

Unit Name: School of Natural Resource and Agricultural Sciences
Agricultural and Forestry Experiment Station
Date of Report: July 27, 2007 / ANNUAL UNIT PLAN

A. General Information:

Unit Name: School of Natural Resources and Agricultural Sciences
Agricultural and Forestry Experiment Station

Unit Mission Statement: The mission of the School of Natural Resources and Agricultural Sciences and the Agricultural and Forestry Experiment Station is to generate and provide knowledge and train students for the successful long-term management of natural, renewable resources in Alaska and the circumpolar world, and to discover, describe, explain, and interpret the spatial characteristics of the northern regions of the Earth.

Core Services:

The School and the Experiment Station are administered by the Dean and Director and have a statewide responsibility. The office of the Dean and Director is located on the UAF Fairbanks campus. Research and outreach are a part of the Experiment Station that includes two experiment farms located in Fairbanks and Matanuska, research sites in Delta and Nome and south-central Alaska administrative offices at the Palmer Research and Extension Center. The School delivers baccalaureate and advanced degree programs in Geography and Natural Resources Management (NRM) through four departments: Geography, Forest Sciences, Plant, Animal, and Soil Sciences, and Resources Management. The NRM Plant, Animal, and Soil Science Option is offered at the Palmer Research and Extension Center (PREC).

We have combined the economic, social, biological, physical and geospatial aspects of natural resources to address issues and provide sustainable solutions to natural resource management concerns in the circumpolar international community, the nation, and the state of Alaska. Our Strategic Plan 2004 identifies five emphasis areas: geographic information, high-latitude agriculture, high-latitude soils, natural resource use and allocation, and management of ecosystems. These are integrated with the USDA Roadmap for Agriculture's seven steps that mirror the changing role of the United States in the world's agricultural economy. The seven steps are the backbone of our federally mandated Plan of Work (2007-2011), prepared cooperatively by the Agricultural and Forestry Experiment Station and the UAF Cooperative Extension Service. The Plan of Work reflects a paradigm-shift in the definition of the word 'agriculture' to include multiple resources, communities, the environment, and people. Thus we, along with CES, as the core of the UAF land-grant mission embrace research, education and outreach addressing healthy people (nutrition, disease control, food safety), a healthy environment (energy, renewable resources, soil, water), and a healthy economy (sustainable growth, technology transfer, new products, new knowledge).

B. Reporting period:

Annual Report (due date July 27)

Mid-term Review (due date Feb. 22)

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C. Long-range Unit Goals (2-5 years)

Agricultural experiment stations and cooperative extension services across the nation are striving to meet the challenge of the changing definition of agriculture. Additionally, they face a potential change in traditional formula funding that has been provided by the federal government and matched by state governments for leverage dollars that support research and outreach in natural resources, agriculture and forestry.

Legislation is moving through the U.S. Congress that will place an emphasis on and provide substantial funding for competitive rather than formula support. In these respects, Alaska's Agricultural and Forestry Experiment Station and Cooperative Extension Service are not different from other states and territories. However, UAF's Experiment Station and Cooperative Extension Service face two challenges, both having equal and important impact on the ability of the two units to respond to the land-grant mission of UAF. First, in Alaska AFES and CES have different reporting lines in the administrative structure of UAF. AFES is a part of SNRAS and reports to the Provost of UAF through the dean who is also the director of AFES. CES is a part of the College of Rural and Community Development reporting to the dean of the College who is also the Vice-Chancellor for Rural, Community and Native Education reporting to the Chancellor of UAF. Second, the state of Alaska provides funds to CES and AFES through the university system. These funds are to leverage and match federal Hatch, McIntire-Stennis and Smith-Lever formula funds provided through USDA. The amount of funding provided to the two units is abysmally low and indicates the level of noncommitment of the state of Alaska to the land-grant mission of UAF. Alaska ranks last in the west in state funds provided for leverage and match to federal formula funds. The ratio is 2.5:1 at UAF compared to an average of 6:1 in western states with a high of 9:1 in Hawaii.

At the request of UA President Hamilton, a review team is being formed by USDA Cooperative States Research, Education, and Extension Service, the unit within USDA that administers formula funds, special grants (earmarks), specific competitive grants, entitlements to cooperative extension services, the National Research Institute competitive grant agency and programmatic reviews of experiment stations and extension services to assure compliance to the land-grant directives. The team is comprised of administrators of agricultural experiment stations and cooperative extension services, land grant university schools and colleges and USDA personnel. They will be in Alaska in late October, 2007. The team will be tasked to consider better positioning of CES within UAF administration to highlight their specific mission of service and outreach and to provide closer alignment of the Experiment Station and the Extension Service to enable the two units to better serve the people of Alaska and position them to be highly competitive in the new funding scenario they will face at the federal level in the very near future. The team has also been asked to consider funding levels from the state of Alaska that will demonstrate their commitment to the land-grant mission and allow CES and AFES to carry out that mission.

1. Unit Goals: List the primary unit goals for the next two to five years

1. Form a closer alliance with the Cooperative Extension Service to better serve the people of Alaska through the land-grant mission of UAF.
 - a. Solve the problem of match and leverage for federal formula funds
 - b. Actively participate in the USDA/CSREES Review
 - c. Implement the results of the USDA/CSREES Review
 - d. Implement the 2007-2011 AFES/CES Plan of Work
 - e. Complete and begin to implement the Master Plan for the Palmer Research and Extension Center

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- f. Formalize and begin to implement the Master Plan for the Fairbanks Experiment Farm
 - SP2010 Pathways II and IV

2. Revitalize enrollment management.

- a. Perform an in depth review of the B.S. in Geography (Environment Studies)
 - 1). Transition to and develop new curricula appropriate for a B.A. in Environmental Studies
 - 2). Share the joint BA degree between Natural Resources Management and Geography
- b. Develop graduate degree programs in Geography
- c. Upgrade distance delivery systems
- d. Expand K-12 outreach program
- e. Enhance the Natural Resources Management program in south-central Alaska
- f. Collaborate with UAS in the Natural Resources Management Forestry Option
 - SP2010 Pathways I and III

3. Resources

Goal 1.

Resource Type	FY08	FY08	FY09	FY10	FY11	FY12
	(from unit)	Increment request	Increment request	Increment request	Increment request	Increment request
Personnel			\$250,000 b/			
Equipment Mower for PREC	\$33,000					
Commodities						
Services USDA/CSREES Review		\$40,000				
Space/Facilities			\$7.5Mc/	\$7.5Mc/	\$7.5Mc/	\$7.5Mc/
Total	\$33,000	\$427,000a/	\$500,000d/	\$250,000d/	\$350,000d/	\$450,000d/

- a. Deficit in FY 08 budget for SNRAS/AFES (Total is \$387,000 deficit plus \$40,000 for cost of USDA/CSREES) Review. Can be met by providing match to one-time Hatch Formula Fund increase.
- b. Replacement of faculty who did not receive tenure located at the PREC, replacement likely in ornamental horticulture, and Geography faculty position to implement the new Environmental Studies B.A. degree.
- c. Begin to implement Master Plan for PREC with building and laboratory renovations and design of new office building to replace the downtown Palmer facility. This funding would be obtained from property sales at the Matanuska Experiment Farm and the facilities in downtown Palmer and would require consultation with and action by the UA administration and the Board of Regents to transfer funds from sales to the SNRAS/AFES specifically to carry out the Master Plan for the PREC.
- d. Includes \$250, 000 for continuing increases in salaries, benefits, retirement, and operating cost. Does not include renovation and construction at the Matanuska Experiment Farm.

