Sustainability at UAF:

Students Building Partnerships

Michele Hebert
Sustainability Director
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SUSTAINABLE UAF

2009

Students voted for a $20/semester Green Fee.

There is a total of $250k/year that comes from the student fee and $250k/year from the Chancellor via private sources.

2004 2008 2009 2010 2011

SUSTAINABLE UAF

RISE Board

SUSTAINABILITY

MAKE A DIFFERENCE ON CAMPUS WITH YOUR IDEAS

SUSTAINABLE UAF

SUBMIT A PROPOSAL ONLINE TO THE R.I.S.E BOARD
AND RECEIVE FUNDING FOR YOUR PROJECT. **DUE OCT. 10TH**

WWW.UAF.EDU/SUSTAINABILITY/RISE

QUESTIONS?

Come to the proposal writing workshop!
5:30pm-6:30pm
September 29, 2011
Library - Kayak Room

UAF UNIVERSITY OF ALASKA FAIRBANKS

HIGHLIGHTS of STUDENT PROJECTS

Recycling

Green Bike Program

Bi-Annual Sustainability Art Shows

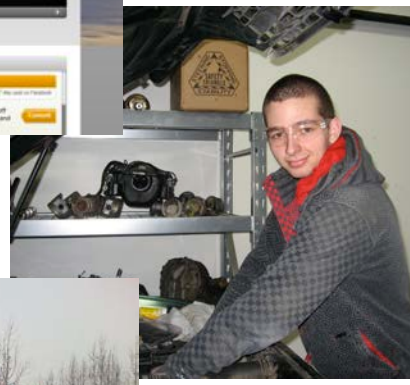
Energy Dashboards

Electric Snowmobiles

LED and Solar PV on campus

Energy efficiency upgrades (freezers, etc).

Water Bottle Stations



green bikes

UAF
uaf.edu/sustainab

Nanook Grown

The Organic Vegetable Garden UAF

Vegetables grown on campus by students

STARS- Sustainability Tracking, Assessment, and Rating System

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CCHRC
COLD CLIMATE HOUSING RESEARCH CENTER

The Sustainable Village at UAF

"Enhancing the Student Experience at UAF"

Unique partnership between UAF Facility Services, Student Services, CCHRC and our Students

" A dynamic and evolving community at the University of Alaska Fairbanks, committed to the tenets of sustainability, demonstrating what can be achieved to secure an enduring future for people of the circumpolar north."
Jack Hébert, President and CEO, CCHRC

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VISION A Living Laboratory

DYNAMIC: evolving with the needs of UAF and advances in building science.

MEET THE NEEDS OF UAF: more student housing, advance UAF Sustainable Campus Initiative.

INVOLVE STUDENTS in evolution of sustainable community, allow for experimentation and collaboration between different fields of study.

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The site is adjacent to CCHRC on a challenging building site.

