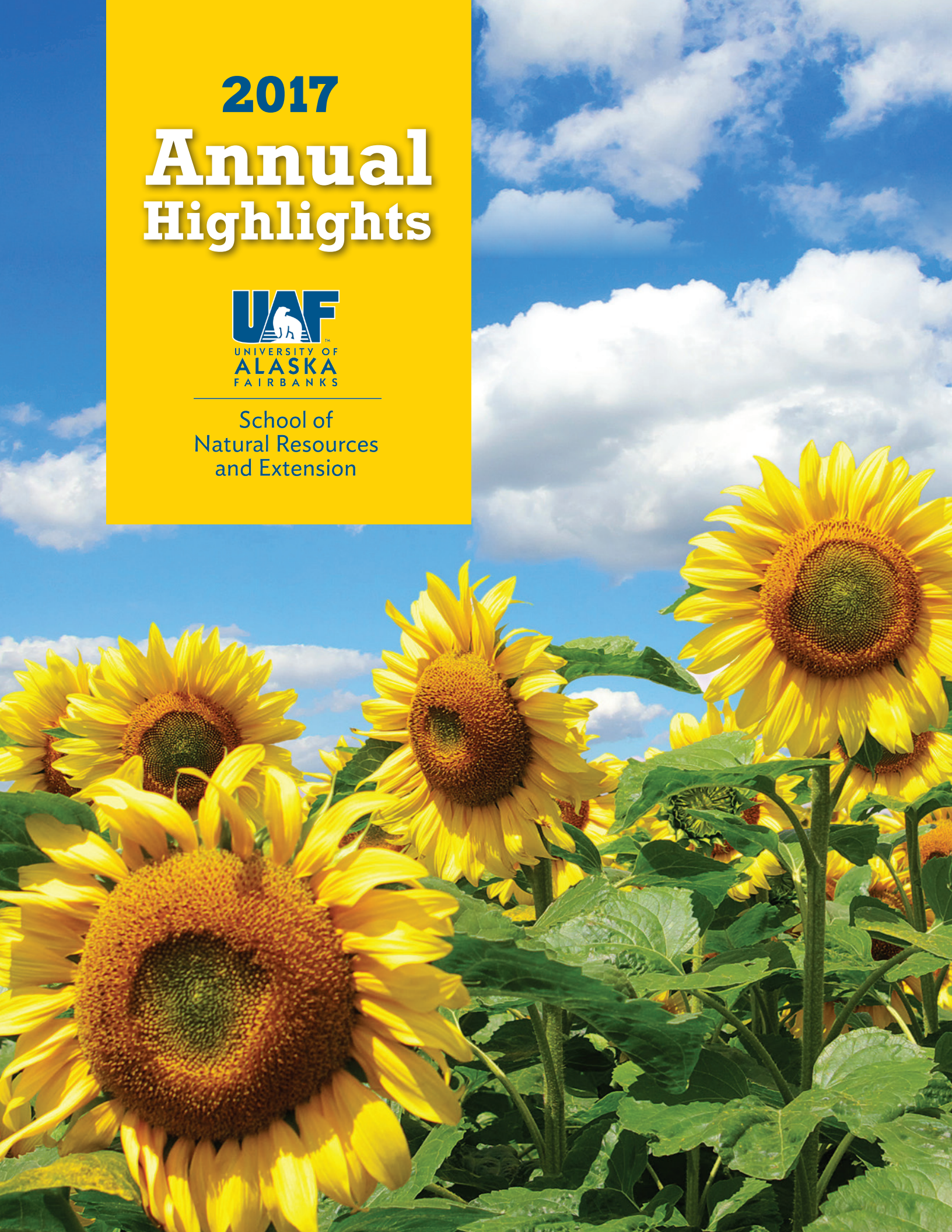


# **2017** **Annual Highlights**



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School of  
Natural Resources  
and Extension





# update

## A note FROM THE VICE PROVOST

Challenging financial times continue for the university, but the School of Natural Resources and Extension maintained its focus in 2017 on teaching, research and outreach.

On the academic side, the school continued to provide relevant natural resources instruction and research opportunities for undergraduate and graduate students. One of our students took top honors in an undergraduate UAF research competition, and graduate students tackled important topics such as planning for climate change, sustainable livestock production and the Coastal Zone Management Program. Following a successful UAF program review, all of our degrees will continue to be offered, and we have put more of our academic courses online to reach more students.

SNRE researchers are leaders in natural resources management, studying the impact of how a changing arctic climate affects Alaska's forests, soils and agricultural possibilities. Our research is important to Alaskans. The Alaska Peony Growers Association honored one of our professors, Mingchu Zhang, with its Growers Cup Award for his work on peony plant nutrition. The Agricultural and Forestry Experiment Station published a comprehensive agronomic crop bulletin this year that is a starting point for farmers interested in growing grains and oilseed crops in Alaska.