Goal 2.

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Resource Type	FY08	FY08	FY09	FY10	FY11	FY12
	(from unit)	Increment request	Increment request	Increment request	Increment request	Increment request
Personnel				\$600,000a/		
Equipment						
Commodities						
Services				\$150,000b/		
Space/Facilities						
Total						

- a. Forest Health faculty position for Fairbanks, Food Science/Nutrition faculty position for Palmer, turf/grass specialist faculty for Palmer.
 b. Start-up costs for three faculty positions.

Goal 1. and Goal 2. Total

Resource Type	FY08	FY08	FY09	FY10	FY11	FY12
	(from unit)	Increment request	Increment request	Increment request	Increment request	Increment request
Total Goal 1. and Goal 2.	\$33,000	\$437,000	\$500,000a/	\$1.0Ma/	\$350,000a/	\$450,000

- a. Does not include renovation and construction at the Matanuska Experiment Farm.

3. Development Opportunities

Geography offers most of the opportunities for funding from alternative sources. SNAP may also provide donor opportunities. The SNRAS/AFES Georgeson Botanical Garden continues to achieve success through donor contributions and is working closely with the Office of the Vice Chancellor for Outreach and Engagement.

1. The University of Alaska Geography Program (UAGP) continues to work with the National Geographic Society Education Foundation in support of K-12 teacher and student programs (Goal 2. under Long-Term Goals). As a member of the National Geographic Society (NGS)-Alliance network, the UAGP will respond to geography-specific RFP's for state-sanctioned outreach and in-service programs. Potential funding is limited to \$50,000 per year per state for states recognized by the Alliance. The UAGP is the recognized NGS Alliance program in the state of Alaska.
2. The UAGP continues to work with AT&T Alascom. The committed funding for FY 07-08 is \$100,000 for the UA GeoPortal and additional programmatic support is to be discussed in the near future with both AT&T Alascom and AT&T Corporate Foundation giving.
3. Other potential foundation support will be investigated with the Open Society (Soros Foundation), MacArther Foundation (globalization), Pew Charitable Trusts (climate change), and the Donor Foundation (Canadian Studies).
4. The American Geographical Society is a known source for student research support and as the geography program grows, this source will be pursued.
5. Scenarios Network for Alaska Planning (SNAP) is currently funded by UA with BP/Conoco monies. SNAP provides timely research and rapid response outreach that shows how current

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ecosystem changes due to climate change will affect the future, a concern of industry donors and private foundations.

4. Major Capital Investment Priorities

1. SNRAS/AFES West Ridge Greenhouse and BIOS

The funding package for BIOS did not include the AFES greenhouse located on the West Ridge of UAF that will be deactivated to provide space for BIOS. It is imperative that UAF have adequate greenhouse facilities for research, education, and outreach. The greenhouse built and occupied by the Institute of Arctic Biology is fully occupied and is not functional as a horticultural research greenhouse. Our second story greenhouse on the Fairbanks Experiment Farm is inoperable in the late fall, winter, and early spring and, according to UAF Facilities Services, cannot be restored. We occupy a seasonal hoop house structure adjacent to the modular Visitor Center and office building on the Fairbanks Experiment Farm. The hoop house was meant to be temporary but has been in place for over 10 years because we need the space. The research and outreach requirements of AFES and CES alone are at least double the space available in the present West Ridge facility. The facility is also antiquated and absolutely incapable of being used to provide state-of-the-art instruction for students, our clients and life-long-learners. Minimal space requirements for a new, up-to-date greenhouse are 10,000 square feet.

We request an add-on to BIOS funding of \$6.0M for the greenhouse and headhouse/storage/classroom space in the Arctic Health Research Building which will adjoin the greenhouse¹.

2. Palmer Research and Extension Center Master Plan and Facility Needs

The Palmer Research and Extension Center Master Plan calls for renovation of existing structures at the Matanuska Experiment Farm and construction of a new office facility at the Matanuska Experiment Farm to replace the current office building in downtown Palmer. The Master Plan will designate properties that could be sold to raise money for renovations and construction. We estimate the cost at \$30.0M spaced over a period of four years beginning in 2009.

We request that monies from previous property sales in downtown Palmer and at the Matanuska Experiment Farm and future revenue from sales in these two locations be used to fund renovation and construction at the Matanuska Experiment Farm and that a fund using these monies be set up that will cover operating costs at the Matanuska Experiment Farm in perpetuity. This will require consultation with and action by the UA administration and the Board of Regents. We are prepared to present our case in 2008.

¹ This request is not included in Section C., long-term plans, because BIOS funding is uncertain. However, whether BIOS is funded or not, our and CES's need for new greenhouse facilities is real.

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3. O'Neill Building, Renovated Space in Arctic Health Research Building, West Ridge Research Building, ATCO Units, IARC, and Off-Campus Sites in Fairbanks

The header indicates the diverse locations of our Fairbanks faculty, staff and students. We occupy the third floor of the O'Neill Building and have a machine shop on the first floor. The building is not adequate for our faculty, is in need of major repairs, and is not considered worth renovating by UA administration. Renovations in AHRB and backfilling will alleviate some of our needs. Our UAGP is in WRRB, graduate students are in ATCO units near AHRB, our natural resources education faculty member has an office in the Syun-Ichi Akasofu Research Building, and one of our K-12 outreach programs is in the former Bowers Office Equipment Building on University Avenue. We are increasing our faculty numbers through research grants and graduate student programs are also expanding. However, we do need space and our Fairbanks Experiment Farm Master Plan details a building with a 10,000 square foot footprint and approximately 30,000 square feet in space on three floors. We estimate needs to house all Fairbanks SNRAS/AFES faculty and staff at 70,000 square feet. This does not include space needs for CES faculty which is important as we move toward a closer association of the two units. We have not presented this need as a capital budget request because BIOS has been the most recent UAF priority after the SFOS facility in Juneau at Lena Point was funded. However, our need is real and if we are to realize our long-term goals, we will need space. Collocation will be vital as we move toward closer association and more joint appointments with CES.

We request a reply from UAF administration that provides us with guidance on accepting our capital request for a building that would be located on the Fairbanks Experiment Farm and would house both AFES and CES personnel. We would not relinquish the space we hold now and will hold in the future in the Arctic Health Research Building²

D. Annual Actions - FY2008

1. Identify up to three priority actions for the unit for the period July 1, 2007 to June 30, 2008

1. Increase the match and leverage provided by the state of Alaska for federal formula funds to solve the immediate problem of match for FY 08.
 - SP2010 Pathways II and IV
 - Unit Goal: 1
2. Complete the USDA Cooperative States Research, Education, and Extension Service review of CES and AFES as described in Section C.
 - SP2010 Pathways II and IV
 - Unit Goal: 1

² This request is not included in Section C. Long-Term Plans because we are uncertain whether such a request would be acceptable to UAF administration.

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3. Complete the review of the current B.S. in Geography (Environmental Studies) and begin to construct curricula, and submit the completed Ph.D. in Natural Resources degree to the SNRAS and SOM Curriculum Review Committees and after review submit to the UAF Faculty Senate.
 - SP2010 Pathways I and III
 - Unit Goal 2.
 - SP2010 Pathways I and III
 - Unit Goal 2.

