

Review Report

Contributing Organizations

University of Alaska Fairbanks

Directors

Jodie Anderson Signed

Executive Summary

Overview

Alaska is recognized for its immense size and sparse population and its cultural, geographic and environmental diversity. The state represents a major region of renewable and nonrenewable natural resources in the United States. Its 365 million acres include the nation's largest oil reserves, coal deposits and the two largest national forests. Alaskans harvest many non-timber forest resources including berries, mushrooms, saps, oils, chaga, roots, wildflowers and more. Alaska has a diverse geography that offers soils for production of food, fiber and biomass fuels as well as a multitude of recreational and tourism activities. The vast stretches of boreal forest offer insight into arctic ecology, tree growth trends and the effects of climate change.

Alaska's natural resources continue to be the foundation of the state's economy, though resource industries have been mostly extractive in nature. IANRE assumes the use and management of these resources will continue to be a predominant force in the FY25 needs of Alaskans. Promoting awareness and stewardship of Alaska's natural resources is therefore central to the FY25 planning of IANRE's teaching, research, Extension and engagement programs. The University of Alaska Fairbanks (UAF) in general and its Agricultural and Forestry Experiment Station (AFES) and Cooperative Extension Service (CES), in particular, are looking forward to meeting the challenges of increasing demands for research, education, outreach and community engagement that are relevant to sustainable management of Alaska's resources and bring community ideas to the university for further development of the state's resources.

In FY25, Alaska is projected to continue importing a high percentage of foods and other agricultural products. The small scale of local markets mean emerging growers in the agricultural sector will continue to need support producing and marketing potatoes, specialty crops and herbs; cut flowers including peonies; vegetables and herbs; forages, grains and manufactured livestock feeds; controlled environment products, and a variety of niche market crops. Livestock enterprises in Alaska are varied in size and species of animal in production. In FY24, producers are expected to request information specific to northern latitudes that will both protect the environment and ensure an abundant and safe food supply for both humans and animals.

The Alaska Department of Labor and Workforce Development projects that Alaska’s population will increase by almost 25,000 people by 2050. As the population grows, more locally and regionally produced food will be needed to provide greater food security. Many Alaskans live a subsistence lifestyle or supplement their diets with fish and game meat. Alaska also has a large military population, and most have not previously preserved game meat or fish. Alaska has one of the nation's highest rates of botulism, so it is imperative to continue providing much-needed information on safe preservation of dietary staples in FY25. Alaska also has one of the fastest growing senior populations, which faces the challenge of remaining active and healthy in a demanding environment. Other concerns that are expected to define health and nutrition programming in FY25 are continued high rates of child and adult obesity and diabetes. Due to high levels of fine particulate matter that occurs during Alaska’s cold winters, and high levels of radon detected in some areas, indoor air quality will also remain a particular Alaska concern.

High energy costs remained a critical issue, particularly in rural Alaska, where fuel oil continued to run \$8 or \$9 a gallon. Research and outreach plans in FY25 related to energy will continue to focus on new and alternative sources of energy, wood harvesting, biomass and energy conservation. AFES will work to provide information to manage renewable resources and to improve technology for enhancing the economic well-being and quality of life at high latitudes. When foresters, farmers and land managers use research results, all Alaskans benefit from the wise use of land resources. Research projects are therefore expected to respond to requests from producers, industries, and state and federal agencies for information on plant, animal and soil sciences, forest sciences and resources management.

AFES priorities, like national priorities, are to enhance sustainability of food and agricultural systems; adapt to and mitigate the impacts of climate change; support energy security through the development of renewable natural resources; ensure a safe, secure and abundant food supply; improve human health, nutrition and wellness; support environmental stewardship through the development of sustainable management practices; and strengthen individual, family and community development and resilience. Experiment station researchers plan to continue publishing research in scientific journals, conference proceedings, books, and in experiment station bulletins, circulars, newsletters, research progress reports and miscellaneous publications. Scientists will share their findings through conferences, public presentations, workshops, field days and mediated platforms like websites and blogs to reach a wide audience.

