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TRIBAL HEALTH  
CONSORTIUM

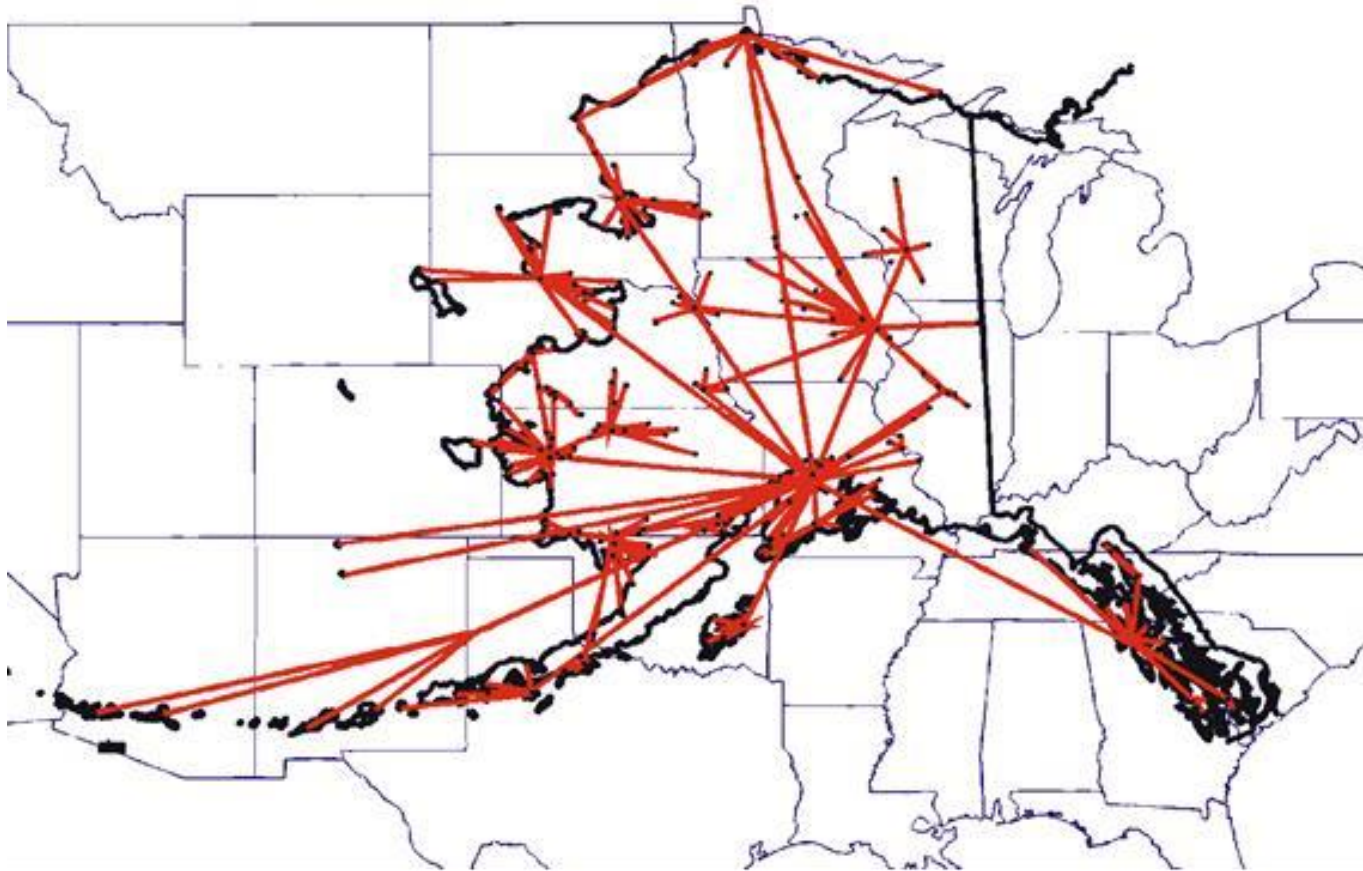
# Rural Alaska Worker Safety and Health Project

LCDR Christopher Fish, CIH, CSP, REHS  
Alaska Native Tribal Health Consortium  
Division of Environmental Health & Engineering



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# Alaska Tribal Health System



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# Background



<https://anthc.org/news/eek-flushes-the-honey-bucket-with-completion-of-water-and-sewer-project/>  
Residents turn on in-home running water for the first time in Eek, AK.