2. Provide the criteria by which the attempt(s) to achieve each action will be evaluated.

1. Match and leverage funding for federal formula funds received from the state is increased to solve the immediate FY 08 problem of match identified in Section C.1.3: Goal 1. and begin to address the issue of at least bringing Alaska’s Agricultural and Forestry Experiment Station and the Cooperative Extension Service within the range of funding received by other western states.
2. Preliminary report submitted by USDA/CSREES Review Committee on October 26, 2007, final report to follow in approximately 30 days; presentation to Board of Regents at December 2007 meeting.
3. Geography/Environment Studies review documentation submitted to SNRAS Dean’s Office for inclusion in Program Review file. Form committee to begin curriculum development. Documents for the Ph.D. in Natural Resources submitted to the deans of SNRAS and SOM for signature; documents provided to SNRAS and SOM Curriculum Review Committee for review; response to review comments complete and provided to the deans of SNRAS and SOM; documentation provided to UAF Faculty Senate with copy to SNRAS and SOM deans.

3. Fiscal resources required to meet goals:

Resource Type	FY08	FY08 from unit	FY08 incremental
Personnel	a/		
Equipment			
Commodities			
Services	\$40,000b/		
Space/Facilities			
TOTAL	\$427,000		

a. Provided by School of Management for Ph.D. in Natural Resources
 b. Cost of USDA/CSREES Review Team.

4. Identify the facility impacts, if any, of each of the actions listed above.

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1. None.
2. There will be facility impacts if a closer association of CES and AFES, and possibly placement under a single administrative head, is a recommendation of the USDA/CSREES Review Team. This is addressed under Section C.4.1., 2, and 3.
3. Geography has limited space with two offices in the O'Neill Building and administrative headquarters and one small office now used for adjuncts and one visiting faculty in the West Ridge Research Building. We do not plan on bringing on new faculty until FY 08-09 and are assuming that roll-over in the Arctic Health Research Building will provide us with space in that year. New faculty for the Ph.D. program could be housed in the School of Management.

E. Key Unit Challenges: (this information is required for the ABS report)

1. Identify the top three challenges confronting the unit for the period July 1, 2008 to June 30, 2009 (please note this is one year out).

1. Implementation of the results of the USDA/CSREES Review to insure that AFES and CES are better positioned to serve the people of Alaska through the land-grant mission of UAF including addressing the issue of increasing the leverage and match funding from the state of Alaska for federal formula funds to bring Alaska into the range of other western states.
2. Implementation of the Master Plan for the Palmer Research and Extension Center to provide a center of research, education, and outreach appropriate to the 'suburbanization' of south-central Alaska and a center in south-central Alaska to augment the services provided from the UAF Fairbanks campus, including the revamped Master Plan for the Fairbanks Experiment Farm, to interior Alaska to allow us to continue and expand, along with CES, our capability to serve the needs of rural Alaska's increasing interest in the sustainable development of the natural resources for entrepreneurial ventures that include agriculture and forestry.
3. Confront the space problem both SNRAS/AFES and CES have on the Fairbanks campus, that will likely increase as we implement the results of the USDA/CSREES Review. If the units are to work more closely, collocation will be a key element to their success in accomplishing this goal.

2. Define the strategies to meet each key department challenges:

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1. Make strategic changes to the joint CES/AFES Plan of Work 2007-2011, craft strategic plans for CES and AFES that emphasize a closer working relationship, and structure the SNRAS/AFES Board of Advisors and the CES Advisory Council to reflect this relationship. Work with UAF and UA administration to develop strategies to increase state funds for match and leverage to formula funds.
2. Implementing the Master Plan for the PREC will mean revamping of facilities at the Matanuska Experiment Farm and constructing a new building. Existing space does not allow for growth appropriate to the needs of south-central Alaska. After the Master Plan is completed it will be presented to UA administration for discussions and strategic planning for financing before presentation to the Board of Regents. Implementation will most likely suffer if there are delays in revamping buildings and in new construction. Faculty of SNRAS/AFES and CES will be involved in preparing job descriptions for new faculty as listed in Section C.3.Goal 1 (footnotes) and possibly a second research faculty position.
3. Continue to lobby for space. We have run out of creative solutions to an institutional problem.

3. List activities that will be undertaken to meet the strategies:

1. Involve stakeholders in each of the processes listed in Section E.2.1.
 - Preparing Alaskans for the state's high demand jobs
 - Enhancing competitive research, taking advantage of UA's position for the International Polar Year and benefits of research as an industry in Alaska
2. Begin revamping facilities with existing resources as discussions are initiated and continue with UA administration. Begin a philanthropic campaign/enlist funding partners to assist with the planned 'Learning Center'.
 - Preparing Alaskans for the state's high demand jobs
 - Enhancing competitive research, taking advantage of UA's position for the International Polar Year and benefits of research as an industry in Alaska
 - Enhancing student success and college readiness
3. Continue to lobby for space.
 - Enhancing competitive research, taking advantage of UA's position for the International Polar Year and benefits of research as an industry in Alaska
 - Enhancing student success and college readiness

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F. Significant Changes in Results to be Delivered in 2008 (this information is required for the ABS report)

1. Specify what the unit will do with any new money that may be made available in budget year 2009. This must reflect the budget request made to the BOR for FY2009.

The statements below assume that SNRAS/AFES will be made whole for a projected deficit in FY 08 of \$387,000 and our budget request for FY 09 is honored.

As stated in Section C.3.Goal 1:

1. Replace faculty who did not receive tenure located at the PREC, replacement likely in ornamental horticulture, and hire a Geography faculty position to implement the new Environmental Studies B.A. degree.
2. Begin to implement the Master Plan for PREC with building and laboratory renovations and design of new office building to replace the downtown Palmer facility. This funding would be obtained from property sales at the Matanuska Experiment Farm and the facilities in downtown Palmer and would require consultation with and action by the UA administration and the Board of Regents to transfer funds from sales to the SNRAS/AFES specifically to carry out the Master Plan for the PREC.
3. Allocate an additional \$250, 000 for continuing increases in salaries, benefits, retirement, and operating cost increases.

G. Performance Report: (this information was part of the Compact Plan and is required for ABS)

1. Major Accomplishments *(to be completed only for the July report)*

1. Creation of Scenarios Network for Alaska Planning (SNAP)
[www.uafedu/snrslafes/pubs/nrnlindex.html] within SNRAS/ AFES in collaboration with the Alaska Center for Climate Assessment and Policy (ACCAP)
[<http://www.uafedulaccap/index.htm>] within ISER at UAA and INE in SME.
2. The UAGP was provided base funding and a new geography core, the UAF B.A. and two new B.S degree curricula submitted to the UAF Faculty Senate.
3. The High Latitude Range Management certificate program, developed in collaboration with the Bristol Bay Campus and Nome and funded by the Alaska Native and Native Hawaiian Serving Institutions special grant, was approved by the UAF Faculty Senate.
4. The Geography Alliance, a K-12 outreach program in geography funded by National

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Geographic became a part of UAF in the UAGP and UAF was approved as one of the Alliance member states.

2. Long Range Plan and Annual Actions Evaluation

The three goals and benchmarks for SNRAS/AFES for July 1, 2006 to June 30, 2007 are provided below with our evaluation and discussion following the benchmarks.

