



Sustainable Housing in Rural Alaska

Promoting and advancing the development of healthy, durable, and sustainable shelter for Alaskans and other Circumpolar people.



Robbin Garber-Slaght, Research Engineer
Cold Climate Housing Research Center



CCHRC in Alaska





Housing Needs in Alaska

78,959

households in Alaska are housing
cost-burdened



16,107

units need to be built to alleviate
overcrowding in the state



14,600

homes are rated 1-star, burdening
households with high energy costs



12,635

homes in Alaska lack complete
kitchens and/or plumbing



318

new senior living facility beds need to be added
annually to keep up with senior population growth



\$23.25

household hourly wage required to afford
the average 2-bedroom rental in Alaska



15,972

estimated shortage of affordable and available
housing units for extremely low-income households



55%

of homes in Alaska are at higher risk for
moisture and indoor air quality issues

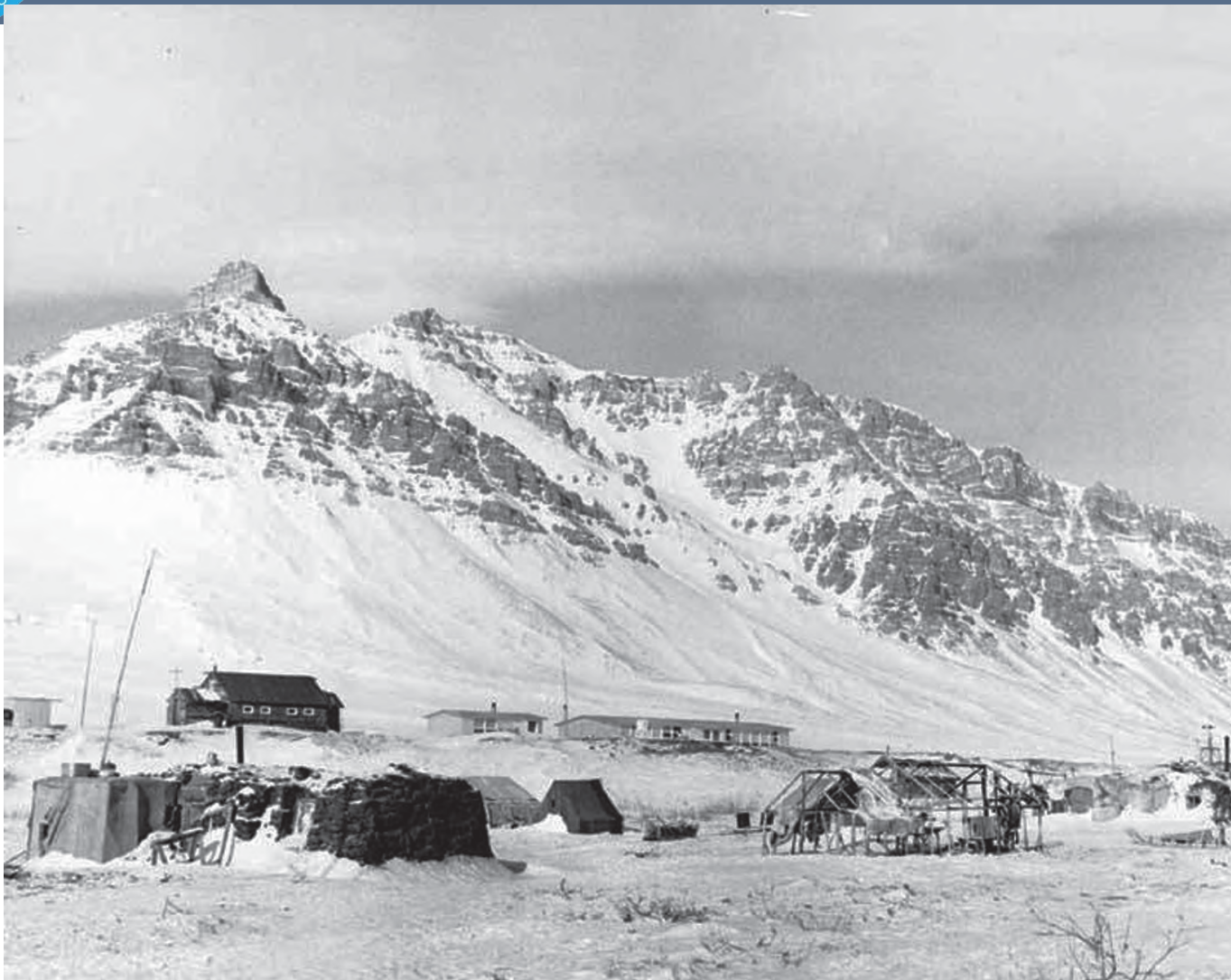


11%

increase in new construction rate needed
to meet projected population growth



Arctic Shelter





Unsustainable Shelter

“We used to build our homes underground where it was warm and lay our dead to rest up in the air. We were told that was uncivilized, and now we have to build our houses on stilts up in the wind and bury our dead in the ground. We’ve been cold ever since. “