The mission of CES is to use research-based knowledge to educate, engage and support the people and communities of Alaska, connecting them with their university system. In FY25, CES plans to continue providing factual and practical information while bringing Alaskans' issues and challenges to the university. CES is committed to promoting the sustainability and economic security of individuals, families and communities by providing practical, non formal education, including conferences, workshops and cooperative work with community, regional and tribal partners. Outreach will occur through numbered publications, faculty consultations, newsletters, blogs and social media platforms like Instagram, Facebook pages, YouTube channels and Instagram feeds.

CES priorities will continue to address expected national priorities in FY25 by helping families, youth and individuals be physically, mentally and emotionally healthy; enhancing workforce preparation and life skills; strengthening food safety and security; and fostering greater energy independence. Programming is planned to integrate cultural and ethnic diversity responsive to emerging stakeholder needs and interests. Programs will be informed by client requests, various regional and subject matter advisory groups, surveys and needs assessments. Collaborations are planned to continue with other universities and with other units within UAF, the University of Alaska statewide system, federal and state agencies, nongovernmental organizations and private industry partners.

Stakeholders to be consulted in FY25 include K-12 students, higher education students, researchers, individuals, businesses, industry, government, nongovernmental organizations, and families and communities throughout Alaska, the circumpolar North and the nation. The combined efforts of AFES and CES are intended to bring the university to Alaskans while bringing community concerns and issues back to the university. State-defined critical issues link specific public needs with our broad mission in order to allow the concentration of resources (money and people) that promoted high-quality work. Critical issues will be used to provide guidance for faculty, staff and administrators to direct current and new programs and find or retain faculty expertise.

### **Critical Issue: 4-H & Youth Development**

4-H has updated its trainings and program designs from the previous Essential Elements model to focus on the new 4-H Thriving Model.

### **Critical Issue: Agriculture & Food Security**

IANRE recently received a NextGen grant, which will increase its focus on promoting agricultural careers.

### **Critical Issue: Healthy Individuals, Families & Communities**

Our SNAP-Ed program manager was recently invited to be part of a new WERA project. That means we will have two Extension employees involved in multi-state projects related to nutrition. This helps ensure the unique needs of Alaskans are considered at a regional level.

### **Critical Issue: Natural Resources, Ecosystems & Sustainable Energy**

Retirements and budget cuts have reduced IANRE's capacity in this area. On the Extension side, outreach in this area is primarily funded by the Renewable Resources Extension Act (RREA) rather than Smith-Lever 3(b) & (c) funds. With that in mind, IANRE is considering condensing agriculture/horticulture and natural resources into one critical issue area, which would better match our internal structure as well.

## Merit and Scientific Peer Review Process

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IANRE's director updated the review process for research project proposals such that primary investigators must have a minimum of three reviewers instead of four. This action was taken to streamline the process, which had been delayed by waiting for responses from additional reviewers.

Overall, the Agricultural and Forestry Experiment Station (AFES) uses peer review to evaluate proposals and publications. Extension uses the merit review process and the general review process for the joint annual report and Plan of Work (POW). In Extension, there are Program Leads who provide internal guidance for program planning.

AFES complies with sections 3(c)(1) and (2) of the Hatch Act and section 1445 of NARETPA (Hatch Regular Capacity Funds) and the amendment to the Hatch Act of 1887 in Section 104 by AREERA for programs funded under section 3(c)(3) of the Hatch Act for Hatch Multistate Research Funds by using its established review process for all proposals and publications. All new and revised Hatch and McIntire-Stennis project proposals undergo a blind peer review by a panel composed of a minimum of three members. Panels consist of competent authorities from the discipline, or closely related discipline, of the proposal/publication. Panelists are generally from other land-grant universities. Each reviewer completes a peer review form that includes specific criteria, provides for comments and suggestions, and makes a recommendation to the IANRE director. Reviews are then shared with the author(s) to make any needed proposal revisions.

