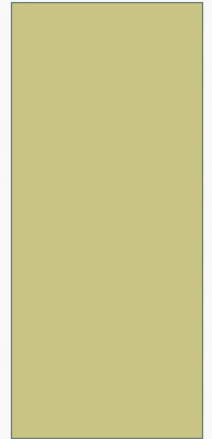




VILLAGE CORPORATION OF HOOPER BAY, ALASKA
SEA LION CORPORATION

TO PROTECT OUR LANDS AND ENHANCE THE CULTURE AND LIVES OF
NAPARYARMIUT (OUR PEOPLE)

WILLIAM NANENG, GENERAL MANAGER



Hooper Bay Energy Efficiency Feasibility Study



SEA LION CORPORATION

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COLD CLIMATE HOUSING RESEARCH CENTER
CCHRC



**AVCP Regional
Housing Authority**

Bethel, Alaska - AVCP Regional Housing Authority, Inc.



SOLUTION:
For Healthy Breathing

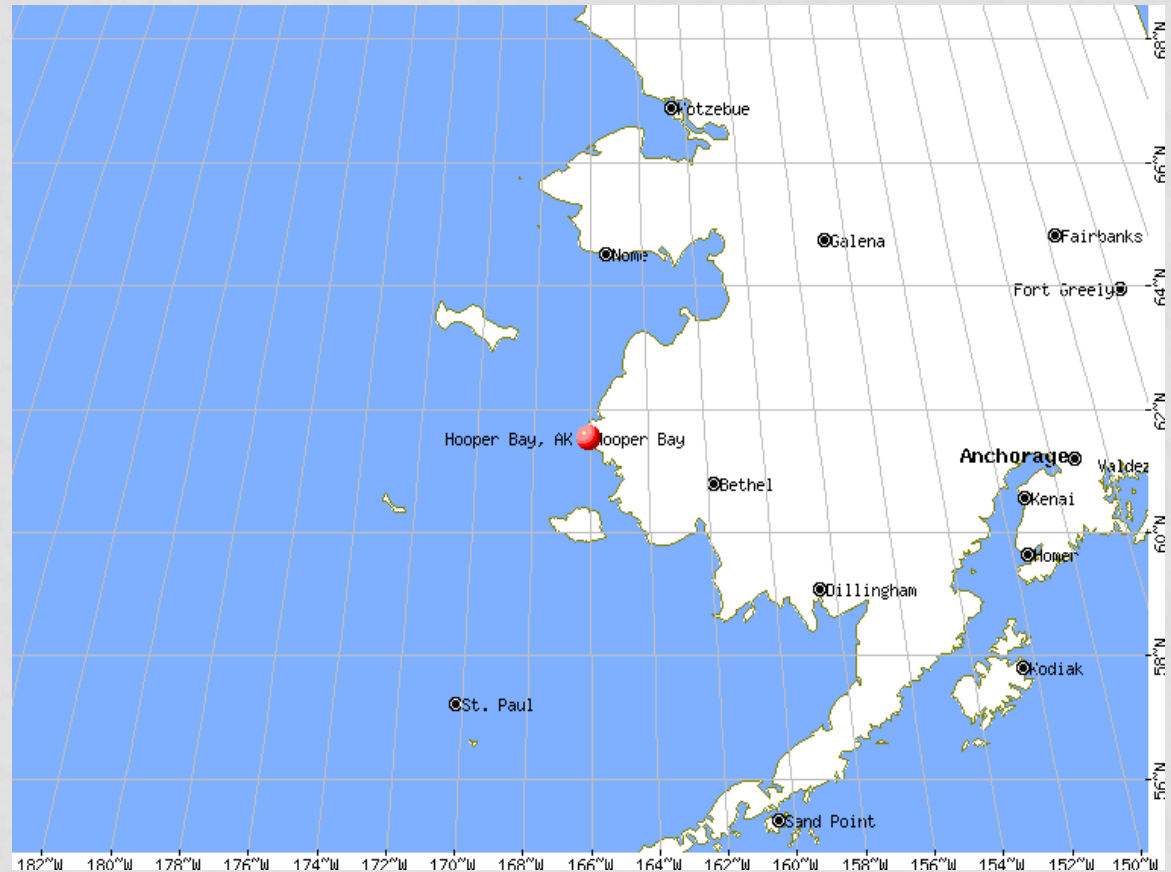
Indoor Air Quality Assessments
Karl Hough