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# Background



Local laborers connect a household sewer service line in Eek, AK



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# Work in Rural Alaska



Angoon, AK – October, 2018  
Lift station rehabilitation





# Work in Rural Alaska



Lower Kalskag, 2018 sewer main construction



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# Target Workforce



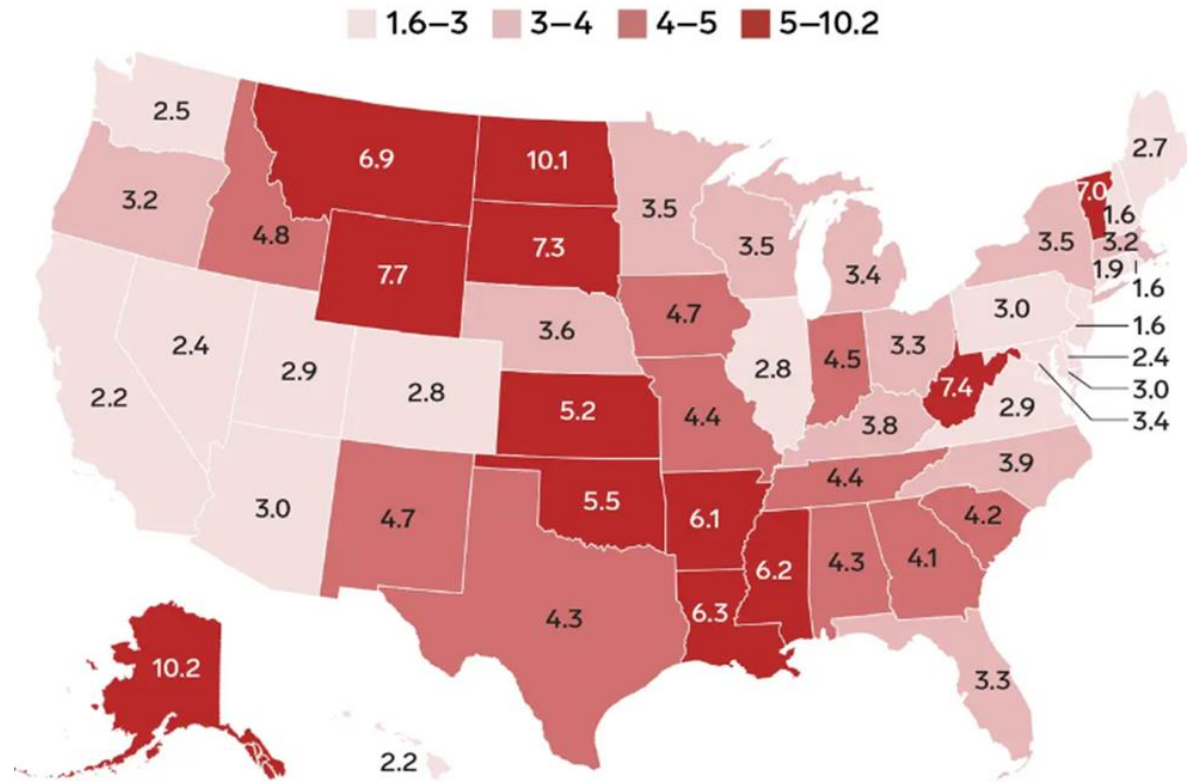
- Temporary workers in hard to reach rural Alaska Native Villages are a vulnerable population
- Define injury types, cause and severity
- Develop recommendations and justification of targeted interventions

Fall protection & confined space entry training, Nome, AK July, 2019



# Target Workforce

Fatal workplace injury rate per 100,000 full-time-equivalent workers in 2017



Source: Bureau of Labor Statistics, "Census of Fatal Occupational Injuries"

