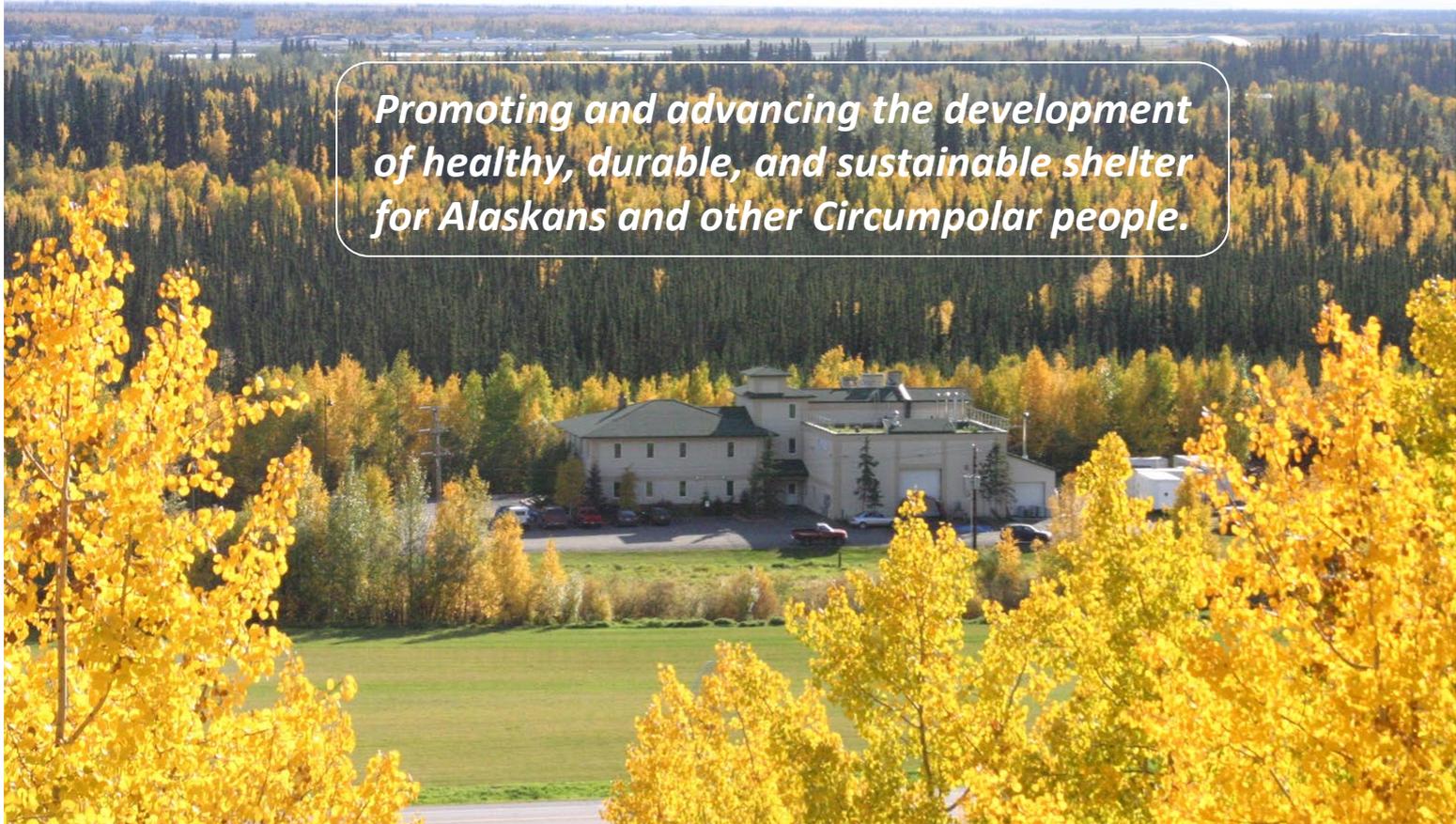




# Sustainable Housing in Rural Alaska

*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

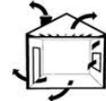
**78,959**

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 in the wind and bury our dead in the ground. We’ve been cold ever since. “