The director reviews all comments and recommendations from the external reviewers along with the revised proposal or publication before it is sent to the USDA. For Hatch projects, the director confirms that proposals are sent out to three related content experts. Primary Investigators (PIs) are asked to submit names of reviewers who are experts in the applicable field(s), preferably from another land grant institution. The director reserves the right to select reviewers that were not on the lists submitted by PIs. Either the director or a reviewer may request a re-review after modification of the proposal or publication. The PI is then cleared to work with the site administrator to submit the proposal to NIFA for approval.

For Hatch Multistate, the PI identifies a project they wish to participate in, and submits the request for director approval. The director signs the appendix E in NIMSS and the PI works with the site administrator to enter project participation in the relevant databases. Each PI also submits projected budgets that include expected costs for research, if applicable, and for travel to and from the multistate meetings.

Review of the Extension initiations related to the institute's POW is done internally by administrators, in consultation with Program Leads. Core leadership assesses how well the proposed activities and resources in each update of the POW contribute to achieving the proposed goals surrounding food security, food safety, climate adaptability, health and wellness, positive youth development and sustainable resource management. Collective feedback is incorporated into the annual updates to the POW. IANRE has an evaluation specialist who will continue to work with faculty and staff on ensuring the POW is informed by needs assessments, formative and summative evaluations, and documented program outcomes.

## Stakeholder Input

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### Actions to seek stakeholder input that encourage their participation

There are no significant changes from the previous POW regarding actions to encourage stakeholder participation.

Methods of soliciting stakeholder input may include using television, radio, newspaper, newsletter and social media ads to announce public meetings and listening sessions; sending targeted invitations to stakeholder groups and key community members; engaging stakeholders at culturally relevant community meetings; conducting surveys and collecting feedback on public priorities during open houses and local and state fairs; and providing online platforms for engagement including blogs, Facebook pages, Instagram feeds and YouTube channels. As required by the AREERA of 1998, these points of contact for public input will be advertised as broadly as possible. CES also sponsors agricultural and horticultural conferences and outreach activities with AFES participation where the units will gather formal and informal stakeholder input. Outreach faculty and staff will also identify ways to overcome barriers like income, transportation, literacy, etc. when reaching out to underserved populations.

CES utilizes advisory groups as an important part of the stakeholder needs assessment process. In addition to traditional feedback options including email, surveys, open houses and discussions, IANRE will utilize citizen science activities to engage stakeholders in local agriculture topics. Such activities make use of faculty-designed phone applications to enhance the experience, such as Grow & Tell and Alaska Weeds ID.

Smartphone apps are a contemporary way to attract stakeholders to participate in pest mapping and variety testing while IANRE gains insight into lay understanding of Alaska's critical issues.

CES and AFES will meet with audiences on demand throughout the state in both formal and informal settings each year. Examples of these audiences include agriculture associations, livestock associations and reindeer herders, Alaska Native villages, tribal organizations and regional corporations, borough and city governments and municipalities, grower groups meeting at regional and statewide conferences, industry stakeholders involved in food, fiber and fuel/energy production, soil and water conservation districts (SWCDs), and state and federal partners including but not limited to USDA, NRCS and the Forest Service.

### **Methods to identify individuals and groups**

There are no significant changes from the previous POW regarding identifying individuals and groups for input.

Faculty and staff will utilize U.S. Census Bureau data to determine potential audiences and parity goals. CES and AFES will also continue to engage with advisory committees as well as continue to conduct needs assessments and stakeholder surveys as methods to identify groups and individuals from whom to collect input. AFES relies on stakeholder input from agricultural groups, collaborators, federal and state agencies, colleagues, faculty and students for assistance in establishing priorities and developing project directions.