Our agents continue Extension's 87-year history of making research-based practical information available to Alaskans, through distance delivery as well as hands-on instruction. Despite multiple years of budget cuts, Extension is staying relevant and effective, providing hands-on and distance delivery instruction across the state in science-based youth programs, food and production agriculture, food preservation, food safety, energy, health programs and more.

We said goodbye in 2017 to four longtime faculty: Extension Associate Director Roxie Dinstel, 4-H State Program Leader Deb Jones, Nome agent Kari van Delden and Gary Kofinas, a professor of resource policy and management.

I thank the faculty and staff for their hard work and dedication to our mission. I also thank our many stakeholders who continue to value and support our school.

Sincerely,

Fred Schlutt

*Vice Provost, School of Natural Resources and Extension*



School of  
Natural Resources  
and Extension



Agricultural & Forestry  
Experiment Station





*Jessica Herzog holds a female common eider while working with biologists on nest predation research last summer near Kaktovik.*

# ACADEMICS

## Students get relevant work experience

**STUDENTS EARNING A DEGREE** in natural resources management enjoy a lot of professional opportunities as undergraduates.

Trisha Levasseur, a UAF senior who will graduate this spring, is one example.

Her faculty advisor recommended her for an internship with the Bureau of Land Management. As part of a summer job in the White Mountains National Recreation Area, Levasseur surveyed visitors about their experiences, rebuilt trails and learned how BLM manages the recreation area.

A second internship with a professor involved surveying visitors to Interior public lands and then analyzing the results of the statewide survey. Levasseur, who is interested in outdoor recreation management, presented her findings at an undergraduate research day at UAF and at a national conference in Annapolis, Maryland.

Levasseur appreciates her professors with the School of Natural Resources and Extension. "It really is a small program but the faculty make it pretty great and are always willing to help," she said.

Jessica Herzog, who is also a senior, said that faculty encouraged her summer bird studies with biologists on the Seward Peninsula and at Kaktovik. They encouraged her collaboration with graduate students, which led to a research project on golden eagles that won top honors at the UAF Research and Creative Activity Day competition in April. She presented her project at a raptor research conference in Utah in November.

Both students especially valued NRM 290, a 10-day natural resources management field course and road trip around the Interior and Southcentral Alaska. The students learned firsthand about resource management issues and potential careers by meeting with natural resource managers for agencies, private industry and parks. The trip helped build camaraderie among the students and, Herzog said, "You learn a lot about how other agencies and businesses operate."



*Trisha Levasseur, left, explains her visitor research poster to a conference attendee in Annapolis, Maryland.*



# Reaching Alaskans

## Extending knowledge through volunteers, distance delivery and hands-on training

**WITH FUNDING CONSTRAINTS**, Extension has to be creative about how it reaches Alaskans.

One way it does this is by teaching volunteers to offer training in their communities. Soldotna agent Linda Tannehill is one of 11 StrongWomen instructors nationwide who is qualified to train other instructors for the strength-training program. She has trained more than 400 instructors in Alaska since 2005, including 21 last year in Homer and Wasilla.

Volunteers lead StrongWomen, or Strong Seniors, classes at senior centers, libraries, churches and other community places in the Mat-Su Valley, Anchorage, Fairbanks, Soldotna, Bethel, Anchorage, Homer, Kodiak and Southeast. The program, which originated at Tufts University, promotes strength, muscle mass and bone density.

Fairbanks agent Leslie Shallcross trains others to offer classes that help Alaskans live with ongoing health conditions. During the past 10 years, she has trained more than 400 leaders through a chronic disease self-management program and, for the last three years, a diabetes self-management program. During 2017, trainees led a series of six classes in Ketchikan, Homer, Bethel, Anchorage, Wasilla, Talkeetna and Chugiak. New trainees will take the program to Cordova, Willow, North Pole, Kotzebue and Fairbanks.

Through the Master Gardener program, agents around the state provide 40 hours of intensive horticultural training and participants commit to 40 hours of volunteer time teaching others or volunteering with an organization.

The university's videoconference network allows agents to lead training in other districts or to reach several communities at the same time. For instance, Extension offered state-mandated food safety management trainings five times in 2017 and reached 100 people in 18 Alaska communities.

Tannehill's StrongWomen training in Wasilla was her first by videoconference. It worked, she said, because Palmer agent Julie Cascio has helped lead the training for years, and she demonstrated exercises while Tannehill observed the trainees from afar and led the lecture portion of the one-day training.