907-457

HOOPER BAY OR NAPARYARMIUT

IS A CITY THAT HAS A TOTAL AREA OF 8.8 SQUARE MILES (22.7 KM²), OF WHICH, 8.7 SQUARE MILES (22.5 KM²) OF IT IS LAND AND 0.1 SQUARE MILES (0.2 KM²) OF IT (0.91%) IS WATER. THE CLIMATE IN HOOPER BAY IS MARITIME. THE MEAN ANNUAL SNOWFALL IS 75 INCHES (1,900 MM), WITH A TOTAL PRECIPITATION OF 16 INCHES (410 MM). TEMPERATURES RANGE BETWEEN -25° AND 79°F.

"Askinuk" or "Askinaghamiut" are the early Eskimo names for Hooper Bay. The village was first reported in 1878 by E.W. Nelson of the U.S. Signal Service. The 1890 Census found 138 persons living in 14 homes. The name Hooper Bay came into common usage after a post office with this name was established in 1934. The present-day Eskimo name "Naparagamiut" means "stake village people."

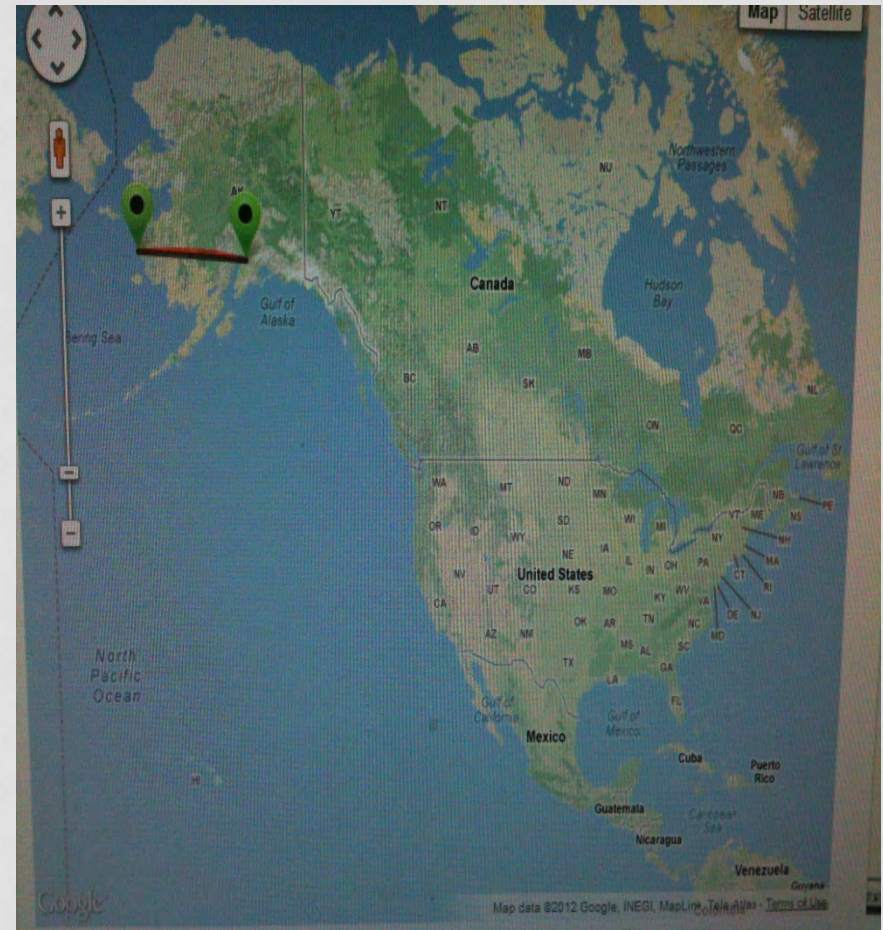




OLD HOOPER BAY VILLAGE SITE

THE YUPIK NAME FOR THIS SITE IS NUVUGMIUT AND WAS STILL OCCUPIED IN THE 1924 TIMEFRAME.