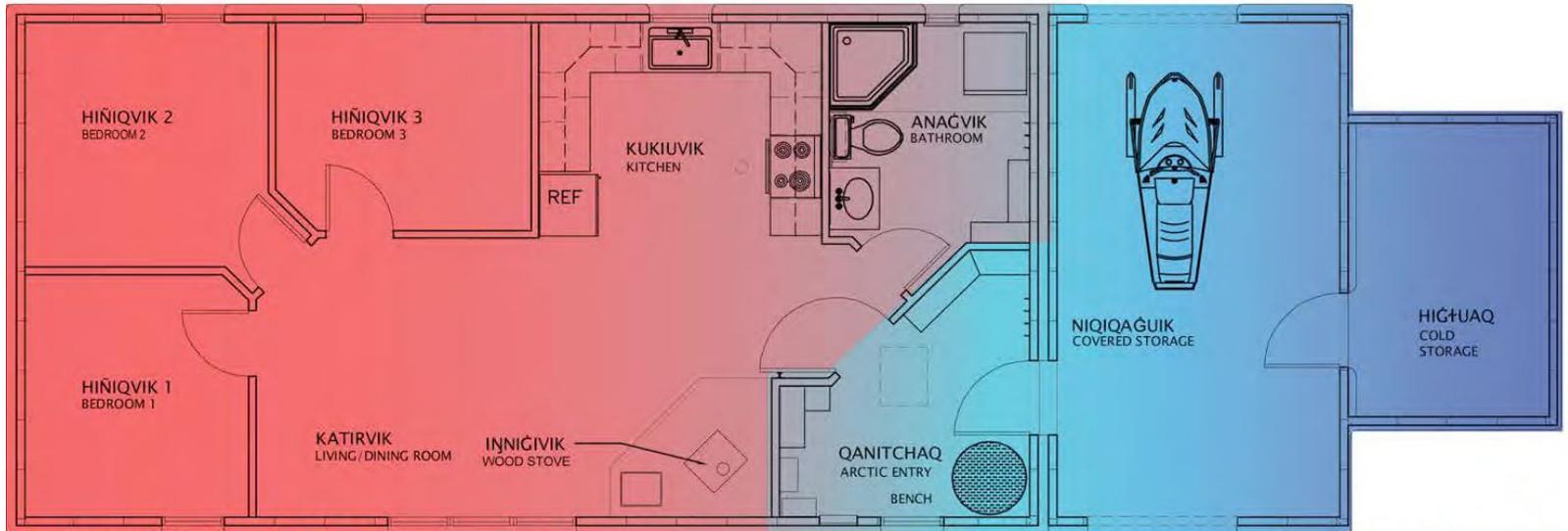
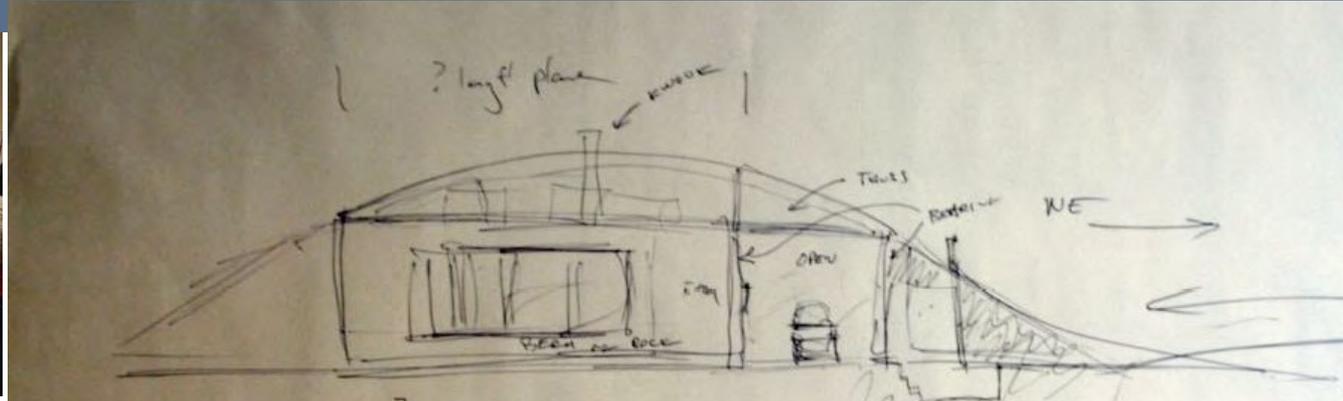
-Grant Kasharuk, Newtok