"I could actually watch their form by camera," she said.

In addition to offering distance education, Extension continues to provide the face-to-face programming that is its hallmark.

The StrongWomen program, which originated at Tufts University, promotes strength, muscle mass and bone density.



*Longtime StrongWomen volunteer Liz Potter leads a practice at the Good Shepherd Lutheran church in Wasilla.*  
Photo by Edwin Rensberg



# research

## Greenhouses

### RESEARCHING FOOD PRODUCTION IN ALASKA

**MERIAM KARLSSON'S** research focuses on greenhouse and controlled environment crop production and resource management in commercial greenhouses.

The University of Alaska Fairbanks horticulture professor has studied a diverse array of flowers and vegetables to see under what conditions they grow best. Because of the current interest in food crops and the short growing season, much of her work concerns greenhouse food production.

Cucumbers and tomatoes grow successfully in Alaska greenhouses, and Karlsson believes that bell peppers could be another potential commercial crop. For the past three years, she has researched the best methods for growing them. The plants are commonly trellised, with two lateral branches. Karlsson looked at how pruning the branches affected the production on six cultivars of red, orange and yellow peppers.

This past summer, she and a research assistant thinned blossoms on three varieties of peppers to see if they could get a more uniform fruit load and more consistent production.

Many Alaskans believe that vegetables grown in the state are sweeter than those grown elsewhere. As part of a state agricultural grant, Karlsson is also looking at the nutrition of locally produced vegetables compared to imported vegetables in grocery stores.

In particular, she is analyzing the sugar and mineral content in different varieties of tomatoes, peppers, romaine and leaf lettuce, cucumbers and kale. She grew some of the produce in greenhouses and some was purchased from farmers markets.

The mineral results are not available yet, but Karlsson said preliminary results show that compared to vegetables from Outside, the sugar values of tomatoes and peppers, in particular, are significantly higher in produce grown in the university greenhouse or purchased from the farmers market.

"It's looking like Alaska grown has, as we expected, higher sugar content," she said. "And now we have the supporting data." Karlsson plans to repeat and expand the experiment this coming summer.



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*Meriam Karlsson has been researching the best methods to grow bell peppers as a potential commercial greenhouse crop.*



# Agent responds to community requests

**ON ANY GIVEN WEEK,** Leif Albertson might present programs on canning fish, improving indoor air quality or eradicating bed bugs.

As the sole Cooperative Extension Service agent in Bethel, he responds to diverse community requests and needs for educational programming in Southwest Alaska.

Albertson got involved with bed bug eradication when he realized there was a problem in rural Alaska and few resources existed for people trying to get rid of the persistent insects. Albertson, who has a background in public health, studied up on bed bugs, gave presentations at state health conferences and co-authored an Extension publication on the subject.

As a new Extension agent, in 2008, he was advised to assess the needs of the region and to offer research-based programs to meet those needs. Albertson said food preservation seemed like a good place to start because of the price of food.

“It’s much more expensive in Bethel,” he said.

Interest in food preservation classes has remained high, he said, in part because of diminished fish runs some years on the Kuskokwim River. He offers classes in canning meat, fish and vegetables, pickling techniques and making yogurt. He has also taught classes on butchering moose and chickens.

Before coming to Extension, Albertson earned a master’s degree in public health policy and management from Harvard, and he managed more than 40 health clinics for the Yukon-Kuskokwim Health Corp. As “the public health guy” in Extension, he provides programs on a number of health issues that affect rural Alaska, including indoor air quality, diabetes and tobacco use.

Because people know he’s the Extension agent, opportunities for community engagement present themselves often — at the grocery store, the airport or just around town. He gets questions on a wide range of issues, sometimes from people in the middle of canning salmon. Albertson likes finding answers.



Outreach

Because people know he’s the Extension agent, opportunities for community engagement present themselves often, at the grocery store, the airport or just around town.



*Extension agent Leif Albertson helps coordinate the community garden in Bethel.  
Photo by Cindy Andrechek*