HOOPER BAY IS LOCATED 536 MILES (HOW THE CROW FLY'S) NORTHWEST OF ANCHORAGE ON THE WESTERN COAST OF THE STATE. TRANSPORTATION TO THE VILLAGE IS LIMITED TO AIRPLANE IF COMING A LONG DISTANCE OR SNOW MACHINE AND 4 WHEELER IF COMING FROM A NEAR BY VILLAGE. SUPPLIES ARE GENERALLY FLOWN IN EXCEPT FOR A COUPLE OF YEARLY BARGES DURING THE WARMER SEASON WHICH ALSO BRINGS THE VILLAGES FUEL SUPPLY FOR THE YEAR.

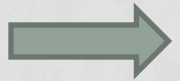


Project Background

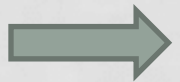
ANALYSIS OF REPRESENTATIVE HOUSING TYPES IN HOOPER BAY



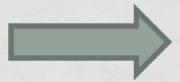
PROJECT OBJECTIVES



Partnering with Association of Village Council Presidents Regional Housing Authority (AVCP RHA) in the training and hiring of (5) five local energy raters to conduct energy audits of (24) twenty four homes.



Partnering with Cold Climate Housing Research Center (CCHRC) to document current electrical and heating energy consumption and analyze data for a final feasibility report.



Assessing the economics of electricity and heating fuel usage

PROJECT OBJECTIVES CONTINUED



The development of materials lists for energy efficiency improvements



Projecting energy savings or fossil fuel reduction by modeling of improvement scenarios and cost feasibility



Identifying financing options for the follow-up energy efficiency implementation phase

1. TRAINING LOCAL ENERGY ASSESSORS



THERMAL IMAGING



BLOWER DOOR TESTING

2. INDOOR AIR QUALITY TRAINING



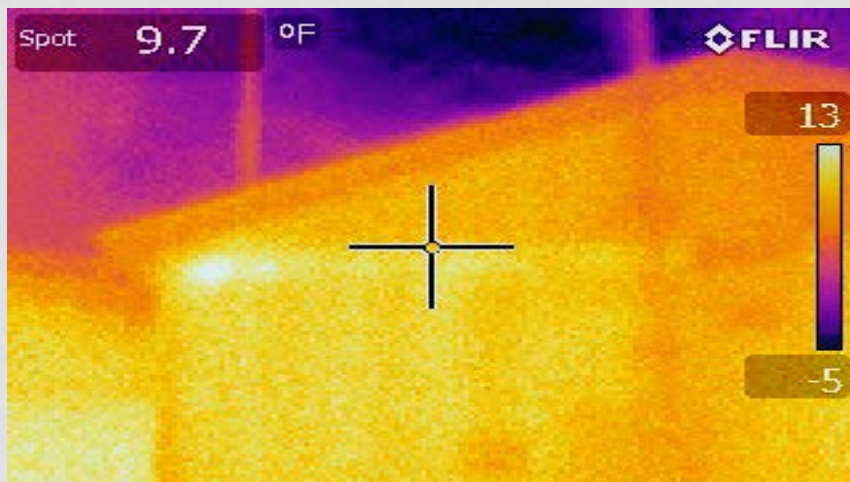
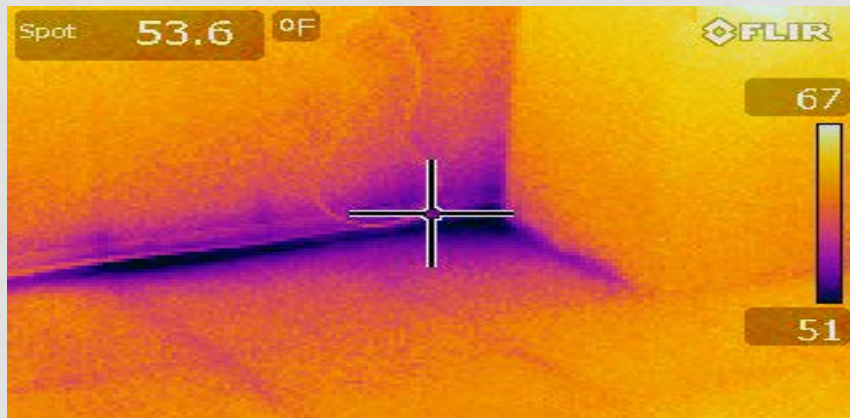
MOLD TESTING



