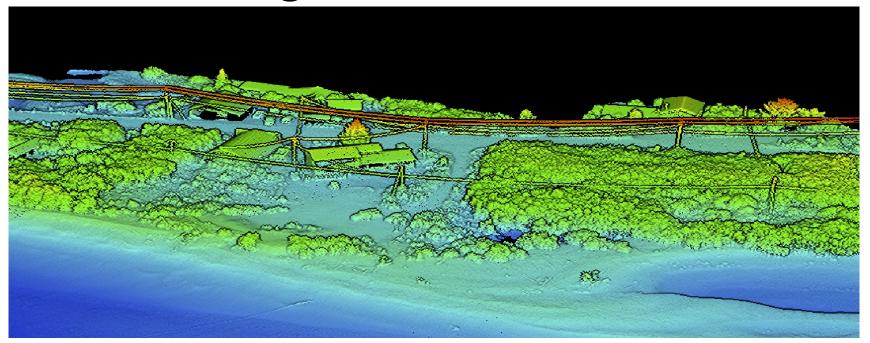
UAF Updates – ACTION project Convergence Science Cruise



2025
Chignik Bay Regional Resiliency
Symposium
Chris Maio and Matthew Balazs





- Enhance communication to identify and act on shared goals
- 2. Advance applied science that addresses local priorities and delivers actionable products
- 3. Build technical capacity through workforce development and youth engagement









































































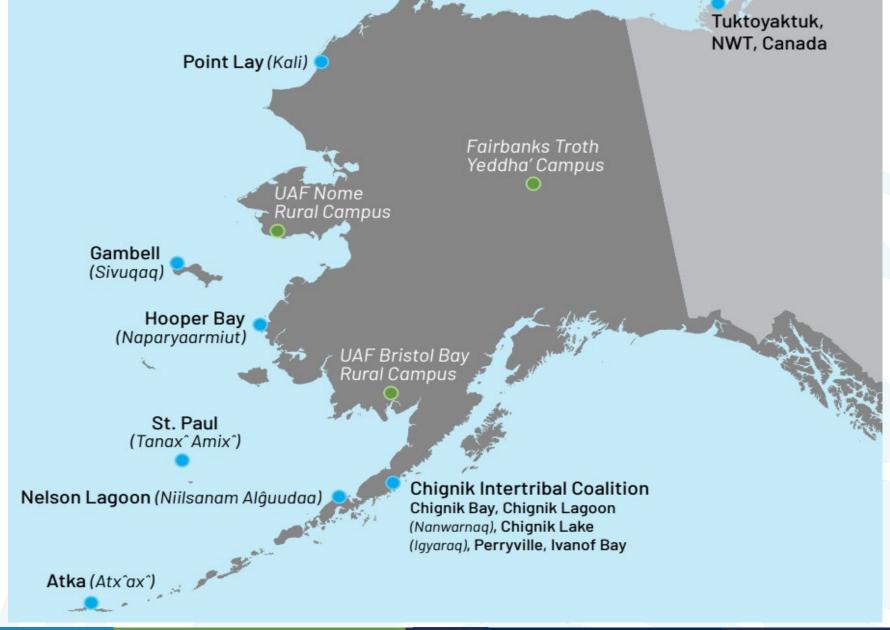




NOAA

ACTION

- NSF Funded 4-Year project - \$14 million total (2023-2
- 12 community partners
- Focus on 3 main pillars
- Foundation and funding through long-term community relationships









ACTION - Highlights







Alaska Coastal Dynamics for Teachers Field Course

- 8 MS/HS teachers working in rural Alaska
- · July 20-30, 2024
- Anchorage -> Homer -> F/V
 Tustumena -> Kodiak/Old
 Harbor -> Chignik Bay
- Culminated in a 2-day Family Camp with youth and adults in Chignik Bay









