

High Latitude Soils- AFES

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V(A). Planned Program (Summary)

1. Name of the Planned Program

High Latitude Soils- AFES

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	0%		20%	
104	Protect Soil from Harmful Effects of Natural Elements	0%		20%	
122	Management and Control of Forest and Range Fires	0%		20%	
123	Management and Sustainability of Forest Resources	0%		20%	
125	Agroforestry	0%		20%	
Total		0%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	0.0	4.9	0.0
Actual	0.0	0.0	2.8	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	0	166593	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	199949	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	94902	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

•Black spruce forest soils :Investigation of the physical environment and soils' properties continued, aspen and black spruce sites were described and sampled. In the past two years all soil sampling associated with the Permanent Sampling Plots was in cooperation with the USDA National Soil Survey Center and all their soil analyses are complete. •Soil organic matter pools: A field experiment with smooth brome grass and three fertilizer treatments and two cutting frequencies was conducted. Soil samples were taken from one quarter of the microplot. Plant samples were dried and ground for analysis of total nitrogen and 15N concentration. •Soil moisture availability: The objective of this project is to understand how chronic moisture stress will alter ecosystem function and carbon balance. The project is based on a series of 15 m x 10 m throughfall exclusion shelters that have been erected each summer since 1989 in three replicate upland and three replicate floodplain mid-successional stands.

2. Brief description of the target audience

•Black spruce forest soils:Managers in USDA Forest Service Private Forestry, Alaska State Division of Forestry. . Researchers groups - provide data for Yukon Basin carbon assessment and climate change modeling. 3.Alaska native corporations •Soil organic matter pools:Research communities, soil laboratories, fertilizer agencies, producers, federal and state agencies: USDA/ARS and NRCS, State Department of Natural Resources Division of Agriculture. •Soil moisture availability:State and private forest and land managers, undergraduate and graduate students. Research efforts are reported through the AgroBorealis Annual Report, publications and contributes to the following course curricula: NRM 304 - Perspectives in Natural Resource Management; NRM 672 - Nutrient Cycling and Soil Fertility. Research is disseminated through the following web sites. <http://www.uaf.edu/salrm/faculty/valentine.htm> <http://www.lter.uaf.edu/>

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	40	60	0	0
2007	40	60	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2007:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	0	7	7

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

Development of a climate/soil model for boreal forest regions

Year	Target	Actual
2007	1	1

Output #2

Output Measure

Development of a soil carbon profile for black spruce forest soils in interior Alaska

Year	Target	Actual
2007	1	1

Output #3

Output Measure

Develop a model for relating post-fire organic duff depth to soil erosion and eventual stand regeneration.

Year	Target	Actual
2007	0	1

Output #4

Output Measure

Publication of scientific journal articles and experiment station bulletins summarizing this research.

Year	Target	Actual
2007	5	7

Output #5

Output Measure

Database listing of development limitations related to soil resources and soil quality.

Year	Target	Actual
2007	150	0

V(G). State Defined Outcomes

O No.	Outcome Name
1	Number of public and private land managers using these models and publications.
2	Number of land managers that change their practices in response to our research.

Outcome #1

1. Outcome Measures

Not reporting on this Outcome for this Annual Report

2. Associated Institution Types

3a. Outcome Type:

3b. Quantitative Outcome

Year	Quantitative Target	Actual
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3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
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V(H). Planned Program (External Factors)

External factors which affected 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.)
- Other (global climate change)

Brief Explanation

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Before-After (before and after program)
- During (during program)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}