V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Climate Change

☑ Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
101	Appraisal of Soil Resources	10%		50%	
132	Weather and Climate	10%		50%	
807	Disaster Preparedness, Mitigation, Response, and Recovery	80%		0%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2018	Extension		Research	
	1862	1890	1862	1890
Plan	1.0	0.0	4.0	0.0
Actual Paid	0.7	0.0	0.2	0.0
Actual Volunteer	0.0	0.0		

Research documented weather factors and agricultural land characterization, including soils and crop types. High latitude soil research centered on the evaluation of the relationship between local climate and soil carbon balance. Research, education and outreach activities focused on climate change adaptation as it relates to communities, including emergency preparedness in the face of extreme weather events.

2. Brief description of the target audience

The target audience included producers and consumers, communities and small business entrepreneurs, individuals and groups concerned about the quality of the Alaska environment, public resource agencies, public and private resource managers, other faculty and researchers, and undergraduate and graduate students. Efforts were directed toward environmentally and economically sustainable development and conservation of our natural resources to help all citizens adapt and become resilient as the climate changes. Advisors and the target audience included various emergency planning organizations, USDA Natural Resource Conservation Service, the Alaska Department of Natural Resources, borough governments and Alaska Native corporations.

3. How was eXtension used?

The use of eXtension resources in FY18 has been valuable to Extension outreach in Alaska. Three agents were members of the Extension Disaster Education Network Delegates Community of Practice (CoP). Another agent was a member of the Climate, Forests and Woodlands CoP.

V(E). Planned Program (Outputs)

1. Standard output measures

2018	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	512	0	244	0

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

Patent Applications Submitted

Year:	2018
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2018	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

management in Alaska are primarily tied to national and state parks and forest. Measurable outputs are publications and presentations.

Year	Actual
2018	8

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Outcome 1. Increase knowledge of arctic and subarctic soils and forest productivity among peer scientists, managers and governments. Knowledge outcome measures will be publications, conferences and workshops.
2	Outcome 2. Increase knowledge through classroom and field course delivery. The outcome measures will be curricula delivered and number of students reached.
3	Outcome 3. Respond to community and individual knowledge needs on the impact of climate change in northern ecosystems and effects on cultural lifeways, economies and individual well-being. Outcome measures will be publications, workshops and conferences.
4	Outcome Measure #4: Demonstrate effective collaboration between research and Extension to resolve issues.

1. Outcome Measures

Outcome 1. Increase knowledge of arctic and subarctic soils and forest productivity among peer scientists, managers and governments. Knowledge outcome measures will be publications, conferences and workshops.

arctic transitions and sustainability modeling.

4. Associated Knowledge Areas

KA Code	Knowledge Area
132	Weather and Climate

Outcome #3

1. Outcome Measures

Outcome 3. Respond to community and individual knowledge needs on the impact of climate change in northern ecosystems and effects on cultural lifeways, economies and individual well-being. Outcome measures will be publications, workshops and conferences.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2018	5

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Over the past 50 years, Alaska has warmed at over twice the rate of the rest of the United States. Alaska continues to see hundreds of wildfires each summer that result in millions of acres burned. Alaska has also seen substantial flooding in populated areas, and the state experiences earthquakes on a frequent basis. As the climate warms, Alaska's coastlines recede and permafrost melts. Extreme weather events may increase in both frequency and severity, hence a need for continuing emergency and disaster preparedness training for the public to mitigate potential damages to property and life.

What has been done

Extension kept abreast of research-based best practices through its relationship with the Extension Disaster Education Network. AFES maintained important community connections. A researcher has been the director of Alaska Center for Climate Assessment and Policy since 2006, director of the Alaska Fire Science Consortium since 2009, and is the stakeholder liaison for the Scenarios Network for Alaska and Arctic Planning. Another researcher has taken on grant work to create climate change educator trainings in Alaska.

Results

communicating about climate change efforts. Of the nine respondents, five who did not previously have an elevator pitch about climate change agreed they had one after the workshop, and three improved their confidence about getting others involved in climate change efforts.

Public feedback was collected at three fairs to assess the general interest of adults in receiving more forestry-related information from Extension. Of the 61 adult responses, the majority (40) indicated an interest in foraging information, such as how to identify and harvest berries or mushrooms from local forests. The next most popular topic was climate, with 27 respondents indicating an interest in learning the effects of climate change on Alaska's forests. Thirty-three respondents indicated they had not previously used Extension to gather forest-related information, with many noting that they either had not heard of Extension or did not know it was a resource for forestry information. While 14 were not interested in a future forestry workshop or training, 36 did indicate they would be interested in expanding their general knowledge about forestry, such as judging the health of trees. Feedback included "great service" and "additional public information about wildfire prevention would benefit Alaskans."

Key Items of Evaluation

Climate change is affecting Alaska's forest health and wildfire risk. Members of the public have indicated an interest in receiving more information about climate change effects from Extension and research. Grassroots efforts to increase climate literacy are gaining momentum.