1. Formalize the Master Plan for the Fairbanks Experiment Farm

Benchmarks

- Complete the draft Fairbanks Experiment Farm Master Plan by late fall 2006 for presentation to the University of Alaska Fairbanks Master Planning Committee.
- Complete the Plan for presentation to the Board of Regents in summer 2007.
- Discuss plans for philanthropic fund raising potential with the Associate Vice Chancellor for Development and continue discussions with the Department of Natural Resources for potential partnership in a building.

Evaluation and Discussion

Our plans for completion of the draft of the Fairbanks Experiment Farm Master Plan were delayed because of the discussions and upcoming review of CES and AFES by USDA/CSREES. We have the draft for the Master Planning Committee completed. We purchased a hay baler and have completed the specifications for pellet manufacturing equipment but are waiting to determine if we can access the additional funding we have been provided by USDA/CSREES in our Hatch formula funds. This will require a one-to-one match that we have not yet secured. Upgrades to the Controlled Environment Agriculture Laboratory are completed and the facility is now operational. The opening was held during the celebration of the 100th anniversary of the Fairbanks Experiment Farm. The SNRAS/AFES greenhouse on UAF's West Ridge planned is on hold pending finalization of construction of the Agricultural Research Service greenhouse complex and the planned construction of a new greenhouse to replace our current West Ridge facility that is delayed because of lack of funding for BIOS.

2. Complete the Master Plan for the Palmer Research and Extension Center

Benchmarks

- Hire a consulting firm on contract with UAF and complete consultant tasks by fall 2006.
- Complete the Master Plan by spring 2007 for presentation to the Board of Regents. Complete discussions of disposition of income from sale or lease of property with the University of Alaska by February 2007.
- Identify possible partners and potential lands/property to be sold or leased, establish a market price by July 2007.

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- Finalize proposal for the South-central Alaska Natural Resources Management/Geography/Environmental Studies Baccalaureate Program (attached) by July 2007 and resubmit request for incremental funding for the program for FY 08.

Evaluation and Discussion

Our plans for completion of the draft of the Palmer Research and Extension Center Master Plan were delayed because of the discussions and upcoming review of CES and AFES by USDA/CSREES. A consultant has completed the first assignment, a facilities assessment. We are using that assessment to determine the cost of renovating existing facilities at the Matanuska Experiment Station. We have completed a space assessment for our faculty and staff needs for a building at the Matanuska Experiment Farm. We are still hoping to bring forward an FY 08 proposal for expanding our baccalaureate studies in south-central Alaska. The proposal will be adjusted; no longer asking for \$200,000 for the Center for Distance Education but rather looking toward our own resources. The hay baler has been purchased.

3. Develop Curricula for;
University of Alaska Geography Program
Ph.D. in Natural Resources
Masters in Natural Resources Management

Benchmarks

- Complete the curricula for the geography B.A. and outcomes assessment by July 2006.
- Complete the curricula for the geography B.S. and outcomes assessment by September 2006.
- Distance Deliver one geography course in AY 06-07.
- Develop 'Geography of Oceania' for international delivery by fall 06 and deliver a trial in spring 07.
- Complete the proposal for a Ph.D. in Natural Resources Management by July 2007.
- Complete the curriculum for the Master's in Natural Resources Management by December 2006.

Evaluation and Discussion

The curricula for the geography degrees and outcomes assessment are completed and the UAF portion has been approved by the SNRAS Curriculum Committee and submitted to the UAF Senate for approval³. Curricula for UAA and UAS are also completed and are being prepared for submission to appropriate Curriculum

³ Funding was provided to the UAGP in 2005: \$200,000 from UA through BP/Conoco-Phillips, and \$130,000 from UAF with \$100,000 from carry forward and \$30,000 to SNRAS/AFES base. The current funding is \$350,000 from both UA and UAF as base initiated by UA and directed to UAGP via UAF with \$30,000 of the total continuing base funds from UAF.

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Committees. The Board of Regents was updated on progress at their spring meeting. The Geography of Oceania syllabus was presented at the Agricultural Development in the American Pacific meeting in early January. Delivery is on hold pending funding of the ADAP earmark which is now included in the 2007 Farm Bill. The proposal for the Ph.D. in Natural Resources will be housed jointly in SNRAS and the School of Management. The committee including SNRAS, School of Management faculty and the IGERT Director (also SNRAS faculty), completed the draft in late July, 2007 and submission to both SNRAS and SOM Curriculum Committees will be in fall 2007 to meet the fall 2007 Faculty Senate deadline. The Program Review Committee (a standing committee in SNRAS) has completed the draft for the Natural Resources Management Master's degree and it has been distributed to faculty for comments.

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H. Reporting Metrics: (required for PBB reporting to UA and M&M)

1. Review the following performance criteria tables and provide an analysis

Two comments are pertinent to our instruction and research metrics.

1. Instruction: It is difficult to predict trends on three years of information. PAIR agrees. We keep our own data dating to 2000 that indicate that the cyclic nature of the data is the result of two important exogenous variables: the Fairbanks, Alaska and national economy and employment statistics; when the economy is down and unemployment is up, our student numbers are down and vice versa. We do note an upward trend in our institutional metrics despite this cyclic performance. Thus, we try to keep our projections level but increasing. Salaries are important to our students because they tend to enter a career track after receiving their baccalaureate degree. Forestry and natural resources/geography career jobs have, in the past, been low-paying professional entry jobs. However, the demand for professionals trained in GIS and interpretive and computational analysis such as our programs provide, is increasing because of the exodus of professionals at the high-end pay scale due to retirements. Promotions within agencies and industry will open jobs at the entry level and at competitive salaries because the pool to fill job vacancies is not sufficient. We are making this information available to our students as we receive it from agencies and industry. One of our strategies to increase enrollment, graduation rate, and SCH is to broadly provide information on the exciting and we-paying jobs available in the fields of natural resources management and geography.
2. Our major stable funding sources are from state of Alaska general funds (fund 1) and federal formula funds. We have shown an increase in fund 3 (non general fund revenue) sources in past years largely due to earmarks. Our submission of competitive grant proposals has increased over the past two years. We have been relatively successful, but not successful enough to overcome the loss of earmarks that has occurred in FY 07. We are also faced with the inability to match a one-time increase, approximately \$1.0M, in our Hatch formula funds due to the low state input to our budget. With the upcoming emphasis on competitive grants in federal legislation affecting agricultural experiment stations and cooperative extension services and deemphasizing dependence on base funding through formula funds, the need to be competitive in the grant arena is imperative. We are aware of this and look forward to the USDA/CSREES Review that will address the relationship of CES and AFES and their ability, and UAF's ability, to respond to the 21st century mission of the land-grants. FY 08 and 09 will be transition years in federal legislation and state and UA and UAF response to these changes. Our metrics will reflect these changes. Therefore, our targets for FY 08 through FY 12 will be guesses at best. They will be what we hope to obtain and most likely will given how well we respond to any reorganization we encounter after the USDA/CSREES review and how UA and UAF respond to their objective to better serve the people of Alaska through the land-grant mission of UAF, and how seriously the state government of Alaska regards the land-grant mission of UAF.

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GROUP A (metrics required by PBB with exception of optional items or otherwise indicated)

1) Undergraduate Student Retention

Retention rate for all first-time, full-time degree-seeking undergraduate students including associate, certificate and pre-major students.