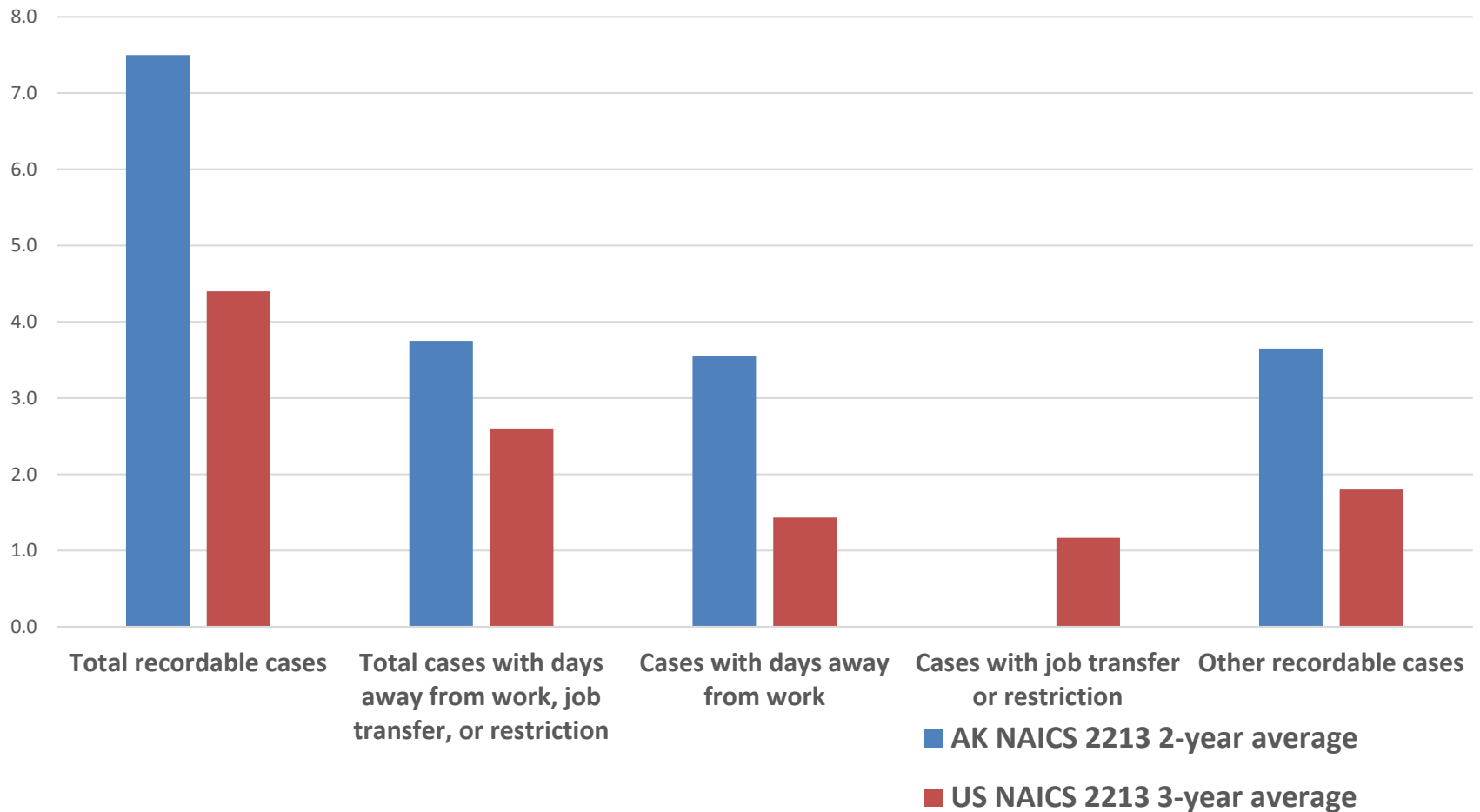
BUSINESS INSIDER

Source: <https://www.businessinsider.com/map-states-with-the-most-fatal-workplace-injuries-2019-7>

