

#### **UAF Research Priorities**

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## UAF research funding

- Most of the money that funds university research in Alaska comes from sources outside the state, or in-state sources that could spend their research dollars elsewhere.
- UA research provides more than 2,000 jobs for a total annual payroll of ~\$90 million.
- UA research totaled \$158 million in FY12, \$133 million of that from non-general funds.
- UAF makes up 80% of total UA research.
- Every \$1 in state GF invested in UA research generates \$5.20 from other sources.
- The economic effect of scholars who travel to Alaska to conduct their own research activities is analogous to that of tourists visiting Alaska. Toolik Field Station and the Sikuliaq are both prime examples of facilities that bring scientists to Alaska.





### **UAF Research Facilities**

UAF's research centers	Established
Advanced Instrument Laboratory (AIL)	2000
Agricultural and Forestry Experiment Station (AFES)	1931
Alaska Center for Climate Assessment & Policy	2006
Alaska Center for Energy and Power	2008
Alaska Climate Science Center (AK CSC)	2011
Alaska Earthquake Information Center	1986
Alaska Native Language Center	1972
Alaska EPSCoR	2000
Alaska Quaternary Center	1993
Alaska Satellite Facility	1991
Alaska Sea Grant	1970
Alaska University Transportation Center (AUTC)	2006
Alaska Volcano Observatory (AVO)	1988
Large Animal Research Station	1979
Arctic Region Super Computing Center	1993
Bonanza Creek Long Term Ecological Research	1987
Center for Alaska Native Health Research	2001
Center for Global Change	1990
Cooperative Institute for Alaska Research (CIFAR)	2008
National Center for Island, Maritime, and Extreme Environment Security - CIMES	2008
Geographic Information Network of Alaska (GINA)	2001
Geophysical Institute	1946
Georgeson Botanical Garden	1989
IDeA Network of Biomedical Research Excellence (INBRE)	1960
Institute of Arctic Biology	1963
Institute of Marine Science	1960
Institute of Northern Engineering	1981
International Arctic Research Center (IARC)	1999
Kasitsna Bay Laboratory	1957
Mineral Industry Research Laboratory (MIRL)	1963
Natural Resources and Agricultural Sciences	1935
Office of Intellectual Property and Commercialization (OIPC)	2011
Petroleum Development Laboratory	1984
Poker Flat Research Range	1968
Pollock Conservation Cooperative Research Center	2000
Scenarios Network for Alaska and Arctic Planning	2007
Alaska Climate Research Center	1992
Coastal Marine Institute (CMI)	1978
College of Natural Science & Mathematics Division of Research (CDR)	2001
Toolik Lake Field Station	1975
University of Alaska Museum of the North	1929
Water and Environmental Research Center (WERC)	1965
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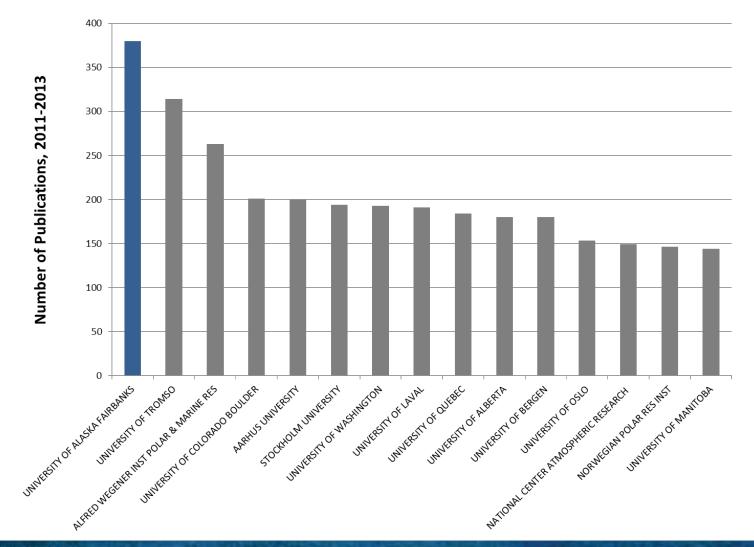
Photo courtesy of Eric Collins, SFOS







