



ALASKA NATIVE
TRIBAL HEALTH
CONSORTIUM

Alaska Native Utility and Construction Worker Injury Prevention Program

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Background

- Alaska Native Tribal Health Consortium (ANTHC)
- ANTHC Division of Environmental Health and Engineering (DEHE)
- Partnership with Alaska Native Villages to provide lasting public health infrastructure



<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

- ANTHC workforce – superintendents, trades, professional
- Local hire workers – laborers and journeyman (capacity building)
- Unserved by DEHE Safety – water treatment plant operators, housing authority workers, and others.



Local laborers connect a household sewer service line to insulated E-one[®] box, Eek, AK



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Work in Rural Alaska



Lower Kalskag, 2018 sewer main construction

Work in Rural Alaska



Angoon, AK – October, 2018
Lift station rehabilitation



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Target Workforce



- ANTHC's work often overlaps with other employers including water utilities, housing authorities, construction contractors and others
- Temporary and limited employment status in hard to reach rural Alaska Native Villages

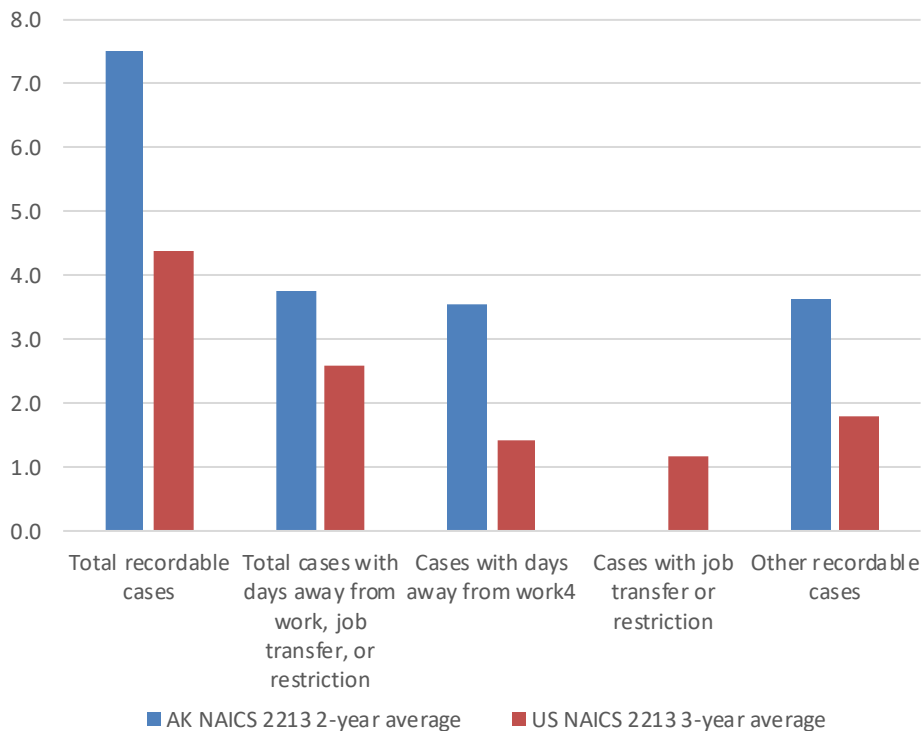
Fall protection & confined space entry training, Nome, AK July, 2019