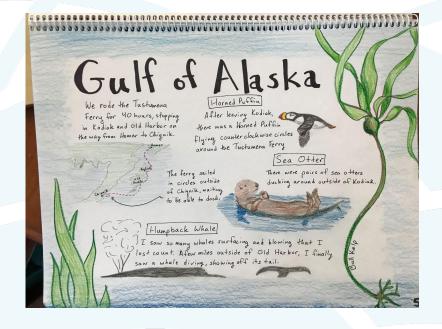
PAUL G. ALLEN



Co-Produced Pilot Field Course





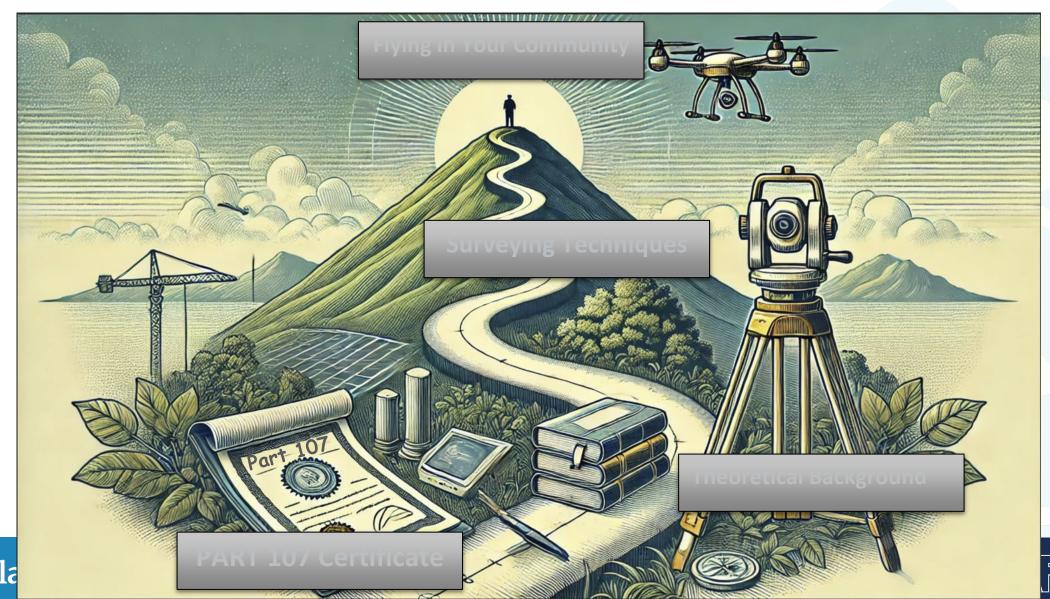








UAS Learning and Training Opportunities

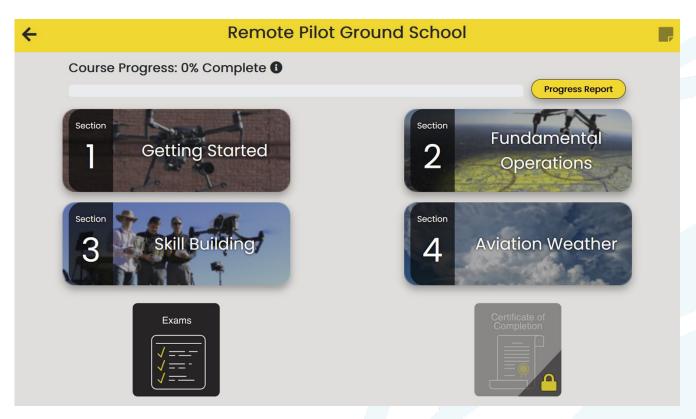


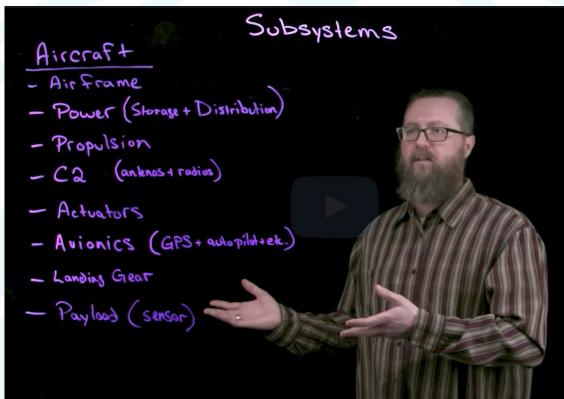


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FAA Part 107 License

Get Legal!