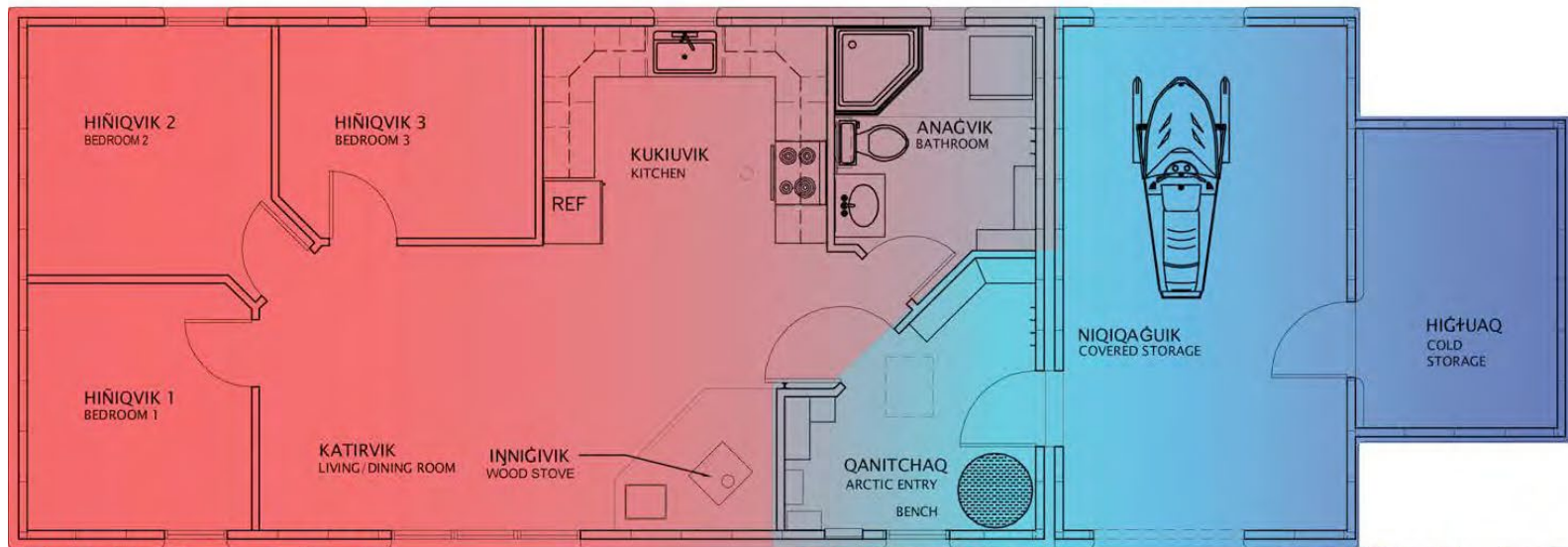
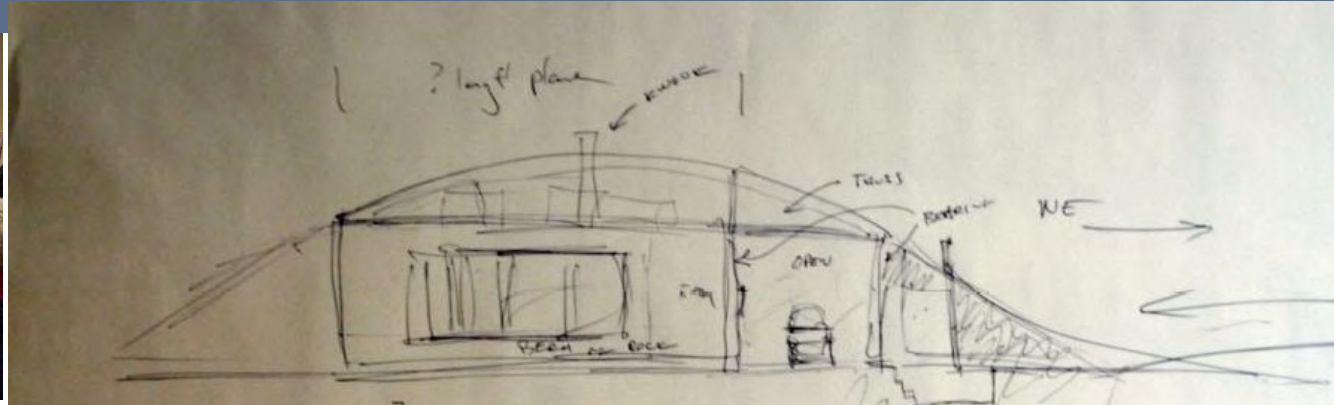
-Grant Kasharuk, Newtok