VENTILATION RATE

- IN ADDITION TO ENERGY EFFICIENCY CONCERNS, TESTING FOR HEALTHY INDOOR AIR QUALITY IS VERY IMPORTANT IN HOOPER BAY
- THE COMMUNITY HAS A VERY HIGH RATE OF MEDIVACS AND HEALTH PROBLEMS THAT ARE DIRECTLY RELATED TO POOR INDOOR AIR QUALITY

DOCUMENT CURRENT ENERGY USAGE AND POSSIBLE SAVINGS



PROGRESS TO DATE

- Identified five Hooper Bay residents to participate in the energy audit training program
- Set up scholarship monies thru the Louis Bunyan Memorial Scholarship program for the individuals to receive training without cutting into Grant funds
- Identified the houses and commercial buildings that would receive energy audits thru this DOE Grant
- Equipment for conducting the audits have been purchased
- Project was delayed due to the harsh climate in the winter months unable to get accurate readings while the homes are frozen

PROGRESS TO DATE CONTINUED

- Partnered with Cold Climate Housing Research Center to conduct analysis after the testing has been completed
- Working with Eric Whitney certified energy rater to do hands on audits on the selected homes and commercial buildings with the selected individuals from the village
- To date we have conducted audits on 4 commercial buildings and 9 homes
- Cold Climate is currently in Hooper Bay looking at the homes that have been tested and taking electricity and fuel usage surveys to finish their analysis

OTHER FACTORS IN ENERGY EFFICIENCY



- LESSONS LEARNED
- SOME RESIDENTS COME UP WITH VERY CREATIVE SOLUTIONS TO BALANCING ENERGY EFFICIENCY WITH INDOOR AIR QUALITY
- IN OTHER HOMES, ENERGY COST CONCERNS CAUSE SOME COMMUNITY MEMBERS TO DISABLE THEIR RETROFITTED VENTILATION SYSTEMS. HOMEOWNER EDUCATION CAN BE AS EFFECTIVE AS RETROFITS



NEXT STEPS

LOCALLY TRAINED ENERGY ASSESSORS ALLOW THE COMMUNITY TO APPLY FOR MORE AVENUES OF FUNDING THAN ARE CURRENTLY AVAILABLE (NAHASDA, AVCP Housing, AHFC Retrofit Program, RuralCAP)



NEXT STEPS

LOCALLY TRAINED ENERGY ASSESSORS ARE ABLE TO ADVISE COMMUNITY MEMBERS ON THE IMPORTANCE OF PROPER VENTILATION IN HOMES THAT HAVE BEEN TIGHTENED AS PART OF PRIOR ENERGY EFFICIENCY RETROFITS

THIS REDUCES THE DEPENDENCE ON OUTSIDE CONSULTANTS, AND ALSO CAN REDUCE THE EXPENSE OF MEDIVACS AND MEDICAL CARE AS A RESULT OF POOR INDOOR AIR QUALITY