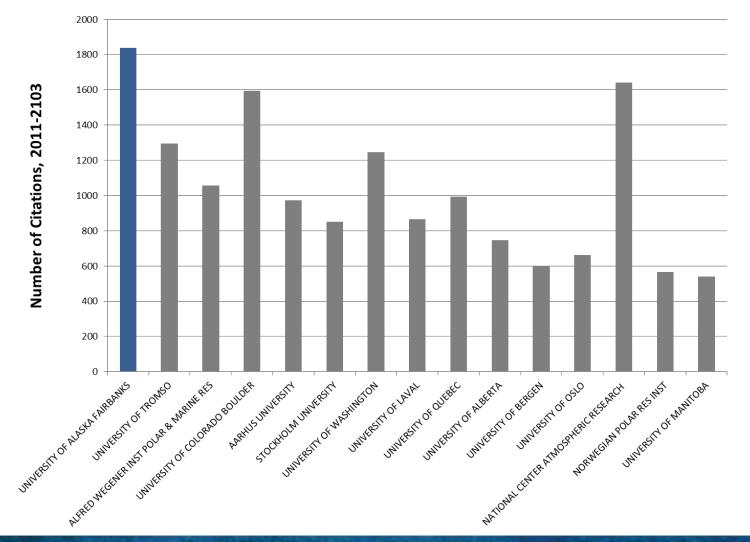
#### Arctic publications







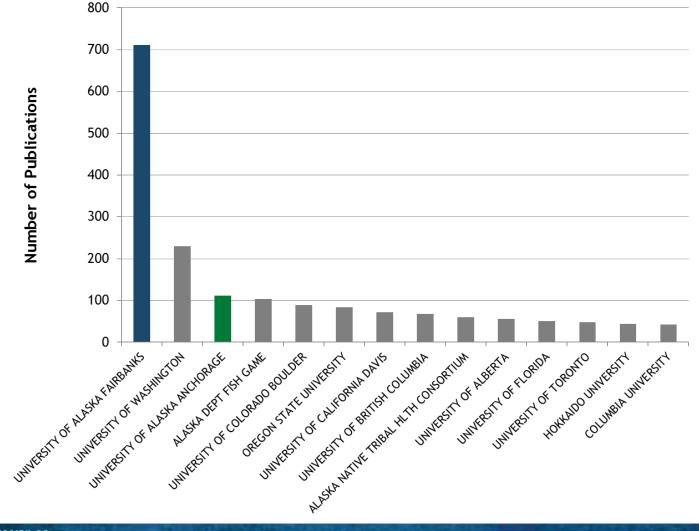
#### Citations of Arctic publications







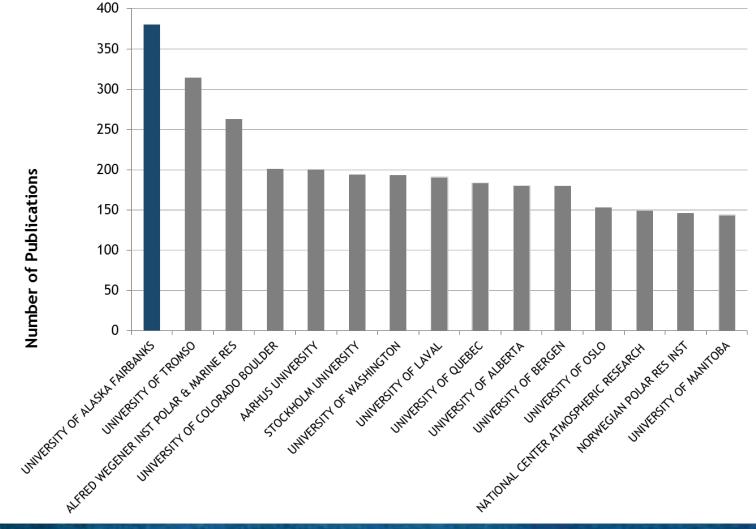
## Research publications about Alaska 2011-2013