Members from the public who have participated in or who have an interest in CES program offerings represent an important segment of the organization's stakeholders who can be contacted after their experience to offer feedback on program improvement and interest in future programming. Stakeholders often identify themselves by emailing or calling Extension faculty or staff. Other significant stakeholder groups are public and private agencies and organizations that have professional and programmatic relationships with Extension or direct interest in CES programming.

A primary goal of the University of Alaska Fairbanks 2019-2025 strategic plan is to "solidify our global leadership in Alaska Native and Indigenous programs." IANRE has built strong relationships with Native groups across the state, from Fort Yukon to Dutch Harbor, and has multiple FRTEP agents that advise the unit on tribal community needs. IANRE has been proactive over the past several decades providing culturally relevant and responsive programming, including but not limited to: advising on cold climate housing and indoor air quality; providing research-based publications on traditional foods like walrus and bullwhip kelp; offering culturally relevant youth activities like dancing and trapping; gathering survey data on Native use of public lands; and teaching hands-on skills for community gardening, reindeer processing, and more.

### **Methods for collecting stakeholder input**

There are no significant changes from the previous POW regarding methods for collecting stakeholder input.

IANRE plans to continue using the following methods to collect stakeholder input, including but not limited to: Meetings with traditional stakeholder groups; surveys of traditional stakeholder groups; meetings with nontraditional stakeholder individuals; surveys of nontraditional stakeholder individuals; surveys of the general public; and meetings with key community members from the general public. CES and AFES will continue generating a feedback loop that provides information to research and outreach programs and from research and outreach programs to stakeholders and individuals. Conferences, meetings and workshops are scheduled around themes relevant to stakeholder concerns. Post-activity surveys and debriefing opportunities will establish how well information needs are addressed.

Meeting minutes, videoconference archives and other records of stakeholder engagement and input will be used in planning of research projects and Extension programs. Extension collects stakeholder input through in-person surveys following conferences and workshops, by email surveys and through public presentations with discussion opportunities made available to a variety of groups and agencies. The evaluation specialist will work with district agents and program assistants to determine culturally relevant methods for documenting behavior changes implemented by stakeholder groups. Input is also collected individually by agents who work with stakeholders, and through meetings with advisory groups. Social media pages on multiple platforms also provide venues for stakeholder input, which are monitored for trends by the Communications unit.

### **A statement of how the input will be considered**

There are no significant changes to how stakeholder input will be considered in program planning.

Stakeholder input will be considered in program planning to: identify emerging issues; redirect Extension and research programs; guide staff hiring and action plans; set district and unit-wide priorities; and identify underserved populations. AFES and CES will continue to serve the

needs of the people of the state of Alaska. Input will reflect ideas and advice given by client user groups, students, expert advisors, state and national peers and collaborators and UAF administration.

The four critical issue areas identified reflect the concerns of all major stakeholder groups, and will continue to be the highest priorities in workload planning and resource allocation. Requests for specific speakers and topics at conferences guide conference agendas. Requests for programming help shape what is offered. Needs assessments will continue to help CES and AFES faculty and staff identify emerging issues. Community needs are an important consideration when assessing how to create or fill staff and faculty positions. Stakeholder needs will continue to be a driving factor in determining CES priorities for programming and AFES priorities for research.

## Critical Issues

Active

### 4-H & Youth Development

Last Updated: 2024

Initiated on: 11/26/2019

**Term Length:** Long-term (>5 years)

Research shows that to increase resilience and reduce risky behaviors, youth need connections to caring adults. Faculty and staff will continue to provide programming to youth focused on achieving the outcomes described in the 4-H Thriving Model. CES seeks to increase participation in STEAM activities as well as provide youth with local and statewide opportunities for community involvement. 4-H educators will continue to offer culturally relevant activities for the many diverse groups in Alaska while providing learning experiences relevant to the national mission mandates of science, healthy living and civic engagement.

