PACIFIC NORTHWEST AGRICULTURAL SAFETY & HEALTH CENTER
farming • fishing • forestry

research for healthy workers, strong communities & productive agriculture

The Pacific Northwest Agricultural Safety and Health (PNASH) Center, established in 1996 through the NIOSH/CDC Agricultural Initiative, conducts research and promotes best safety and health practices for Northwest producers, workers, and communities in farming, fishing, and forestry.

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RESEARCH

Forestry Workforce Location- and Wearable-based Activity Recognition for on-the Job Digital Health and Safety Metrics (Keefe & Zimbelman, PIs, NIOSH 2022-2027)
Logging is among the most dangerous professions in the United States, with manual felling of timber with chainsaws and setting of cable log chokers accounting for 47% of injuries. Building on a recent PNASH pilot project, a library of wearable- and location-based human activity recognition (HAR) models will be developed and coded into a smartwatch app prototype. This application aims to prevent injuries by improving loggers' situational awareness by providing real-time updates of their coworkers' work activity status and location. Visit https://deohs.washington.edu/pnash/forest_safety.

Respiratory Health and Indoor Air Quality in the Cannabis Industry (Simpson & Sack, PIs, NIOSH 2022-2027)
There has been a dramatic expansion of the Cannabis industry, yet very little is known about the occupational hazards and potential health effects for workers involved in Cannabis cultivation. Recent pilot studies have demonstrated that these workers are exposed to a variety of respiratory hazards and may be at increased risk. This panel study aims to evaluate and prevent exposures that lead to of occupational lung diseases, particularly work-related asthma. Visit https://deohs.washington.edu/pnash/cannabis-worker-health-and-safety.

PREVENTION AND INTERVENTION

Engineering Solutions to Reduce Pesticide Exposure and Waste on Northwest Fruit Farms (Kasner, PI, NIOSH 2022-2027)
This project evaluates emerging pesticide application technologies and educational programming as interventions for breaking the pesticide exposure pathway on Northwest fruit farming systems. A broad network of Northwest partnerships will inform assessments on uses for precision agriculture and corresponding impacts on pesticide safety and health. Visit https://deohs.washington.edu/pnash/engineering-solutions-reduce-pesticide-exposure-and-waste-northwest-fruit-farms.

A Mixed-Methods Evaluation of Heat-Related Illness Policy Implementation to Inform Practical Solutions for Farmworkers (Spector & Blancas, PIs, NIOSH 2024-2027)
The objective of this project is to conduct a timely evaluation of a new updated State occupational heat policy for agriculture (Ag) to inform practical implementation solutions. We anticipate that this project will ultimately lead to outcomes of reduced adverse health effects from heat for Ag workers. Visit https://deohs.washington.edu/pnash/mixed-methods-evaluation-heat-related-illness-policy-implementation-inform-practical-solutions.

DATA TRACKING

Tracking Agriculture, Forestry, and Fishing Health Indicators: RISC Agriculture (Yost & Flunker, PIs, NIOSH 2022-2027)
Fatal and non-fatal injuries in the agriculture, forestry, and fishing sectors remain both elevated and poorly documented, compared to other work settings. This project expands on the current Risk Information System for Commercial Fishing (RISC), to encompass farming, fishing, and forestry in the NW (Alaska, Idaho, Oregon, Washington) and engages advisors in analysis with PNASH's interactive data dashboard.

EDUCATION

Fishermen Led Injury Prevention Program (FLIPP) for Lifejackets Mobile Program (Kincl, PI Oregon State University, NIOSH 2022-2027)
In commercial fishing, fatalities occur when those lost were not wearing a lifejacket. We expect technological advances in lifejackets to address some of the barriers fishermen have to wearing them while working (comfort, accessibility, confidence in, etc.) and to improve the flotation and survivability. This educational study will collect fishermen's views and experiences related to vessel safety including use of lifejackets, and then launch a region-specific promotion campaign. Visit https://deohs.washington.edu/pnash/fishermen-led-injury-prevention-program-flipp-lifejackets-mobile-program.

Safety and Health Training for NW Restoration Forestry Services Workers (Yost, PI, OSHA Susan Harwood, 2024-2025)
Forest fuels reduction work in the Northwestern US relies heavily on manual labor conducted by small private contract forest service firms, small forest landowners, young workers, and Spanish-speaking immigrant workers. This workforce is underserved, at high-risk for injury, low-income, hard-to-reach, and often with limited English. This project will conduct a regional needs assessment through key stakeholder interviews, develop a training curriculum and materials, deliver and evaluate two pilot training sessions (one in English, one in Spanish), and formulate a four-year capacity building plan. Visit https://deohs.washington.edu/pnash/safety-and-health-training-nw-restoration-forestry-services-workers.

PNASH PILOT PROJECT PROGRAM & OUTREACH MINI-GRANTS

Each year, through two separate calls for proposals, PNASH awards small grants throughout the Northwest (AK, ID, OR, WA). One supports pilot research studies. The other funds small community education projects to service organizations. Learn more at https://deohs.washington.edu/pnash/opportunity

2024-2025 Pilot Projects

Climate and Mental Health in Agriculture (CLIMA). Maria Blancas, PhD, MPH, Clinical Assistant Professor, Department of Environmental and Occupational Health Sciences, University of Washington.

Development and evaluation of WISHA 10 cannabis training module. Diana Ceballos, PhD, MS, Assistant Professor, Department of Environmental and Occupational Health Sciences, University of Washington.

Evaluating Opioid Overdose Prevention Program for Commercial Fishermen with CDC Program Evaluation Framework & Systems Theory Approach (Project Gabe). Denise Damewood, RN, BSN, MAR, Nurse Consultant, State of Alaska Public Health & Alaska Marine Safety Education Association (AMSEA).

PNASH EDUCATIONAL RESOURCES

Video YouTube Channel https://www.youtube.com/user/USagCenters

Hazard Self-Assessment Tool (HSAT) https://sites.google.com/boisestate.edu/potential-hazards/hsat-forms

Dairy Safety Tookit https://deohs.washington.edu/pnash/dairysafetytoolkit

Heat Education & Awareness Tools (HEAT) https://deohs.washington.edu/pnash/heat-toolkit

Basta! Prevent Sexual Harassment in Ag (ENG/SP) https://deohs.washington.edu/pnash/sexual-harassment

Practical Solutions for Pesticide Safety (ENG/SP) http://depts.washington.edu/pnash/practical_solutions

Forestry Services Safety Resources (ENG/SP) http://deohs.washington.edu/pnash/forestry-services

Fishermen Led Injury Prevention Program (FLIPP) https://health.oregonstate.edu/labs/osh/resources/flipp

Other resource pages: **Potato hazards, Orchard Injuries, Nitrates & well water, etc. http://depts.washington.edu/pnash**