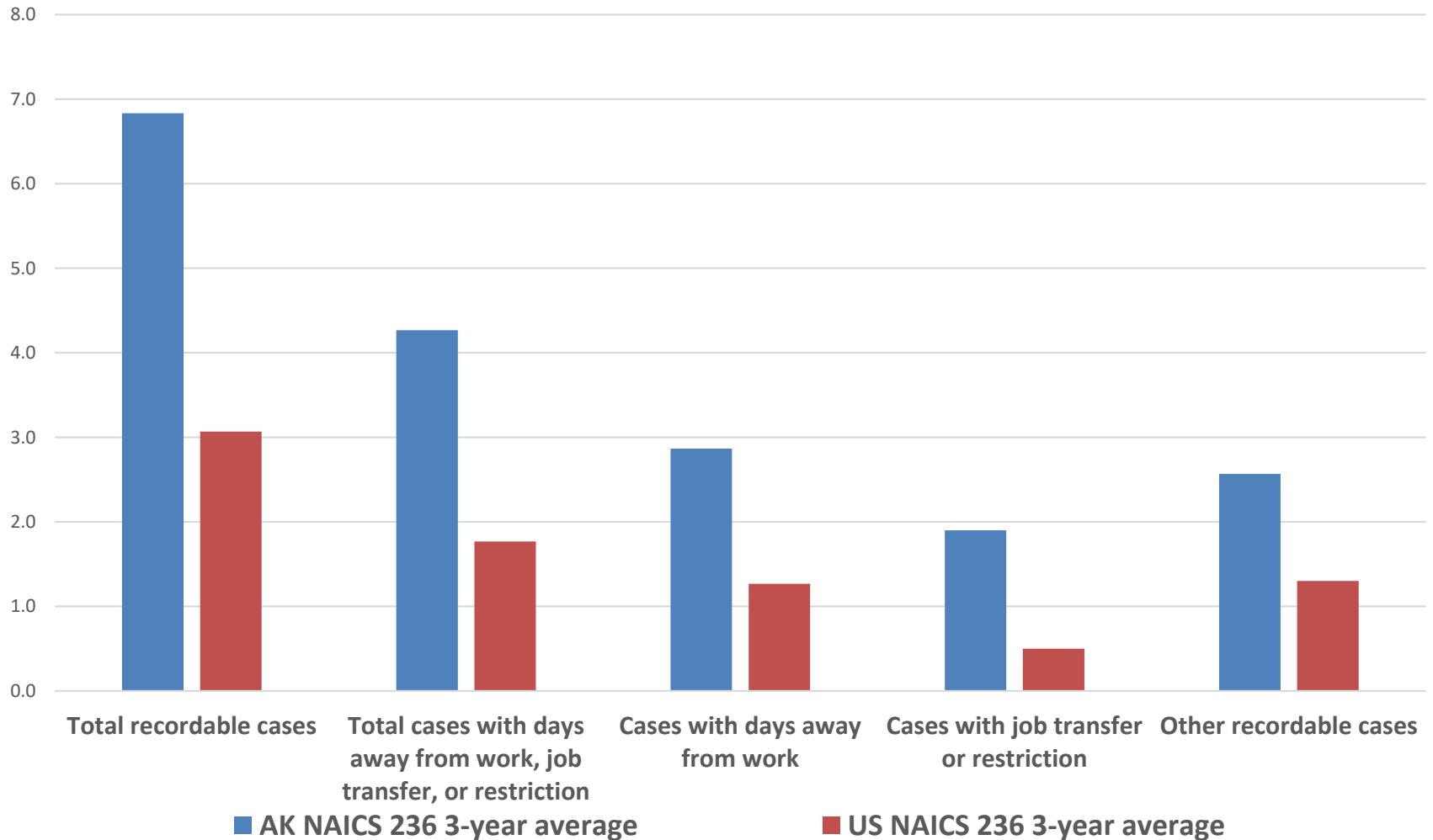


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## NAICS 2213 Water, sewage and Other systems 2014-2016 Injury rate per 100 full-time workers