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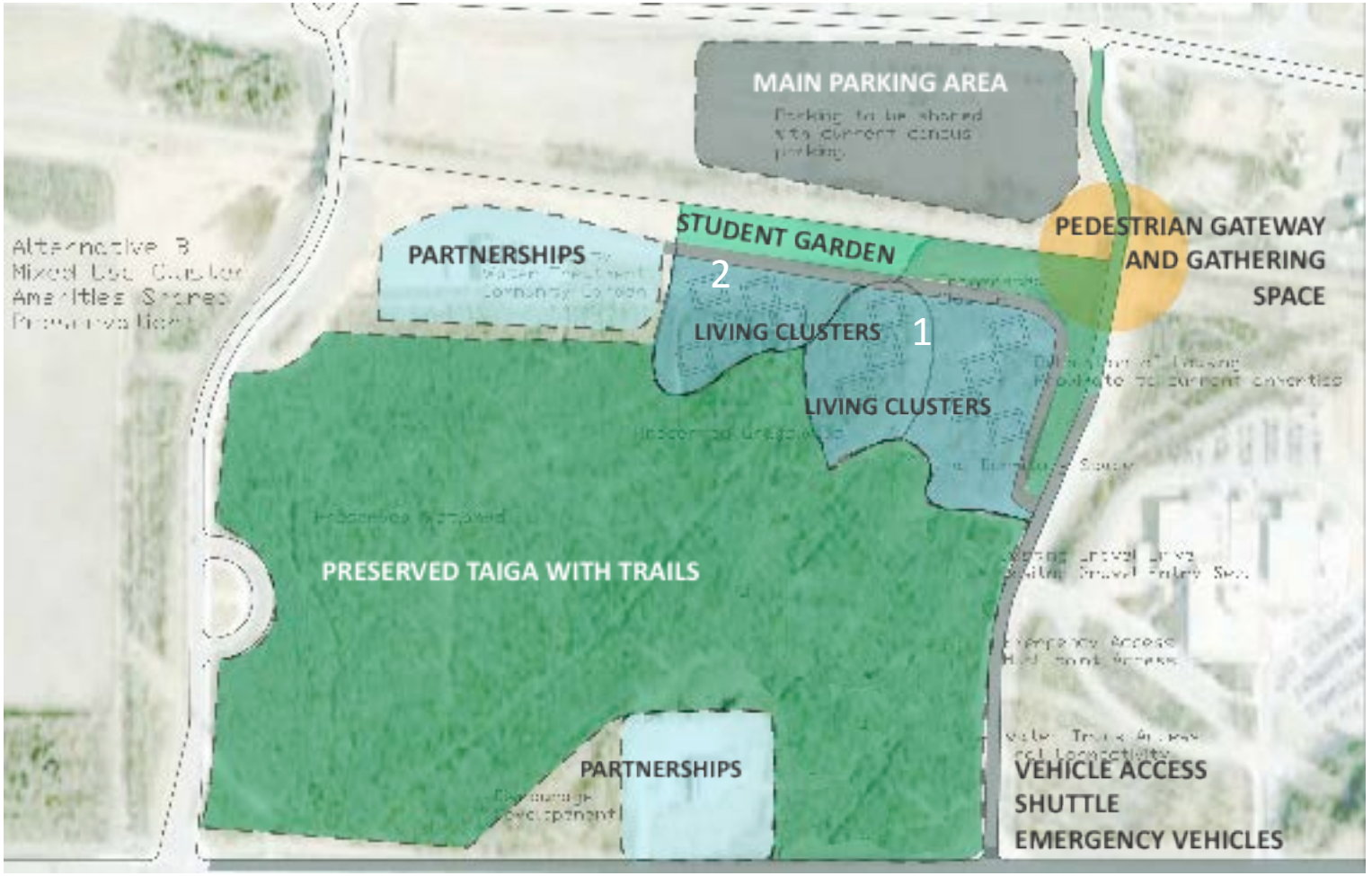
Phase one planned for 2012 with students moving in Fall 2012