**Science Emphasis Areas:** Education and Multicultural Alliances, Youth Development

Research Projects: 0

Extension Programs: 1

Active

### Agriculture & Food Security

Last Updated: 2019

Initiated on: 11/26/2019

**Term Length:** Long-term (>5 years)

Alaska's agricultural opportunities and their relationship to food security are a critical issue because Alaska imports over 90 percent of its food. To become adaptable to economic, climate and other changes, it is critical to provide support to growers in the state. CES and AFES are well positioned to provide information about high-latitude agriculture and horticulture. Areas emphasized in the close collaboration of CES and AFES include agronomic crop and livestock production, commercial and home horticulture best practices, new technology applications, IPM and control of invasive pests, youth involvement in agriculture, best practices for controlled environments small-scale agribusiness, and cultivar testing for climate-adapted crops.

**Science Emphasis Areas:** Agroclimate Science, Sustainable Agricultural Production Systems

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Research Projects: 21

Extension Programs: 1

Active

## Healthy Individuals, Families & Communities

Last Updated: 2019

Initiated on: 11/26/2019

**Term Length:** Long-term (>5 years)

Alaska faces challenges such as high rates of botulism, obesity, food insecurity and other risks to public health. Cold climate housing also presents challenges in balancing fresh air flow with energy conservation. To address such concerns, CES faculty and staff will offer educational opportunities regarding nutrition and physical activity, chronic disease prevention and management, home modifications, air quality and energy efficiencies, food safety practices and food preservation techniques.

**Science Emphasis Areas:** Family & Consumer Sciences, Food Safety, Human Nutrition

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Research Projects: 0

Extension Programs: 1

Active

## Natural Resources, Ecosystems & Sustainable Energy

Last Updated: 2019

Initiated on: 11/26/2019

**Term Length:** Long-term (>5 years)

Collaborative efforts are key to ensuring proper stewardship of Alaska's complex ecosystems. CES and AFES faculty and staff will maintain partnerships and participate in multistate and integrated activities with stakeholder groups, government agencies and other institutions that enhance outreach regarding natural resource management and renewable energy sources. Faculty and staff will work to expand capacity for public involvement in natural resource, ecosystem and sustainable energy issues, including maintaining online platforms for education and engagement. Public workshops, presentations and consultations will offer opportunities for stakeholders to increase their awareness of biomass and other sustainable energies.

## Report Status

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**Approved as of 07/31/2024**

### Comments

#### Executive Summary

Like the FY24 Plan of Work, the FY25 Executive Summary provides a good overview of the vast natural resources available in Alaska. The challenges and priorities for Alaska and the Institute of Agriculture, Natural Resources and Extension (IANRE) are well-documented. The four Critical Issues remain unchanged for FY25. We appreciate the key updates for each of the critical areas. We also acknowledge the impact that budget cuts and retirements is having on the natural resources program area.

#### Merit and Scientific Peer Review/Stakeholder Input

We appreciate the detailed description of the Merit review and Stakeholder Input processes, as requested last year. This section adequately presents details regarding the process for evaluating research and Extension proposals. The internal and external aspects of these reviews is a strong point. It is helpful to understand the role of the IANRE Director. The process for soliciting and using stakeholder input is adequate. IANRE is to be commended on the various methods for engaging stakeholders.

#### Critical Issues

IANRE did a great job of identifying critical priorities impacting the citizens of Alaska and developing relevant programs and research projects to address those challenges. Again, we appreciate IANRE highlighting the key updates for each critical issue. Congratulations on the NextGen award. We are also pleased to know about the two Extension employees engage in multi-state projects related to nutrition

#### General Comments and Recommendations

The Alaska Annual Report is informative and well-written. IANRE is to be commended for their level of community/stakeholder engagement and visibility. The programs continue to address the needs of a wide audience, including youth, farmers, families, individuals, and policymakers. The programmatic efforts reflect good partnerships and collaborations.