## NAICS 236 Construction of buildings 2014-2016 Injury rate per 100 full-time workers





# AK Rural Worker Safety and Health

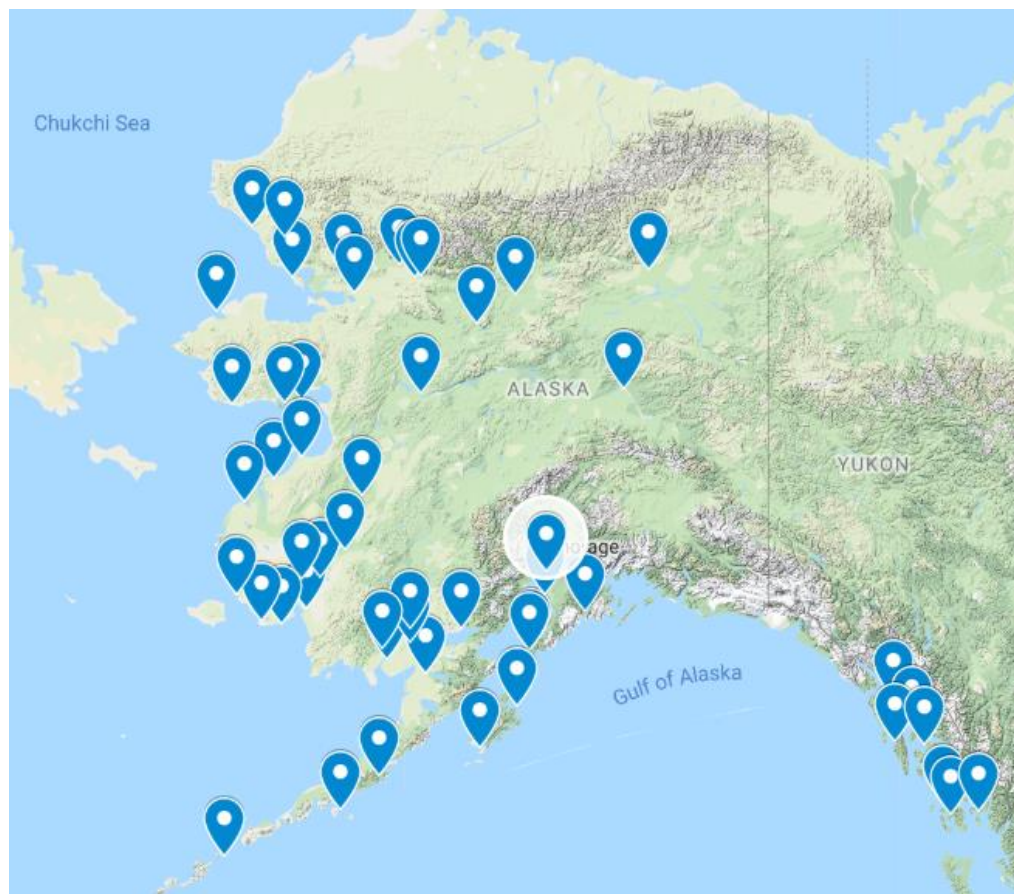
- OSHA Susan Harwood Grant – FY 18 & 19
  - Develop & deliver training to rural Alaska Native construction and utilities workforce
  - Focus: Electrical safety & LOTO, Ergonomics, Excavation, Fall Protection, Permit-required Confined Space Entry, & Respirable Crystalline Silica
  - FY18: 349 trainees, 1,650 contact hours
  - FY19: 468 trainees, 2,500 contact hours



Kotzebue, Direct Read Instrument training June, 2019



# AK Rural Worker Safety and Health



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# Underlying Factors for Elevated Injury Rates

## Mitigating

- Safety culture and perceptions
- Training & experience
- Availability of safety equipment
- Engineering Design
- Western culture: communication and production expectations

## Contextual

- High employment turnover
- Limited Supervision
- Lack of regulatory presence
- Socioeconomic status



Lower Kalskag, AK - April, 2019 sewer main construction





# Possible Injury Multipliers

- Access to emergency care
- Access to occupational medicine providers
- Employer return to work programs
- Climate and conditions
- Economic hardship
- Fatigue & long work hours
- Housing and accessibility



# Future Work

- IRB is approved: descriptive study of rural AK worker injuries
- Key variables:
  - Standard Occupational Classification Code
  - Date of hire
  - Date of injury
  - Injury Location (rural/urban)
  - Cause
  - Nature of injury
  - Date disability began/ended



# Impact

- Establish baseline?
- Evaluate Susan Harwood training program effectiveness in rural Alaska
- Communicate risk to stakeholders
- Training alone will not resolve OSH disparity in Alaska
- Justify ergonomics intervention





# We Owe Very Special Thanks To

**John Gilbert, ANTHC SH Program Director,  
and our partners who hosted or helped  
develop outreach and training:**

Alaska Occupational Safety and Health

Alaska Rural Water Association

Alaska Rural Utility Collaborative

Alaska Vocational Technical Center

AK Safety Training Services

Associated General Contractors of Alaska

Baranoff Housing Authority

Bristol Bay Area Health Corporation

Bristol Bay Housing Authority

Bristol Bay Native Association

Akiachak, AK

Atmautuak, AK

City of Sitka, AK

Eek Tribal Council

Enstar Natural Gas Company

EPA Region 10 Tribal Programs

Exclusive Paving

Kenaitze Indian Tribe

Interior Regional Housing Authority

Lower Kalskag Tribal Council

Maniilaq Health Corporation

Native Village of Atmautluak

NIOSH WSD Anchorage

Norton Sound Health Corporation

OSHA Region X

Pango Technology

Silver Bay Seafoods

Southeast Regional Health Corporation

Tanana Chiefs Conference

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Zender Environmental Health and Research  
Group



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# Thank you

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## **OUR VISION:**

**Alaska Native people are the healthiest people in the world.**



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