Retention	Baseline Data (Actual)			Current Unit Snapshot			Projections				
Reporting period: July 1, 2007 to June 30, 2008											
	FY04	FY05	FY06	FY07 Targets	FY07 Actual	Trend FY04-FY07	FY08 Target	FY09 Target	FY10 Target	FY11 Target	FY12 Target
PAIR targets:	83%	78%	71%	75%	100%	flat	75%	75%	75%	75%	75%
<i>Adjusted UNIT targets:</i>											

Data Review

PAIR data indicates we are above the UAF average. We have not adjusted our target and we will continue to report retention on a school basis.

Strategies

Dean exit interviews and student comments indicate open-door advising and contacts with our recruitment coordinator keep students in NRM. Geography will be included in exit interviews in FY07-08 and rather than personal interviews, we are creating a blog. This is a more modern approach and friendly to today’s electronically connected students. We will invite students to speak directly with the dean if they so desire. We promote internships for summer employment with credit given the following fall; provide job information and person contacts through our recruitment coordinator, and keep an up-to-date bulletin board for job announcements. We have begun using Banner student lists to track first-time-freshmen and transfer students using FY02-03 as the base year.

Resources and Reallocation

We have allocated no additional financial resources to retention. However, in consideration of our budget deficit, we have not reduced our recruitment coordinators budget. If we had additional resources we would allocate them to our recruitment coordinator and to our Information Officer who works closely with our coordinator to disseminate materials to students in a variety of media. Our most critical for success in retention is our recruitment coordinator and our information officer.

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2) High Demand Job Degrees (HDJDs) Awarded

The number of certificates and degrees (all levels) awarded during the fiscal year in Alaskan high job demand areas as initially defined by the State of Alaska Department of Labor (DOL).

High demand job degrees	Baseline Data (Actual)			Current Unit Snapshot			Projections				
	FY04	FY05	FY06	FY07 Targets	FY07 Actual	Trend FY04-FY07	FY08 Target	FY09 Target	FY10 Target	FY11 Target	FY12 Target
PAIR targets:	13	17	28	26	21	-	23	24	25	26	27
<i>Adjusted UNIT targets:</i>											

Reporting period: July 1, 2007 to June 30, 2008

Data Review

Our graduation rates were high in FY06. If data is reviewed from 2000 forward, it will be seen that our graduation rates are cyclic and depend on our enrollment cycles. The trend is upward. Our objective is to stay in the mid-20s through FY 11, given the downtrend in UAF enrollments and the relatively flat enrollments in NRM programs and potentially increasing enrollments in geography, we believe this is realistic. In FY 12, we hope to see the first peak in geography because of the new geospatial option and the new landscape option that are waiting UAF Faculty Senate approval. The graduates will be able to take advantage of opportunities for careers in natural resources management and geography and at competitive salaries. We are building for the future.

Strategies

Dean exit interviews and student comments indicate open-door advising and contacts with our recruitment coordinator keep students in NRM. We are also creating a blog. We will invite students to speak directly with the dean if they so desire. We promote internships for summer employment with credit given the following fall; provide job information and person contacts through our recruitment coordinator, and keep an up-to-date bulletin board for job announcements. We have begun using Banner student lists to track first-time-freshmen and transfer students using FY02-03 as the base year. High demand job categories may be attractive to Alaska Scholars, particularly the proposed Geography B.A. in Environmental Studies. The current Geography B.S. (Environmental Studies) is now a part of the High Demand Job category. The Director of the UAGP will be sending a personal letter to all Alaska Scholars inviting them to explore the adventures and career opportunities available to them in geography. We will work with the geography degrees with an intensive campaign prior to increasing our efforts in NRM.

Resources and Reallocation

We have allocated no additional financial resources to retention. In consideration of our budget deficit, we have reduced our recruitment coordinators budget. If we had additional resources we would allocate them to our recruitment coordinator and to our Information Officer who works closely with our coordinator to disseminate materials to students in a variety of media. Our most critical for success in retention is our recruitment coordinator and our information officer.

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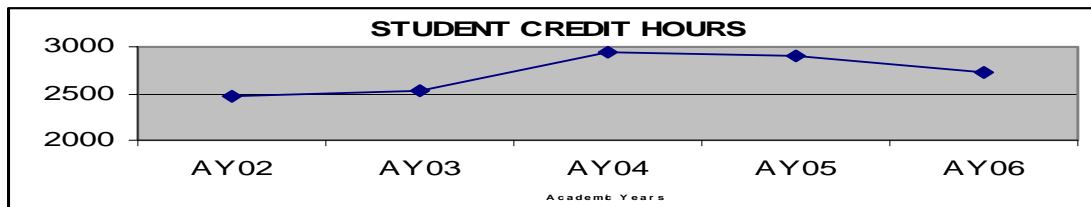
3) Student Credit Hours (SCH) Generated

SCH figures include all for-credit courses, including audit, 500-level, developmental, distance education, self-support and correspondence courses both semester- and yearlong-based.

Student credit hours	Baseline Data (Actual)			Current Unit Snapshot			Projections					
	FY04	FY05	FY06	FY07 Targets	FY07 Actual	Trend FY04-FY07	FY08 Target	FY09 Target	FY10 Target	FY11 Target	FY12 Target	
Reporting period: July 1, 2007 to June 30, 2008												
PAIR targets:	2989	2943	2722	3048	2569	-5%	2600	2730	2866	3010	3160	
Adjusted UNIT targets:												

Data Review

Review of data from 2000 indicates an upward trend through FY 04. We have provided a graphic from AY 02. PAIR indicates that the drop from AY 05 to AY 07 in our undergraduate courses. A cursory analysis indicates that NRM 101 enrollments have dropped over the last five years and with an upward trend in upper level and graduate SCH. Approximately 50% of our students are transfers and are not required to enroll in NRM 101. The instructor has implemented a more rigorous curriculum resulting in lower enrollments in NRM 101. Enrollments in the NRM plant propagation course have dropped because biology no longer requires the course. Our introductory silviculture course has undergone a change of instructors and was taught for the first time by an adjunct who is now refining and improving the course material. GEOG 101 enrollments are also down but we expect that trend to reverse when the new geography B.A. and B.S. degrees are approved.



Strategies

We will update this report in 2008 with a breakdown of targets by degree programs, upper and lower division courses, and graduate courses. We will also perform a critical review of NRM 101 and GEOG 101. Dynamic instructors and exciting course material in introductory courses are critical to recruitment into our degree programs. For this report, we will use AY 03 (2600SCH) as a base for estimating targets and continue to use a 5% increase for all programs in SNRAS. This will bring us back, in AY 11, to approximate the AY 04 high we realized. This is coincidental with

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the introduction of the new geography degrees, the new Ph.D. and masters degrees, and a closer integration of NRM and geography in environmental sciences.

Resources and Reallocation

We have allocated no new resources nor made any adjustments in the resources we have to meet our goals. Faculty, staff, and department chairs are aware of the challenge we have and faculty have reflected that challenge in their workloads.

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4) Declared Undergraduate Majors in Unit (optional)

Declared majors	Baseline Data (Actual)			Current Unit Snapshot			Projections				
	FY04	FY05	FY06	FY07 Targets	FY07 Actual	Trend FY04-FY07	FY08 Target	FY09 Target	FY10 Target	FY11 Target	FY12 Target
PAIR targets:	121	121	125	Not used in 2006	104	-5%	109	115	120	126	132
<i>Adjusted UNIT targets:</i>											

Data Review

SNRAS majors dropped by 20 from 2006 to 2007. We have adjusted our targets based on 2007 actuals but anticipate a 5% increase through FY 12 considering the new geography programs that are being reviewed by the UAF Faculty Senate and the closer integration of geography and NRM in the proposed geography B.A. in Environmental Studies. Students who declare majors in NRM and geography are job career oriented. We suspect that the perception that entry positions in these two fields are perceived as low compared to engineering and even certificate and two year degree programs in the trades and crafts is influencing student decisions on choice of major. This was addressed in the introduction to this section.