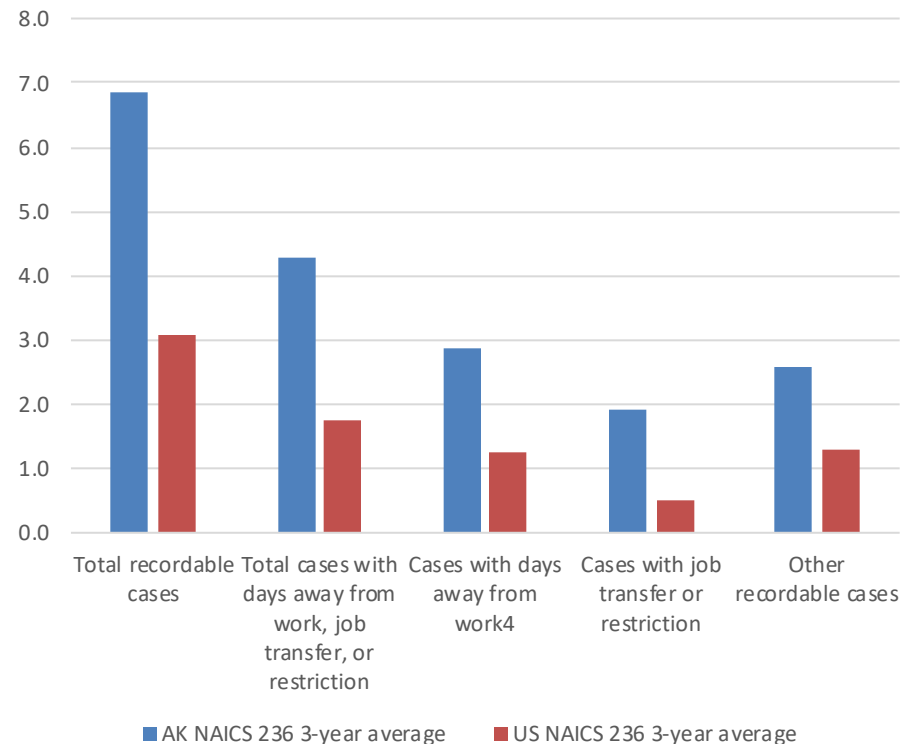
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BLS Survey of Occupational Injuries and Illnesses

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



Underlying Factors for Elevated Injury Rates

- High employment turnover*
- Training & experience
- Limited equipment available
- Limited Supervision*
- Engineering Design
- Lack of regulatory presence*
- Socioeconomic status
- Safety culture and perceptions
- Western culture: communication and production expectations

Crew prepping trench for second section of 8" gravity sewer main.
Page CS-418. LKL 4/16/19.

