information.

**V(E). Planned Program (Inputs)**

**1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890
2017	3.0	0.0	3.0	0.0
2018	3.0	0.0	3.0	0.0
2019	3.0	0.0	3.0	0.0
2020	3.0	0.0	3.0	0.0
2021	3.0	0.0	3.0	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

Research products will provide science-based information in resource planning, economic and environmental impact of natural resource use involving market and nonmarket value of resources, and land planning issues in urban and rural communities. Measurable outcomes will include peer-reviewed and lay publications, rural community business development plans and citizen participation.

Multi-institution and interdisciplinary activities will continue in research, education and outreach. Integrated and/or multistate projects concerning natural resources stewardship will provide collaboration and engagement with other land-grant institutions, extension and federal partners. Activities will involve partners from other UAF units to assure engagement that will continue to make the information provided to stakeholders relevant to their needs.

Partnerships will be developed and/or maintained that address emerging natural resources issues. Activities will address the needs of Alaskans most directly impacted by specific natural resource matters.

Outreach activities will include literature reviews; reviews of contemporary research relevant to the program; lay publications that provide unbiased, scientific information about natural resource issues; website development for natural resources issues; Extension workshops, demonstrations and basic skill training; public meetings and discussions; 4-H and FFA projects; and young adult stakeholder workforce readiness training.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

Extension	
Direct Methods	Indirect Methods

<ul style="list-style-type: none"><li>● Education Class</li><li>● Workshop</li><li>● Group Discussion</li><li>● One-on-One Intervention</li><li>● Demonstrations</li><li>● Other 1 (Youth and natural resource camps)</li><li>● Other 2 (Consulting)</li></ul>	<ul style="list-style-type: none"><li>● Public Service Announcement</li><li>● Newsletters</li><li>● TV Media Programs</li><li>● Web sites other than eXtension</li><li>● Other 1 (Publications)</li></ul>
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### 3. Description of targeted audience

This program will focus on industry and entrepreneurs including communities, families, and newly forming cooperatives and businesses, nonprofit and for-profit development corporations. Efforts will be made to address problems of the traditionally underserved rural populations within the limit of resources available. Stakeholders are those directly impacted by contemporary natural resource issues related to forest and land resources, mining resources, water resources, young adults wanting entry level skills needed for employment in natural resource related businesses, agencies or organizations, persons in natural resource-related occupations who wish to increase their skill and/or knowledge level, and federal and state agencies.

### V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
    - Direct Adult Contacts
    - Indirect Adult Contacts
    - Direct Youth Contacts
    - Indirect Youth Contact
  - Number of patents submitted
  - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

## **V(H). State Defined Outputs**

### **1. Output Measure**

- Output 1: Active partnerships with other land grant institutions, government agencies, stakeholder groups and organizations.
- Output 2: Develop and deliver public issues education workshops and classes for stakeholders on locally relevant natural resources and related issues.
- Output 3: Develop and maintain a web-based platform for discourse and information sharing on relevant areas of interest in natural resource issues that connect people to information.
- Output 4: Conduct needs assessments of natural resource management stakeholders.
  
- Output 5. Develop regional economic models for Alaska resource management scenarios. Output will be models, presentations and publications.
- Output 6. Develop and implement public involvement in natural resource issues. Output measure will be public input sessions and publications.
- Output 7. Provide analysis of natural resource and environmental laws. Output measure will be presentations, workshops and publications.
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

**V(I). State Defined Outcome**

O. No	Outcome Name
1	Outcome 1: Increase and maintain partnerships with stakeholder groups, government agencies and other institutions that will enhance the land-grant mission. Measure will be number of partnerships.
2	Outcome 2: Increase and maintain the number of integrated and multistate research-Extension activities. Measure will be number of activities.
3	Outcome 3: Increase the recruitment and retention of youth and college-age students appreciating and considering natural resource management careers. Measure will be number of graduate and undergraduate students enrolled and number of youth participating in natural resource management activities.
4	Outcome 4. Increase public involvement in natural resource and community development issues. Outcome measure will be the number of participants.
5	Outcome Measure #5: Demonstrate effective collaboration between research and Extension to resolve issues.

**Outcome # 1**

**1. Outcome Target**

Outcome 1: Increase and maintain partnerships with stakeholder groups, government agencies and other institutions that will enhance the land-grant mission. Measure will be number of partnerships.

**2. Outcome Type** : Change in Action Outcome Measure

**3. Associated Knowledge Area(s)**

- 608 - Community Resource Planning and Development
- 111 - Conservation and Efficient Use of Water
- 134 - Outdoor Recreation
- 122 - Management and Control of Forest and Range Fires
- 112 - Watershed Protection and Management
- 605 - Natural Resource and Environmental Economics
- 123 - Management and Sustainability of Forest Resources
- 610 - Domestic Policy Analysis

**4. Associated Institute Type(s)**

- 1862 Extension
- 1862 Research

**Outcome # 2**

**1. Outcome Target**

Outcome 2: Increase and maintain the number of integrated and multistate research-Extension activities. Measure will be number of activities.