Strategies

New courses, instructors and proposed curricula in geography are becoming known. We have a new forest science faculty who is a computational analyst and will bring this expertise to the classroom. Our efforts to bring our NRM programs to south-central Alaska will be enhanced by our new administrator at the PREC who is student oriented. We are also cooperating with UAS to bring our NRM forest science option to southeast Alaska.

Resources and Reallocation

The geography program at UAF was funded to base in FY 08. This will stabilize the program. Our new administrator at the PREC is intent on increasing student enrollment and we have provided him with a salary increase to do so. Discussions with UAS in southeast Alaska continue but we have allocated no resources to support the expansion of this program. We support UAS’s request for an additional geography program that could enhance the UAGP and the expansion of the NRM forest sciences option.

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6) Graduate Student Headcount

Graduate student headcount	Baseline Data (Actual)			Current Unit Snapshot			Projections				
	FY04	FY05	FY06	FY07 Targets	FY07 Actual	Trend FY04-FY07	FY08 Target	FY09 Target	FY10 Target	FY11 Target	FY12 Target
Reporting period: July 1, 2007 to June 30, 2008											
PAIR targets: Master's	33	35	26	27	31	flat	30	30	40	40	40
Ph.D.	9	8	9	9	11	flat	12	13	14	15	15
<i>Adjusted Unit targets:</i> Master's											
Ph.D.											

Data Review

Our target for M.S. students in NRM for the next two years is 30. Student experience is diminished when we cannot provide them with at least a modicum of space. In 2005, we purchased an ATCO unit to house our graduate students and we are paying annual upkeep for that unit. The unit is now at capacity. Given our space constraint, we do not see any way that we can increase our M.S. student numbers through FY 09. We anticipate increases in student numbers in FY 10. Our increase in Ph.D. student is In part due to IGERT/RAP students showing an interest in natural resources management and an increasing number in sustainable agriculture. We expect this trend to continue. We have factored into our space equation the increases in our Ph.D. students.

Strategies

Our new Ph.D. in Natural Resources will be presented to the UAF Faculty Senate in fall 2007. We should also have our professional masters degree established in FY 10 and we are preparing to present a graduate program in geography. We are assuming that there will be a solution to our space problem by FY 10 whether it be space at our Fairbanks Experiment Farm or a version of BIOS that will be funded freeing space in AHRB. Without space we cannot expand and our metrics will reflect this need. We are also expanding our faculty through grants and partnerships. This will increase the number of professionals able to serve on graduate student committees, but will be to no avail if we do not have space to accommodate students.

Resources and Reallocation

We have no resources, faculty or funds, to reallocate to our graduate student program other than those we are already expending.

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7) Grant funded research expenditures

Grant-funded research expenditures are defined as restricted expenditures made from an org with an NCHEMS category of Research, including indirect cost recovery (ICR). Expenditures are counted at the MAU where the money is expended rather than at the MAU associated with the grant award.

Research expenditures	Baseline Data (Actual)			Current Unit Snapshot			Projections				
	FY04	FY05	FY06	FY07 Targets	FY07 Actual	Trend FY04-FY07	FY08 Target	FY09 Target	FY10 Target	FY11 Target	FY12 Target
PAIR targets:	4220	4997	6284	5400	6087	15%	5500	5775	6050	6400	6650
<i>Adjusted UNIT targets:</i>											

Reporting period: July 1, 2007 to June 30, 2008

Data Review

Our grant funded expenditures have increased for two reasons. First, we are conservatively spending out the funds we have received from federal congressional earmarks in anticipation of a discontinuation of some of the earmarks or a reduction in the funding we will receive for specific earmarks. We expended our FY 07 earmarked funds to enhance our graduate program, and provide more opportunities for students. Second, and importantly, our competitive proposal submission has increased and we have been very successful. There will most likely be a lag in our competitive grant funding increase and earmark decrease. Therefore, we have conservatively used our FY 07 actual as a base for our anticipated increases of \$250,000 in research expenditures through FY 12.

Strategies

The strategies for SNRAS/AFES have been discussed in the body of this document.

Resources and Reallocation

No resources have been reallocated to meet our goals. We have provided information to our faculty and staff concerning the redirection of our efforts to obtain funding for research given the federal funding scenario and emphasized that funding they seek must be consistent with our Strategic Plan 2004 and our joint CES/AFES Plan of Work. The faculty and staff have responded positively.

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10) Student Learning Outcomes Assessment (*% of programs with effective* student learning outcomes assessment*)

Assessment	Baseline Data (Actual)			Current Unit Snapshot			Projections				
Reporting period: July 1, 2007 to June 30, 2008											
	FY04	FY05	FY06	FY07 Targets	FY07 Actual	Trend FY04-FY07	FY08 Target	FY09 Target	FY10 Target	FY11 Target	FY12 Target
PAIR targets:	n/a	25%	50%	100%	n/a	up	100%	100%	100%	100%	100%
<i>Adjusted UNIT targets:</i>											

Data Review

Outcomes Assessment for NRM is complete and on file with the Provost’s office. Outcomes Assessment is included in the curriculum package that has been presented by the UAGP for UAF to the UAF Faculty Senate. Our targets are realistic.

Strategies

The implementation of the NRM responses to outcomes assessment is on file with the Provost’s office. Geography’s outcomes assessment will be implemented pending approval of the curricula presented to the UAF Faculty Senate.

Resources and Reallocation

No resources have been allocated to this activity other than the normal activities associated with operating an academic unit.

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11) Enrollment Management Plan

Provide the URL for the unit enrollment management plan(s).

GROUP B (metrics required by ABS and/or M&M)

1) Occurrences of applied research benefiting Alaska

Project Title:	Contribution to State	Funding Agency	Status
Forest Products Project (Wood Utilization Research)	A continuing federal earmark and a national program, Wood Utilization Research addresses forest products research in the United States including non-timber products and education and extension associated with new product development and production processes .	USDA/ CSREES	Active
Invasive weed research	Alaska's ecosystems are relatively intact thus research can focus on strategies to prevent the introduction of invasive species, more cost effective than research concerning control.	USDA/ARS BECRU	Active
Natural Resource Research	Addresses the genetics of alternative livestock and application of the Endangered Species Act	OFFICE OF THE GOVERNOR	Active
Integrated pest management (IPM) for Alaska agriculture ARS Research Support	Current research focuses on grasshoppers, which regularly infest small-grain crops and during sporadic outbreaks cause considerable damage; more robust models of grasshopper development can be used to predict outbreaks directly relevant to grasshopper population management in other areas.	USDA/ARS	Active
Radio telemetry and range management	Project collects, processes, and archives satellite telemetry locations of satellite-collared reindeer to generate maps used by reindeer herders to locate and track reindeer herds and individuals.	USDA/NRCS, NSF and AFES	Active
On-line Reindeer Herd Record Keeping System	Herders can query and browse herd and individual animal records year round via the internet.	AFES	Active