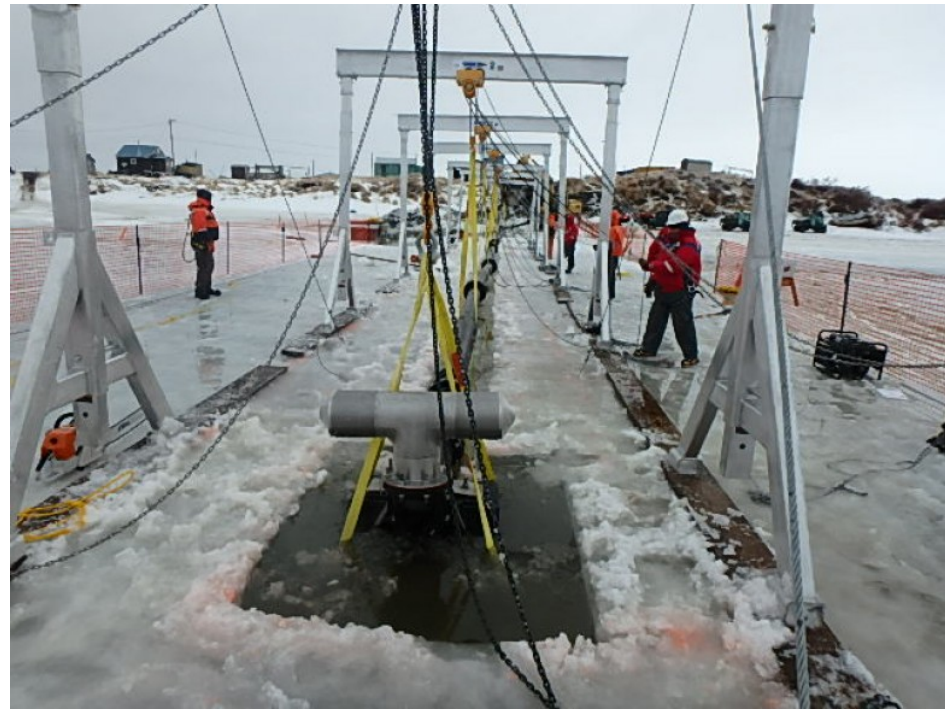


Lower Kalskag, AK - April, 2019 sewer main construction



Possible Injury Multipliers

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



<https://anthc.org/news/environmental-health-and-engineering-staff-overcome-climate-challenges-in-eek-water-project/>

Eek, AK February, 2016 Water intake construction



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ANTHC Workforce Injury Prevention Projects

- OSHA Susan Harwood Grant – FY 18 & 19
 - Develop & deliver training to rural Alaska Native construction and utilities workforce
 - Focus areas include – Electrical safety & LOTO, Ergonomics, Excavation, Fall Protection, Permit-required Confined Space Entry, & Respirable Crystalline Silica
 - FY18: Reached 349 trainees, 1,650 contact hours
 - FY19: 375 trainees, 2,200 contact hours to date



Kotzebue, Direct Read Instrument training June, 2019



ANTHC Workforce Injury Prevention Projects

- ANTHC Produced Excavation Safety Checklist mobile App
 - <https://www.excavation-safety.net>
 - Online/offline inspection checklist capability
 - Used in excavation & trenching training activities
 - Looking for more users and feedback, feel free to share widely

Excavation Safety Checklist

Daily Inspection Checklist for Trenching/Excavation Sites

Competent Person:
chris

Project:
Fish

Trench Location/Station and Dimensions:

Utilities

✓ N/A

1. Utility locates contacted at least 2 working days prior to start of digging, and appropriately marked and identified

2. Underground installations have been protected, supported, or removed when the excavation is open

3. Surface encumbrances such as utilities, utility poles, foundations, transformer vaults or other structures are supported or removed

4. Equipment operator(s) is aware of energized overhead uninsulated powerlines and required approach distances (10' minimum for lines <50KV; 20' minimum unknown Voltage; with a dedicated spotter)

Excavation / Trench

✓ N/A

1. Soil classified using 1 visual and 1 manual method, or default Type C

2. Employees are protected from loose rock or soil

3. All employees are wearing proper PPE



ANTHC Workforce Injury Prevention Projects

- OSHA Susan Harwood Grant Fiscal Year 2019
 - Developing curricula – focus training on hands-on learning
 - Incorporating VR, iPads and interactive projectors to facilitate activities
 - Partnership with [University of Idaho](#) and [University of Washington](#) [PTOP](#)



2019: Kotzebue VR test run

Video demo link: <https://vimeo.com/291007435>



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ANTHC Workforce Injury Prevention Projects

- University of Washington – Professional Training Opportunity Program
- Begin investigation of injuries in rural Alaska using the NIOSH/AK-WC injury database
- Establish the leading causes of injuries and associations with severity
- Pending AK Area IRB approval



Lessons Learned

- Training alone will not resolve OSH disparity in Alaska, a wider reaching intervention to change behavior among employers and workers is needed
- Work with stakeholders to assess needs and work side-by-side through development
- IRB process is very important, but can present significant obstacles to new researchers
- Research protocol in Alaska should be complete in advance to ensure AK Area IRB approval
- Need to identify funding source for future research protocol development



We Owe 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

City of Akiachak, AK

City of Eek, AK

City of Lower Kalksag, AK

City of Sitka, AK

Enstar Natural Gas Company

Exclusive Paving

Kenaitze Indian Tribe

Interior Regional Housing Authority

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

University of Washington, DEOHS

University of Idaho, Virtual Technology &
Design

Yukon-Kuskokwim Health Corporation

Zender Environmental Health and Research
Group



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OUR VISION:

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



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