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COMMUNITY CLUSTERS

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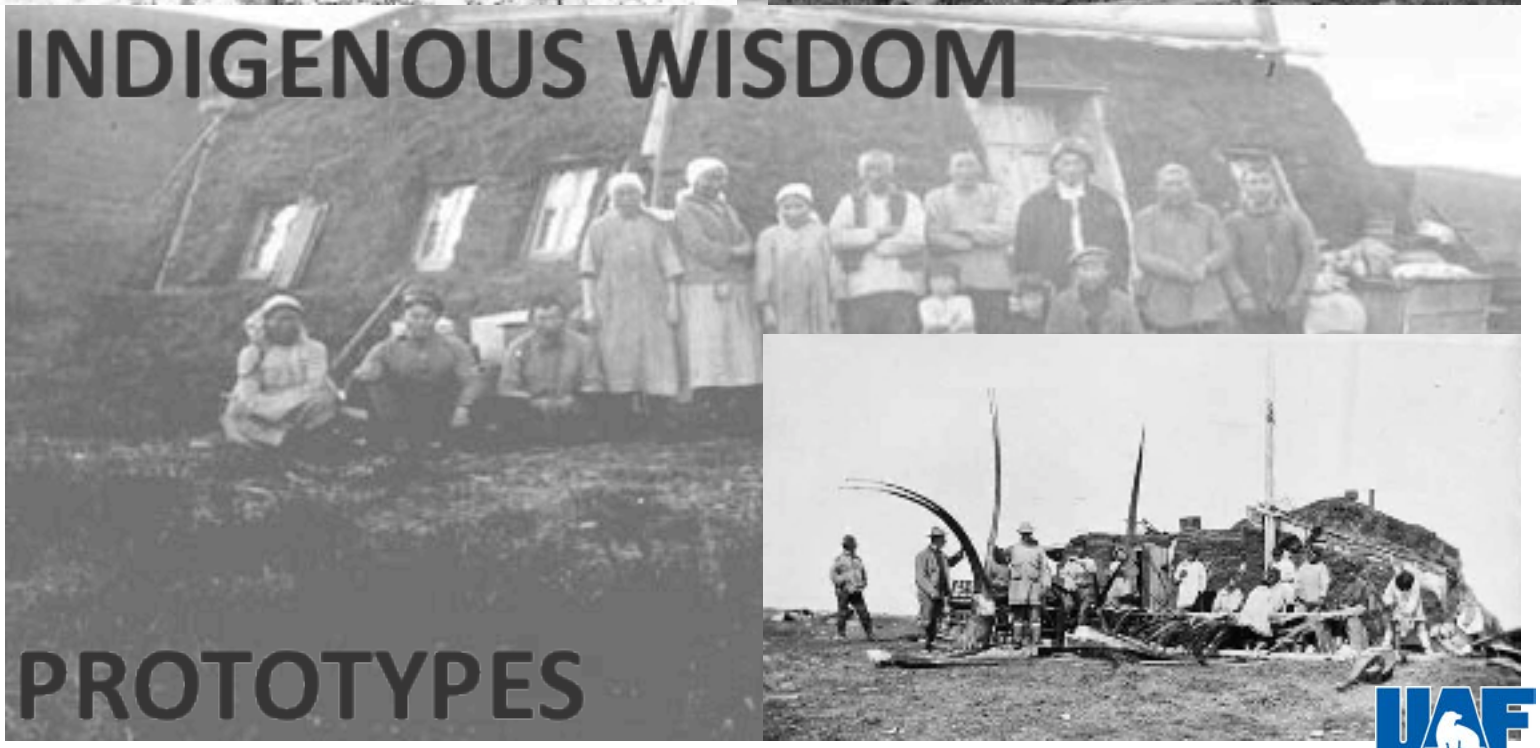
CCHRC is involved in working with Alaska rural communities to develop and build prototype houses that incorporated indigenous wisdom.



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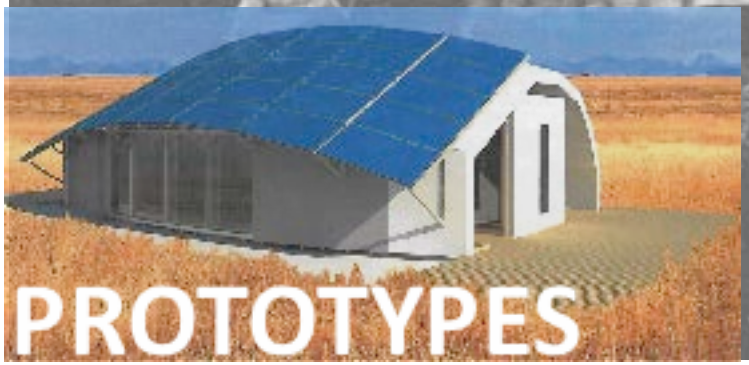
Anaktuvuk – North slope, Alaska
Quinhagak –Southwest, Alaska

Developing models of energy efficient homes that cost less than 200,000 and use less than 120 gallons of fuel per year for rural and urban Alaska.



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The village is more than the buildings. It is how we interact with the environment, the community and each other.

A RESEARCH PROJECT IN SUSTAINABLE LIVING

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A RESEARCH PROJECT IN SUSTAINABLE LIVING