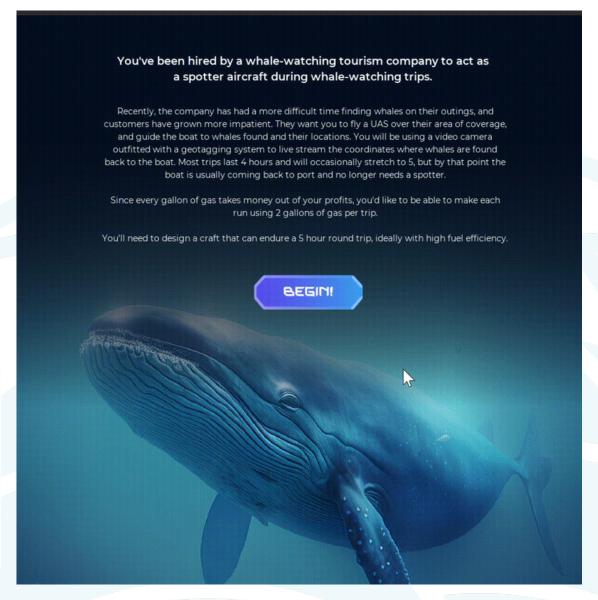




Online EdX Courses

- Course 1: Fundamentals
 - Module 1: Introduction to UAS
 - Module 2: Platforms
 - Module 3: Sensors
- Course 2: Operations
 - Mission Preparation
 - Flight Planning
 - Flights and Post Ops























YOUTH RESEARCH CAMP





SHARE YOUR KNOWLEDGE AND PARTICIPATE IN RESEARCH IN CHIGNIK BAY!

Elders are invited to have lunch with the youth to share and exchange knowledge on June 25th (12:00pm)!



Chignik Bay

JUNE 24-26 2025

Activities

- Participate in a photovoice activity
- Collect data for research

Questions? Email us!

- Learn to fly drones
- Photography skills
- Lunch and snacks
- Have fun!

Join us for a three-day research camp Every day, from 10am to 4pm at city hall

For youth aged 10 years and over

* This includes young adults! *

who live in the Chignik communities

You do not have to live in Chignik Bay to participate

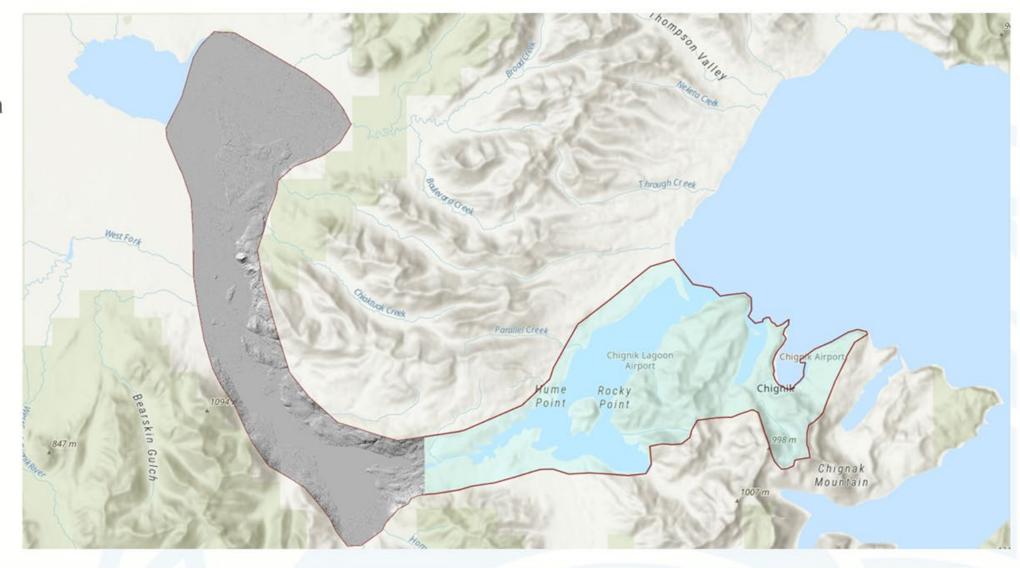






Elevation Data: LiDAR

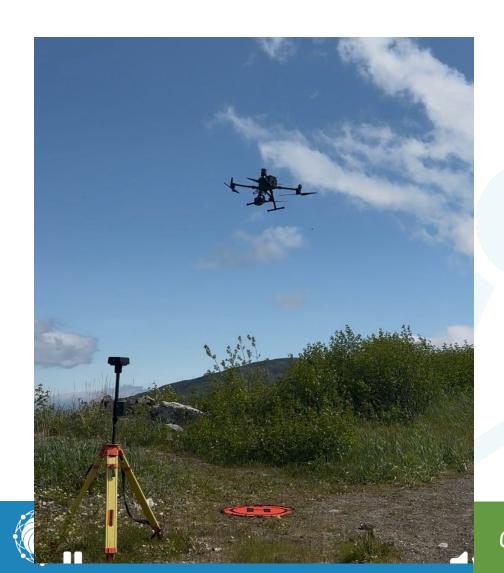
- Lake and Peninsula Borough / USGS / Alaska Coastal Cooperative
- Half of the area collected in 2023
- Second half Collected this summer