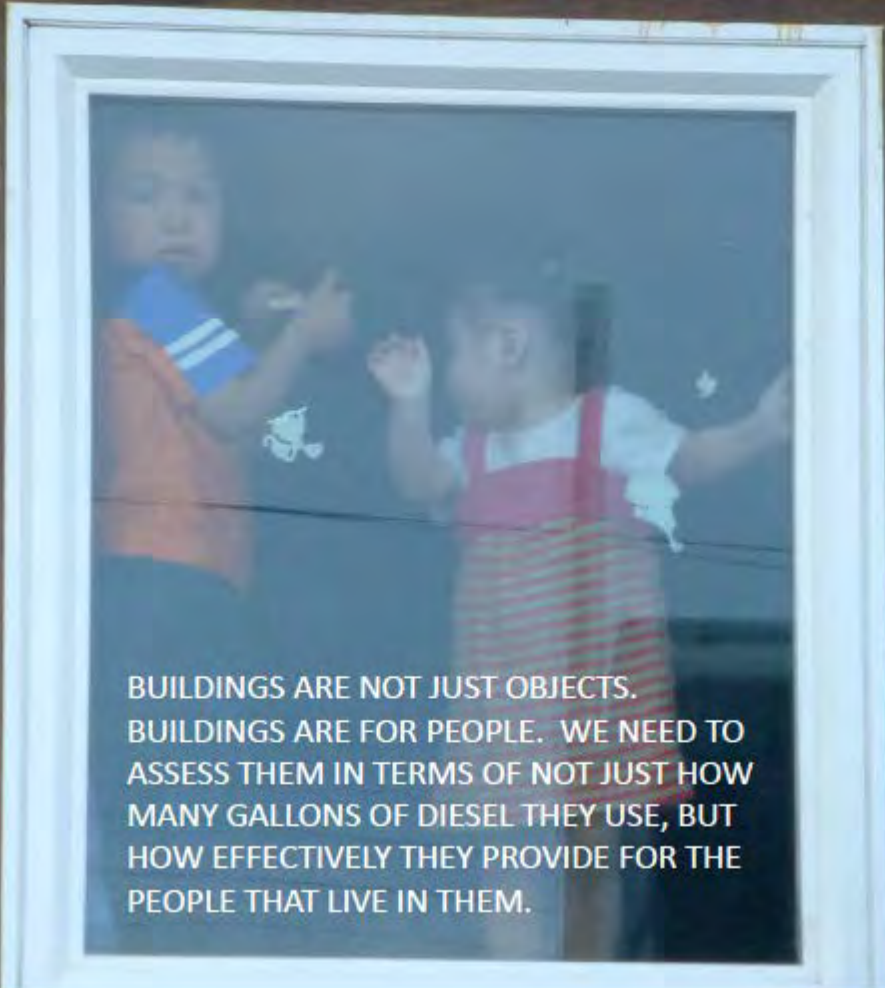


CONCLUSION

- IN SOME HOMES, 30% REDUCTIONS IN ENERGY USAGE ARE ATTAINABLE WITHOUT LARGE EXPENDITURES

- 
- A photograph of a yellow, single-story house with a dark roof. The house has a covered porch area with a wooden deck and stairs leading up to it. Solar panels are mounted on the roof. In the foreground, there is a red utility vehicle, possibly a snow blower or a small tractor, parked on a wooden platform. The background shows a flat, open landscape under a clear blue sky.
- IN SOME HOMES, A FULL-HOUSE WRAP AND ADDED INSULATION WOULD BE THE MOST EFFECTIVE RETROFIT STRATEGY
 - THIS STRATEGY WOULD NOT BE EFFECTIVE IN HOMES WHERE THE OCCUPANTS DISABLE THEIR OWN VENTILATION SYSTEMS

CONCLUSION



BUILDINGS ARE NOT JUST OBJECTS.
BUILDINGS ARE FOR PEOPLE. WE NEED TO
ASSESS THEM IN TERMS OF NOT JUST HOW
MANY GALLONS OF DIESEL THEY USE, BUT
HOW EFFECTIVELY THEY PROVIDE FOR THE
PEOPLE THAT LIVE IN THEM.

QYANA THANK YOU



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