Integrated with the Undergraduate Honors Program

4 Bedroom, 1 Occupant per room

A living Laboratory

Collaboration between CCHRC, Students and Faculty at UAF

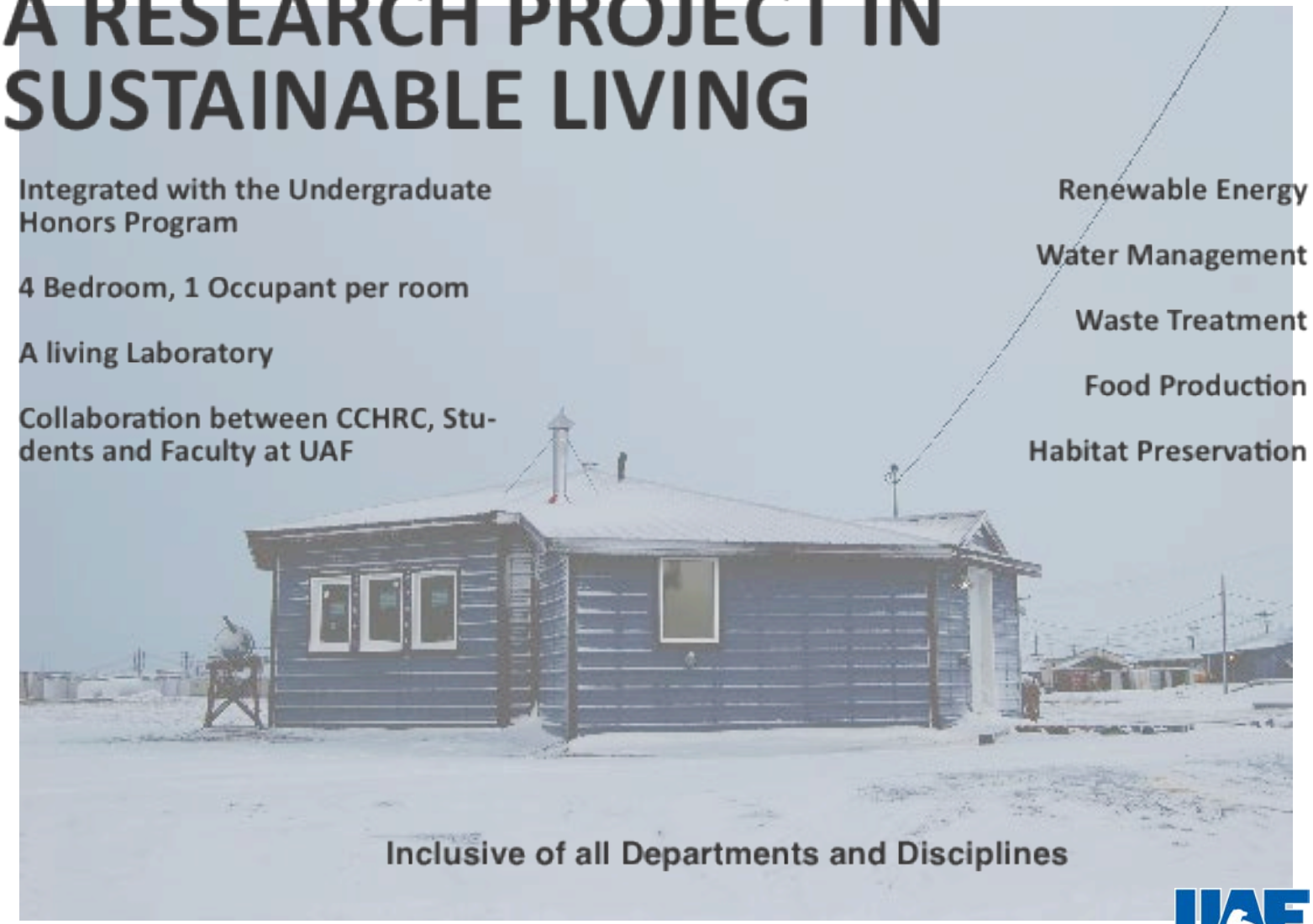
Renewable Energy

Water Management

Waste Treatment

Food Production

Habitat Preservation



Inclusive of all Departments and Disciplines

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UAF Sustainable Village Student Design Competition

The UAF Sustainable Village Student Design Competition Fall 2011 was an opportunity to engage university students in designing a cluster of small student housing units that will be cost effective, resource responsible, energy efficient and community focused.

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Cold Climate Housing Research Center

UAF Sustainable Village
STUDENT DESIGN IDEAS COMPETITION

FALL 2011

energy efficient
resource responsible
community focused
low-impact
cost-competitive

FOR CREDIT!