**2. Outcome Type** : Change in Action Outcome Measure

**3. Associated Knowledge Area(s)**

- 608 - Community Resource Planning and Development
- 605 - Natural Resource and Environmental Economics
- 122 - Management and Control of Forest and Range Fires
- 111 - Conservation and Efficient Use of Water
- 134 - Outdoor Recreation
- 610 - Domestic Policy Analysis
- 131 - Alternative Uses of Land
- 123 - Management and Sustainability of Forest Resources
- 112 - Watershed Protection and Management



#### **4. Associated Institute Type(s)**

- 1862 Extension
- 1862 Research

#### **Outcome # 3**

##### **1. Outcome Target**

Outcome 3: Increase the recruitment and retention of youth and college-age students appreciating and considering natural resource management careers. Measure will be number of graduate and undergraduate students enrolled and number of youth participating in natural resource management activities.

**2. Outcome Type :** Change in Action Outcome Measure

##### **3. Associated Knowledge Area(s)**

- 610 - Domestic Policy Analysis
- 608 - Community Resource Planning and Development
- 134 - Outdoor Recreation
- 605 - Natural Resource and Environmental Economics
- 111 - Conservation and Efficient Use of Water
- 122 - Management and Control of Forest and Range Fires
- 131 - Alternative Uses of Land
- 123 - Management and Sustainability of Forest Resources
- 112 - Watershed Protection and Management

#### **4. Associated Institute Type(s)**

- 1862 Extension
- 1862 Research

#### **Outcome # 4**

##### **1. Outcome Target**

Outcome 4. Increase public involvement in natural resource and community development issues. Outcome measure will be the number of participants.

**2. Outcome Type :** Change in Action Outcome Measure

##### **3. Associated Knowledge Area(s)**

- 131 - Alternative Uses of Land

- 122 - Management and Control of Forest and Range Fires
- 134 - Outdoor Recreation
- 610 - Domestic Policy Analysis
- 605 - Natural Resource and Environmental Economics
- 111 - Conservation and Efficient Use of Water
- 608 - Community Resource Planning and Development
- 123 - Management and Sustainability of Forest Resources
- 112 - Watershed Protection and Management

#### **4. Associated Institute Type(s)**

- 1862 Extension
- 1862 Research

### **Outcome # 5**

#### **1. Outcome Target**

Outcome Measure #5: Demonstrate effective collaboration between research and Extension to resolve issues.

#### **2. Outcome Type : Change in Action Outcome Measure**

#### **3. Associated Knowledge Area(s)**

- 112 - Watershed Protection and Management
- 111 - Conservation and Efficient Use of Water
- 610 - Domestic Policy Analysis
- 122 - Management and Control of Forest and Range Fires
- 605 - Natural Resource and Environmental Economics
- 134 - Outdoor Recreation
- 123 - Management and Sustainability of Forest Resources
- 608 - Community Resource Planning and Development
- 131 - Alternative Uses of Land

#### **4. Associated Institute Type(s)**

- 1862 Extension
- 1862 Research

### **V(J). Planned Program (External Factors)**

#### **1. External Factors which may affect Outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

### **Description**

Continuing state and university budget cuts will severely impact research and education. Changes in state and federal policy and regulation and reductions will affect appropriations to the university and the economy of the state of Alaska. Current energy dialogue in the state centers on oil and gas with increasing discussions of alternate energy, particularly biomass. Should a successful proposal for a gas line be announced, this will inject jobs and dollars into Alaska and could change priorities from an increasing focus on using alternative forms of energy that are regionally produced to, once again, export of a raw product.

Alaska shows many effects of climate change that continue to influence the thrust of the Natural Resource and Community Development program in coming years. Policy and regulation and competing public priorities affect land use and resource use for community development. Despite the potential effect of external factors, there will be a need for continuing adult education and higher education to fill workforce vacancies or new positions that are created to meet demands in energy and community development, and a continuing need for processes that improve the quality of life and economic well-being of communities.

Long distances between rural communities that are not on a road system and accessible only by plane or boat affect development and our ability to offer programs. Health and education of rural residents is slowly improving but is not on par with rural towns in the rest of the country. SNRE will work to increase economic and community development, particularly in rural areas.

Oil production is the top Alaskan priority and the highest income generator, and university funding has been severely impacted by the falling price of crude oil. The university has experienced budget cuts for the last seven years which has dramatically affected programs. SNRE, in particular, has been under the University administration's spotlight given its policy of preventing the rehire of research and teaching faculty on state funds. As can be seen by our falling FTE it is an increasing struggle to meet the needs of stakeholders through research and teaching. UAF policy rewards external grants but disparages land grant funds and its required state match. The merger between AFES and CES has helped fill some positions but both units have heavy workloads as we try to keep our productivity high in such demoralizing times.

## **V(K). Planned Program - Planned Evaluation Studies**

### **Description of Planned Evaluation Studies**

The objective of AFES and CES is to continue the communication that provides information to our clientele and bring clientele input back to us to meet the needs of the people of Alaska. Outreach events and workshops will be evaluated for effectiveness and knowledge gains and in regard to changed practices as a result of educational events.