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Similarities and differences in composition and selected sensory attributes of reindeer, caribou, and beef	This study determines composition and sensory properties of Alaska reindeer meat and compares these to caribou and beef.	USDA/CSREES	Active
Economics of Reindeer Herding	The regional economic model built for this study provides a detailed view of the link between reindeer industry output and regional economic activity.	NSF	Complete
Locally produced feed ingredients for use in captive reindeer diets	Evaluating locally grown components of reindeer diets will provide insight into reindeer nutrition and determine what diets will produce the greatest performance at the lowest cost for Alaska producers.	USDA/CSREES, BIA, and AFES	Active
Alaska Residents Statistics Program	The increasing trend of recreational use of public lands is monitored for use by public land managers, and by public agencies to plan support infrastructure to avoid negative environmental effects and maintain the quality of the user experience.	USFS; BLM; NPS; US Fish & Wildlife	Active
Stream temperature response to timber harvest activities in Interior Alaska	Identify the natural course of stream temperature and the potential effects of ice bridges on fish habitat in interior Alaska.	USDA/McIntire-Stennis	Active
Lake level changes at Harding Lake	Reconstructing the historic lake levels and lake level changes at Harding Lake and provide a model that will assist in developing operational rules for a control structure on the divergent stream.	SNRAS/AFES	Active
Modules & Models for Hands On Learning	Design of stand alone hands-on learning modules to deliver curricula to learners with unequal and diverse educational backgrounds as often found in Alaska.	NSF	Proposed
Canola Quality	Alaska grown canola is of high quality and growers may be interested in considering this crop because of its superior characteristics.	USDA/CSREES	Active
Regional Economic Data	Improve regional economic models by collecting primary data and revising published data for Alaska fishing communities for use in requisite regional economic analyses.	NOAA	
Impact Analysis for Alaska Natural Resources	Regional economic models are developed of the reindeer and groundfish industries to aid community and resource managers in decision making.	USDA/Hatch	Active

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An evaluation of the effectiveness of cattle distribution practices in grazed watersheds	This program is a multistate, collaborative effort to understand and predict animal movement and landscape use for a variety of ecosystems throughout the western United State including Alaska and will allow assessment of impacts before the actual introduction of livestock into new landscapes, which can promote informed decisions and prevent adverse publicity and possible litigation.	USDA/AGNlc	Active
Peonies as field-grown cut flowers	The objective of this project is to identify methods of growing peonies for field-grown cut flower production, investigate marketing opportunities and participate in test marketing.	USDA/CSREES	Active
Tomato variety trials	New tomato cultivars developed for northern climates were tested in a three-year study to expand the number of outdoor tomatoes identified as hardy for interior Alaska.	USDA/Hatch	Active
Horticultural Plant Production in Alaska	Provide information on landscape plant hardiness, wildflower seeds, and commercial lingonberry production to satisfy consumer and commercial demand.	USDA/Hatch	Active
Carrot variety trials	Carrot trials identify new cultivars useful in home and market gardens.	USDA/Hatch	Complete
Arctic Plant Germplasm Introduction and Research Project (APGIR)	The National Plant Germplasm System (NPGS) of the ARS is a cooperative effort by public (state and federal) and private organizations to preserve the genetic diversity of plants. The National Arctic Plant Genetic Resources Unit, Alaska Plant Materials Center in Palmer, Alaska, is the first systematic effort by a U.S. agency to preserve high-latitude and high-altitude plant germplasm.	USDA/ARS	Active
The Response of Forest Ecology and Growth to Climate Variability in Alaska: Patterns, Controls and Strategies for Management	The management of forests, agricultural lands and rangelands can play an important role in enhancing carbon sinks. Reliable measurements of net uptake of carbon dioxide into its forests will assist Alaska in establishing the magnitude and thus obtaining market value cash income.	USDA/McIntire-Stennis	Active
Alaska birch sap production	Advise Alaska birch sap producers on expected rates of Alaska birch sap production, chemical properties of sap, climate control, and desirable characteristics of producing stands.	USDA/CSREES	Complete
Arctic Climate Impact Assessment	ACIA is an important summary and information reference for the public, natural resource managers, scientists, and policy makers in anticipating, planning for, and dealing with consequences of climate change in the Arctic.	AFES	Complete

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Alaska Birch and Black Spruce Tree Growth and Climate	Scientists and policy makers are intensely interested in the climate sensitivity of the boreal forest, because it is an important factor in taking up and storing carbon dioxide in the atmosphere. This project provides long-term, ground-based data to help answer this question.	USDA/McIntire-Stennis	Active
Natural Regeneration of White Spruce at Reserve West	This study is a long-term monitoring project that measures survival and height growth of seedlings and saplings in an area burned in the 1983 Rosie Creek Fire. Regenerating white spruce is generally the biggest reforestation problem in the boreal forest region.		
Innovative Use of Natural and Supplemental Light for High Latitude Crop Production	Opportunities for year-round controlled environment production of perishable high quality produce and ornamentals will be greatly increased if recommendations for optimal amount, daily duration and quality of light are known and utilized.	USDA/Hatch	Active
Light Quality for Off-Season Raspberries	Economical, seasonal temporary greenhouses can easily be adapted and used to extend the local production of high-quality fresh raspberries. Research information is demonstrated at Chena Hot Springs Resort.	USDA/CSREES	Active
Fertilizer to greenhouse strawberries	To efficiently produce greenhouse strawberries for off-season markets, proper fertilizer recommendations are necessary. Research information is demonstrated at Chena Hot Springs Resort.	USDA/CSREES	Active
Sharing Networks to Assess the Vulnerabilities of Local Communities to Oil and Gas Development Impacts in Arctic Alaska	Assess the vulnerabilities of two North Slope Alaska coastal communities and one interior rural Alaskan community for the effects of oil and gas (O&G) development to inform agencies and participating communities of the resilience of social systems of the North Slope villages.	MMS/CESU	Active
Green storage cabbage variety trials	The storage quality of cabbage is related to slow growth over a long season. The season for cabbage sales can be extended through the winter with adapted varieties and production practices that promote storage quality.	AFES	Complete
Head lettuce variety trials	Provide information on lettuce varieties and their potential for good crop production in Alaska to supply local markets.	USDA/Hatch	Active
Antioxidants in berries and vegetables	Survey Alaska berries and vegetables for high levels of phytochemicals with antioxidant activity.	USDA/CSREES	Complete
Laboratory Testing for Seed Potato Export	Field surveys, sampling and laboratory testing of seed potato fields to insure virus free potatoes for export to Taiwan and China.	DNR- Division of Agriculture	Active