Sustainable Shelter

Anaktuvuk Pass prototype



WARM

COOL

COLD



Sustainable Shelter

Anaktuvuk Pass prototype

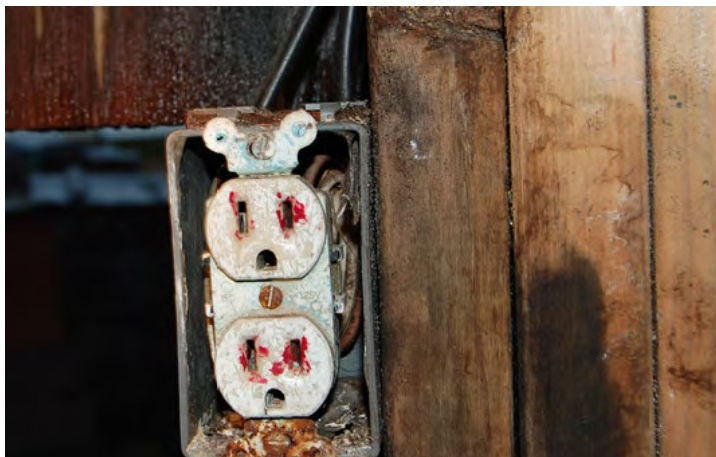




Unsustainable Shelter

“Alaska Native children have some of the highest rates of respiratory illness ever documented.”

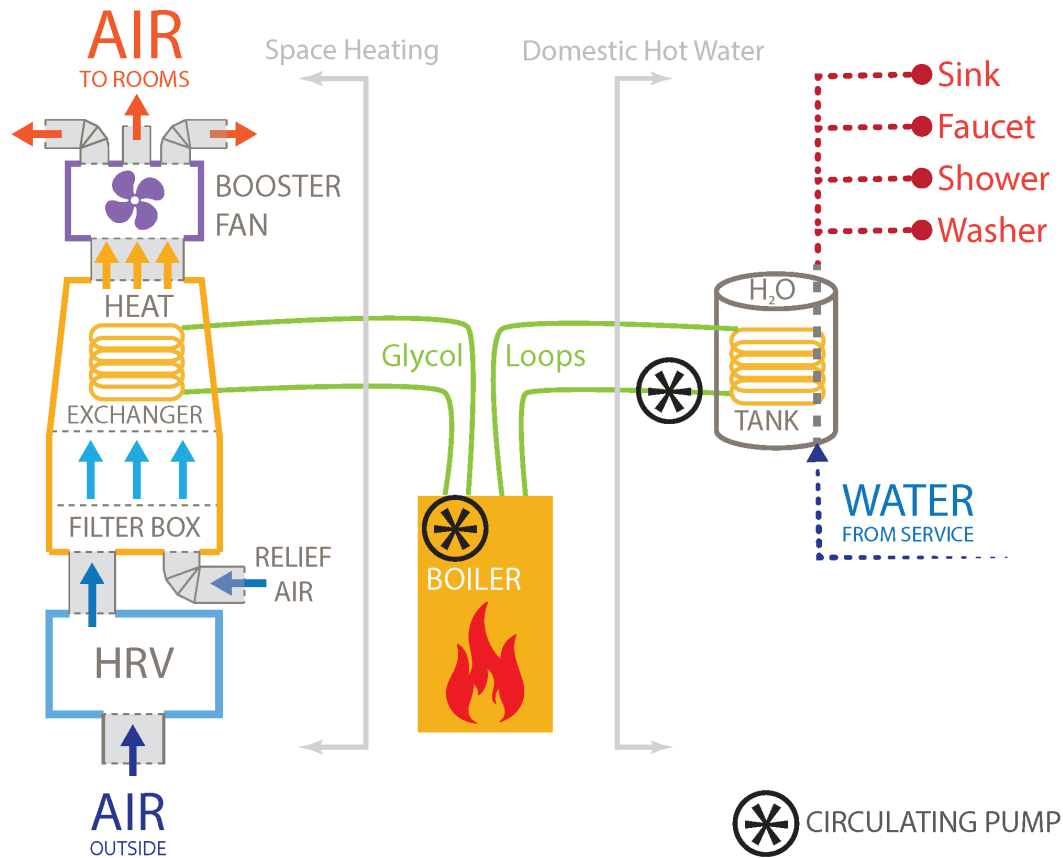
-Alaska Native Tribal Health Consortium





Sustainable Shelter

Buckland prototype





Sustainable Shelter

Buckland Prototype





Unsustainable Shelter

“We’ve structured our grid so that for the next two generations, our children will be forced to locate their homes based entirely on where they can s*#t. I think as humans, we are capable of more than that.”

-Canadian resident, Pond Inlet





Sustainable Shelter

Water and Sewer

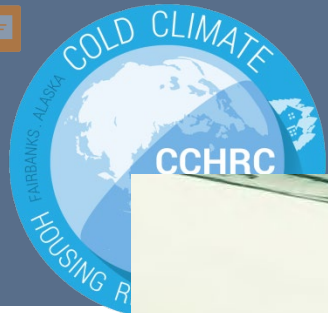




Sustainable Shelter

Water and Sewer





Unsustainable Shelter



"We need to build for the young people. Our people moved from site to site until the state told us to live here for the school for our children. So now, we need to build up this site, here where we are, for our children."

-Nathan Hadley Sr., Buckland, Alaska



Sustainable Shelter

Newtok/Mertarvik





Sustainable Shelter

Newtok/Mertarvik





Sustainable Shelter

Newtok/Mertarvik





Sustainable Shelter

Newtok/Mertarvik





Questions?

Robbin Garber-Slaght

robbin@cchrc.org