## Research publications about the Arctic 2011-2013









## Projects Recently Funded By Legislature

#### Professional veterinary medical program

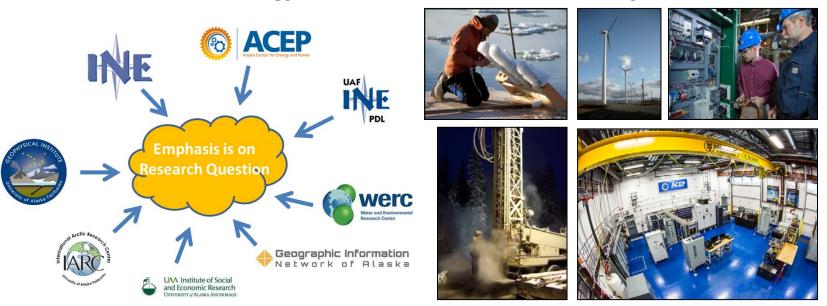
- First Class Matriculates Fall 2015 (MOA signed Dec., 2013)
- Accomplishments:
  - Assoc. Dean Vet Med, Dr. Arleigh Reynolds appointed January 2014
  - Active statewide PreVet program via Coordinator of Prevet/Vet Student Services
  - Faculty hires Veterinary Anatomy & Large Animal DVM (arrive April 1, 2014)
  - Recruiting Pathologist & advertising for Vet Physiologist
  - UAF faculty assigned to develop curriculum & to specific courses (via MOA)
  - Office Manager & Laboratory Manager (hired, setting up Dept)
  - First year DVM Curriculum under college faculty review committee
  - Space identified for Department and Faculty offices, renovation of lab space, classroom and student area scheduled
  - Current legislative support (\$200K) funded Assoc Dean (interim/permanent), current faculty, staff, CSU coordination, curriculum development, & faculty hires/recruiting.
  - Current budget projections indicate another \$200K is needed FY14.
    Supplemental funding will continue to be needed from the state for the next few years.
  - Grant writing and continuing education is underway.





#### Alaska Center for Energy and Power

Develop and disseminate practical, cost-effective, and innovative energy solutions for Alaska and beyond



- Organized 6 years ago as 'Gateway' to Energy Research for UA
- Based at UAF with a satellite office in Anchorage
- 20 dedicated staff, 30 affiliated faculty and 50 students
- Emphasis on statewide energy research needs, research teams are formed quickly to address near-term research needs.





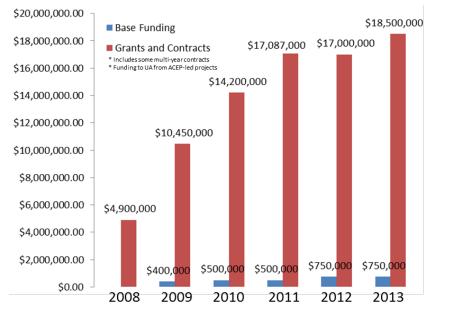
### Alaska Center for Energy and Power

A new way of doing business

- Extensive private sector partnerships
- \$10 in external grants and contracts for every \$1 invested by the state
- Plan to extend the model to build an integrated fossil energy research team







since 1917





## New Project Ideas

# Digital aerial mapping of Alaska's resources – \$1.9 million – 3 years

- **\$400K New Mapping -** Work in cooperation with federal, state, and agency partners to identify and acquire maps in need of refresh
- \$1M Basemap Services Continue operations of the heavily used UAF's GINA map distribution services to allow others to continue leveraging the investments in mapping Alaska
- \$500K Decision Support Tool Bring together existing sources of data onto a single, easy-to-use web map to serve decision makers charged with allocating funds, including legislators, private inventors, and resource managers

Background of Lisbourne Peninsula from the SDMI Statewide Alaska Orthomosaic Project - material © CNES 2013, Distribution Spot Image S.A Alaska SDMI funding in partnership with the Coastal Impact Assistance Program (CIAP), US Department of Interior and US Fish and Wildlife.



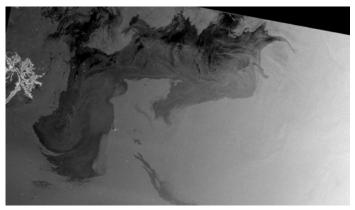


#### Arctic Center for Oil Spill Research and Education

- UAF's A-CORE seeks to bring together:
- Communities
- Educators
- Private investors
- NGOs
- Oil and shipping industry
- Government agencies



Photo courtesy of Eric Collins, SFOS



Deepwater Horizon oil spill as detected with SAR







#### UNIVERSITY OF ALASKA FAIRBANKS