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Potato virus detection work	Potatoes grown in northern climates will be evaluated for developing virus-free potato germplasm and environmentally-friendly approaches to control viral pathogen infection and improved methods for virus and vector detection will be developed.	USDA/ARS	Active
Management Practices for Turfgrass	Extensive damage to golf course greens over most winters results in damages in the six-figure range statewide most years. Results are being used by golf course managers in south-central Alaska.	USDA/Hatch and USDA/CSREES	Active
Phytochemicals from the Northern Forest	The objective of this study is to determine potential (type, quality, and quantity) of chemicals contained in northern forest species for uses from health care to biofuels.	USDA/CSREES	Active
Forest Vegetation Simulator (FVS) model	FVS provides current and post-prescription quantitative and visual results of treatment prescriptions for Alaska's northern forests.	USDA/McIntire-Stennis	Active
Levels-of-Growing-Stock (LOGS) studies	Levels-of-Growing-Stock plantations are designed to determine the effect of distance between planted seedlings or pre-commercial thinning on crop tree growth.	USDA/McIntire-Stennis	Active
Black spruce forest soils in boreal regions of Alaska	Provides a soils information baseline for modeling climate change, boreal forest management, and future soil inventory.	USDA/Hatch	Active
IPY: Arctic Earth Science Class	Provide hands-on field trip experience for K-12 educators on the effects of global climate change.	NSF	Proposed
Development of a computer model for management of fuels, human-fire interactions, and wildland fires in the boreal forest of Alaska	The models will provide mapped depictions of changes in wildland fuels, fire risk, and vegetation under multiple future scenarios of fire management, climate change, and human development.	NSF, SNRAS, US Forest Service, FJVA, UA	Active
An integrated approach to understanding the role of climate-vegetation-fire interactions in boreal forests responses to climate change	Improve the understanding of boreal forest-tundra dynamics in Alaska to enable understanding the processes and mechanisms controlling circumarctic ecosystem responses to climate change by linking paleo-data and modern ecological modeling.	NSF, SNRAS, US Forest Service, FJVA, UA	Active
Predicting Temperate Forest Dynamics	Design a model for predicting how vegetation mosaics respond to multiple disturbance agents.	NSF	Proposed

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Assess the Vulnerabilities of Local Communities to Oil and Gas Development Impacts in Arctic Alaska (SNAP)	Alaska managers and policy makers need timely access to research that shows how current changes may shape future conditions. SNAP has been created to develop scenarios based on the most current information available.	University of Alaska Foundation -BP/Conoco	Active
RAMSES, A Planning Model	Understand how boreal forest ecosystems could respond to the rapid climatic and sociopolitical changes brought about through the shift to a warmer Arctic.	NSF	Proposed
GeoPortal Project Support	Produce a main internet site as a portal to geography resources for K-12 teachers, students and the public.	AT &T; UA Foundation	Active
AK Geography Alliance Education Network	Joins a network of K-12 educators with higher education faculty from 3 university campuses.	National Geographic	Active
Reproductive Performance in Domestic Ruminants	Producers of domestic ruminants experience economic loss associated with inefficient reproductive management practices. The purpose of this research is to examine the effects of extreme temperature and extreme changes in day length on a seasonal basis on high latitude domestic ruminants.	USDA/Hatch	Active
Cicer Milkvetch, Forage Galega, and Lupinaster Clover as Potential Forage Crops for Alaska	Determine if higher protein forage legumes are winter hardy and can be grown in interior Alaska.	USDA/Hatch	Active
Bio-oil Production and Upgrading from standing dead trees in interior Alaska	Produce and compare bio-oil from Alaska woody biomass that has no market value or that is underutilized and that could be used as feedstock for energy and product application. This is the first such study in the state.	DOE/EPSCoR	Proposed
Cropping of Native Alaska Woody Species for Biomass	This project will determine if willow and poplar has potential as biofuel.	SunGrant	Proposed
Extraction & Concentration of Sugars from Oak and Pine Pyrolic Bio-Oil	This proposed study will help quantify and qualify the types of sugars found in bio-oil produced water by employing a proprietary process based on water-water extraction.	U.S. Forest Service	Proposed
Long-term tillage study	Determine the effects of various long-term tillage and crop residue management practices on grain yield and various soil properties in a subarctic environment.	USDA/ARS, AFES	Active
Global change education using western science and Native observations/knowledge	Provide Alaska K-12 teachers and their students' opportunities to engage in climate change research based on local observations and western science and translate such research into meaningful classroom activities and learning.	NSF, NASA, AK DNR	Active
Restoration of Sedges	Identify major factors affecting sedge seed germination for revegetation on Alaska's North Slope.	SeaGrant and BP	Active

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Innovative Methods of Involving the Public in Environmental Decisions	Increase the level of awareness of new public involvement techniques and their advantages and disadvantages in environmental decision-making in Alaska.	USDA/Hatch	Active
Soil Carbon Balance and Nitrogen Dynamics Following Disturbance by Wildfire and Logging in Interior Alaskan Forests	Quantify and compare impacts of wildfire and logging disturbance on soil carbon balance and nitrogen availability and clarify the mechanisms underlying observed responses of soil respiration and N mineralization to wildfire and logging.	USDA/McIntire-Stennis	Active
Mapping burn severity in interior Alaska using satellite imagery	Map burn severity to assess regeneration of major browse species such as willow and aspen using algorithms developed primarily in warm regions at low latitudes under Alaska conditions.	USDA/McIntire-Stennis	Active
High Latitude Terrestrial Satellite Estimates in K-12 Outreach	Improve math, science and technology in K-12 classrooms by providing an opportunity for scientists and students to collaborate on a research project of real significance to scientists who are tracking plant phenological changes as an indicator of global change.	National Science Foundation	Complete
Controls on and consequences of burning of deep organic soils in Interior Alaska ecosystems	Develop approaches to remotely identify and map areas that experience deep burning of the surface organic layer and become vulnerable to changes in post-fire ecosystem succession.	Joint Fire Science	Complete
Long-term Forest Ecosystem Monitoring and GIS Modeling of Taiga Forest Dynamics	The purpose of this study is to develop a computer model on the functional aspects of forest ecosystem dynamics at a broad landscape scale in interior Alaska.	USDA/McIntire-Stennis	Active
Selection, Variety Testing, and Evaluation of Cultural Practices for Alternative Agronomic Crops in Alaska	Reliable information on high value agronomic niche crops such as hullless barleys and oats, grass seed, and oilseeds as well as horticultural niche crops like flowers, vegetables and nursery plants is important to local producers trying to fill and sustain the demand from local markets for niche crops.	USDA/Hatch	Active
Agronomy, Economy and Fuel quality of Polish Canola Grown in Alaska	Determine if Polish canola seed can be used for biodiesel fuel and as a rotational crop.	SunGrant and USDA/CSREES	Proposed
Food and Agricultural Sciences National Needs Graduate Fellowship	This fellowship will provide graduate financial assistance to increase professional support to underserved small farms and remote communities in Alaska.	USDA/CSREES	Proposed

2) Publications in refereed journals/periodicals - Provided under separate cover.

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3) # of joint partnerships

List partnerships:

Partner(s):	Project:	Funding Source (if applicable)	Project duration:
Cooperative Extension Service	Land grant mission of UAF and UA	USDA, state of Alaska, competitive grants	Continuing
USDA Agricultural Research Service	Integrated Pest Management Arctic and Subarctic Plant Curation	USDA/ARS	Continuing
USDA Forest Service	Ecology of the Boreal Forest	USDA Forest Service	Continuing
Cooperative Ecosystems Study Unit	Ecosystems Management	NPS, BLM, NRCS, US F&W, ARS	Continuing
Cold Climate Housing Research Center Kawarek Reindeer Herders Association	Energy efficiency and architectural design in subarctic climates Reindeer management, nutrition, and meat quality	USDA, State of Alaska, BP, private foundations USDA, BIA, NSF	Continuing Continuing
Chena Hot Springs Resort	Alternative energy and year-round crop production in controlled environment	USDA, DOE, UAF/SNRAS/AFES	Continuing
Alaska Berry Growers Association	Cultivated production of Alaskan wild grown berries	Anticipated	Initiated
National Geographic	Geography Alliance – K-12 Outreach	National Geographic	Continuing
AT&T	IT outreach to K-12	AT&T	Two years

5) Additional Unit-Specific Metrics - none