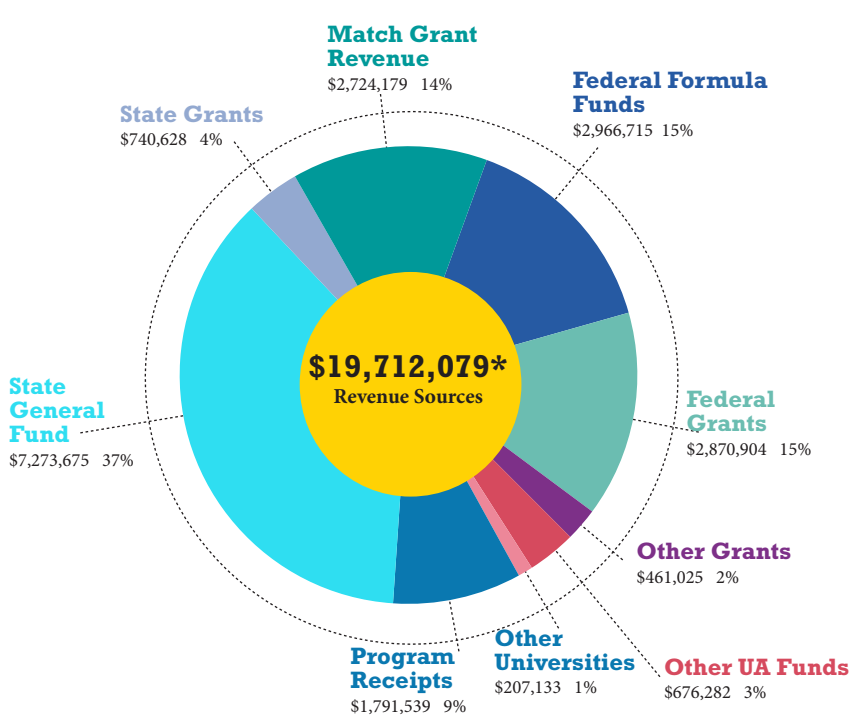




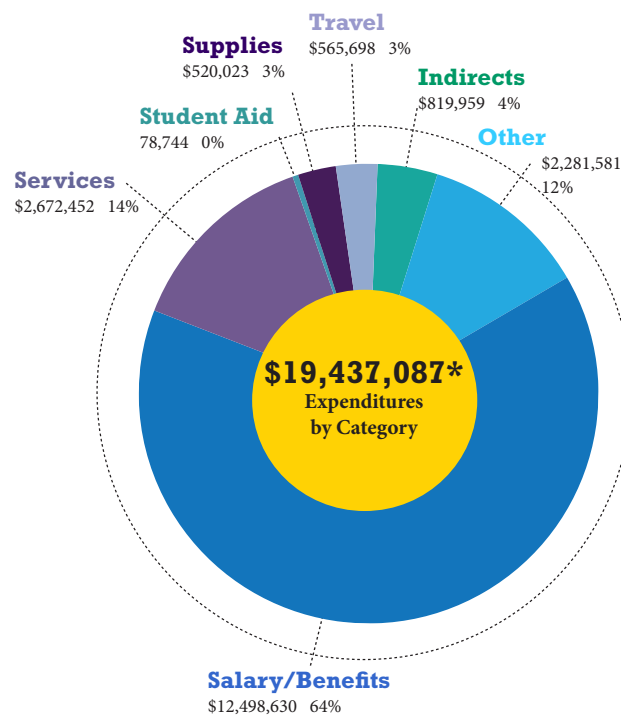
- Extension agents taught 70 food preservation and food safety workshops to 1,012 Alaskans in 38 communities in 2017. Half the communities were reached with video technology.
- After an eight-year hiatus, vegetable variety trials resumed last summer at the Georgeson Botanical Garden in Fairbanks as part of a five-year project. Sixteen varieties of carrots, beets, daikon radishes and turnips were tested.
- Twenty-four students with the School of Natural Resources and Extension completed their studies during the 2016-2017 year. Students received two doctorates, nine master's degrees and 13 bachelor's degrees.
- Nutrition educators in Fairbanks, Anchorage, Bethel, Soldotna, Palmer and Tok taught nutrition programs to 793 low-income adults and youth.
- Fifty-two Alaska women farmers and agency representatives joined about 550 participants at 37 videoconference sites in Washington, Oregon and Idaho for the 2017 Women in Agriculture Conference, which was hosted by SNRE in Fairbanks and Palmer. Farmers also participated from Delta Junction.
- The UAF Reindeer Research Program and the Tanana Chiefs Conference hosted a five-day workshop on reindeer production for communities potentially interested in raising reindeer. Prospective herders came from Fairbanks, Stevens Village, Ruby and Tanana.
- Alaska FFA donated its \$15,000 prize for winning a national FFA Hunger Heroes Challenge to the Fairbanks Community Food Bank, which shared the funds with the Mat-Su Food Bank. FFA won the challenge for having the best chapter participation in a contest to grow, harvest and collect foods for food banks and other organizations.

did you know?





July 1, 2016 - June 30, 2017 (State FY17)  
SNRE Revenue Sources



July 1, 2016 - June 30, 2017 (State FY17)  
SNRE Expenditures by Category

\*Increased revenues and expenditures during the fiscal year reflect the addition of the Mining and Petroleum Training Service program to SNRE.