# 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.”

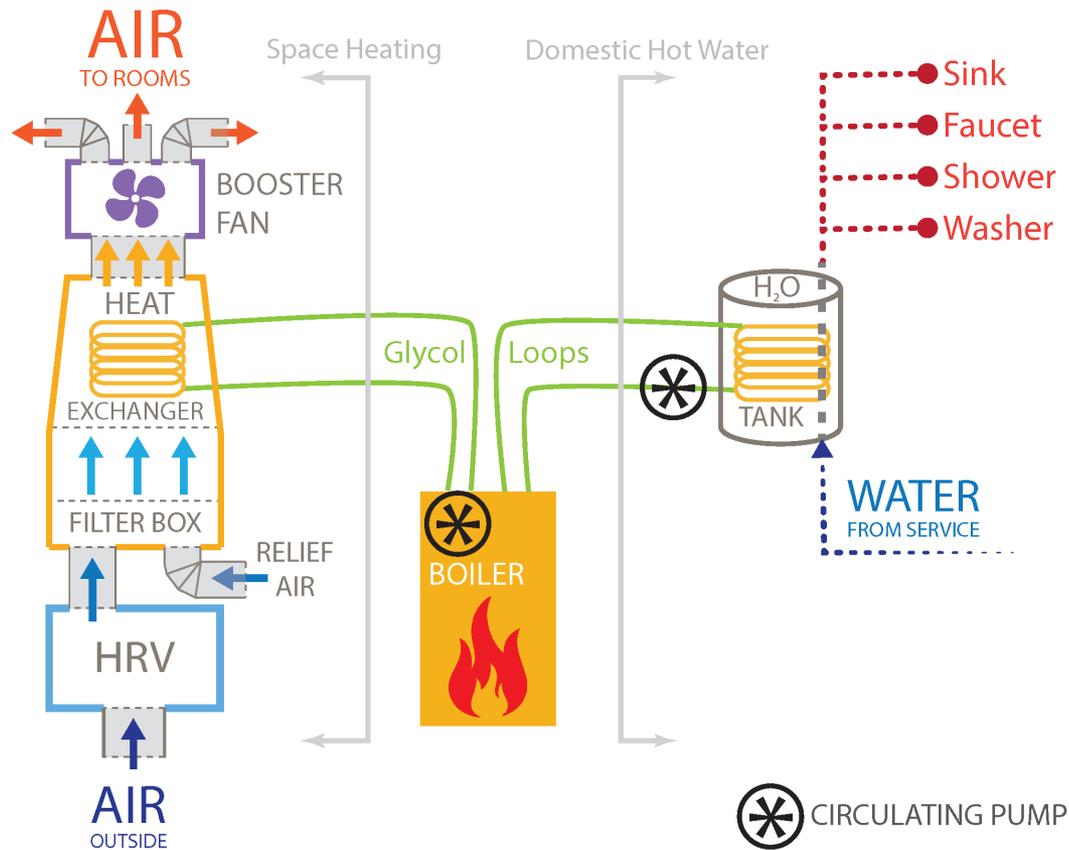
-Alaska Native Tribal Health Consortium





# 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?

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