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who: all UAF students

what: help us design new sustainable housing at UAF

where: Lower Campus, by CCHRC

when: register Sept. 1-Oct. 1
submission due Oct. 15

why: apply lessons of sustainable design, construction, energy use, food production, FOR CREDIT!

how: info at uaf.edu/sustainability/events/village-design-contest
on Facebook at UAF Sustainable Village Design Ideas Competition

UAF University of Alaska Fairbanks

Cold Climate Housing Research Center CCHRC

6 week seminar series

4 Student teams for design competition

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Sustainable Building and Community Design Course

2 credit options: Individual Student Course or Internship GEOG/NRM F300. 1-6 Credits (prearranged with instructor based on effort).

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Design competition was sponsored by Siemens Industry Inc. and the RISE board.

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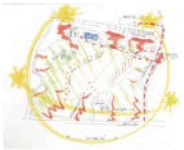
UAF Sustainable Village: Community

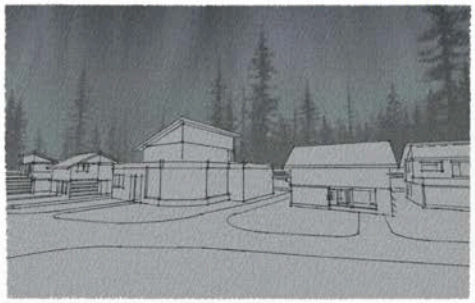
Set among the peaceful birch and spruce trees, the community is a quiet place to appreciate nature. The stepped design allows the buildings efficient shading in summer and plenty of sunlight in winter.



site analysis

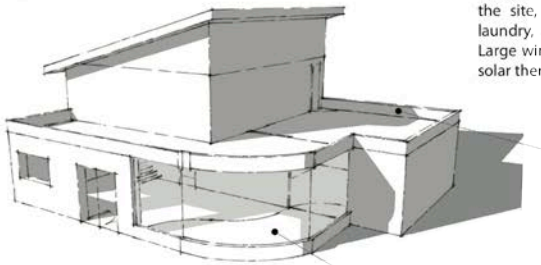
initial concept sketch

overall site



UAF Sustainable Village: Commons

incorporating research and learning with the energy and water systems of the site, the Commons houses a classroom, community showers and laundry, a kitchen, and a Living Machine to clean waste water naturally. Large windows allow light and warmth to enter and an extensive array of solar thermal evacuated tube collectors supply heat to the entire site .

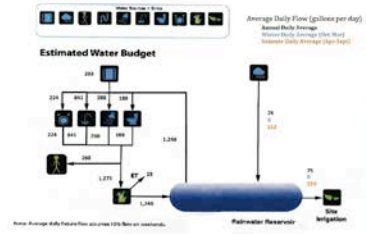


solar thermal

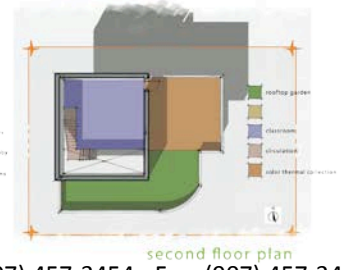
Living Machine

Integrated Water Master Plan

Dynamic Water Budget



first floor plan



second floor plan

erik williams · garrett everidge · lyle axelarris · maura taterlale · skye storm

circle visions

Winning Team's Community Presentation

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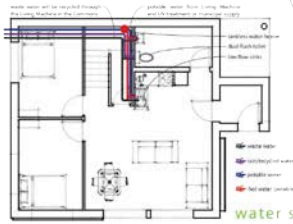
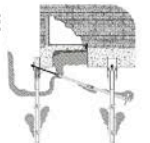
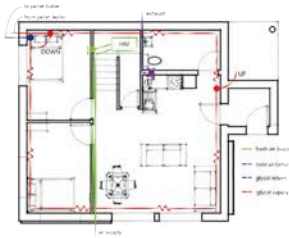
UAF Sustainable Village: Home

The four homes, with two prototype designs, take advantage of sustainable constuction techniques. The homes are super insulated, including a foundation designed for permafrost conditions, and heated with solar thermal energy from the Commons. Passive solar design contributes to heat and natural light, partial power comes from photovoltaics, and green materials make up the construction of the homes. To counter the displacement of earth for construction, each house has a green roof and plentiful garden space, including a unique living wall.







Winning Team's Home

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Beginning of a multi-year program, learning and applying as we go!

Questions?

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UAF pictures by Todd Paris and other UAF staff. CCHRC pictures by CCHRC staff.

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