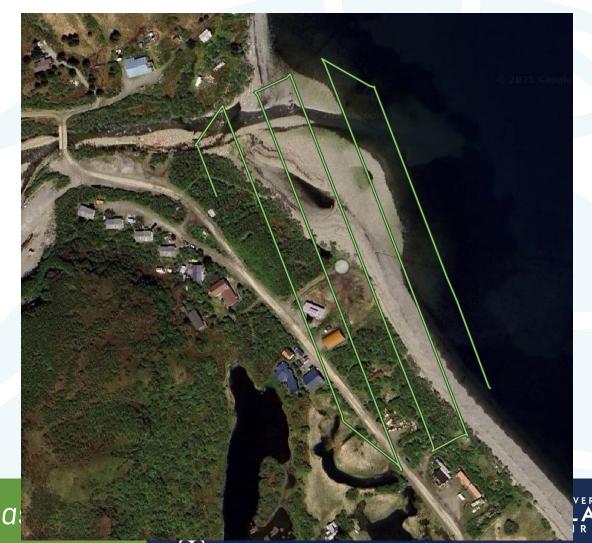




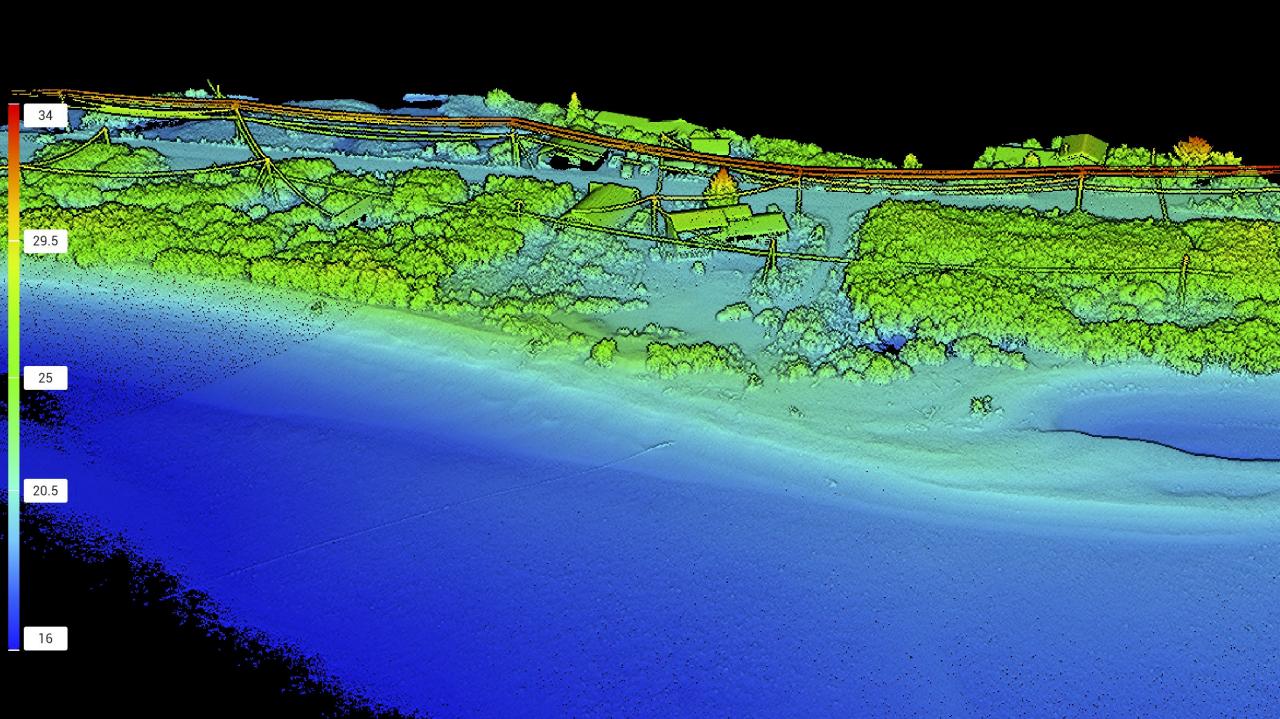


Mapping with LiDAR Drone





alaskacoa





A Community-Based Framework for Topobathymetric Mapping in the Chignik Watershed

Mike Willis, Master's student

Committee: Matthew Balazs, Chris Maio, Mark Zimmermann









Local tide and water levels



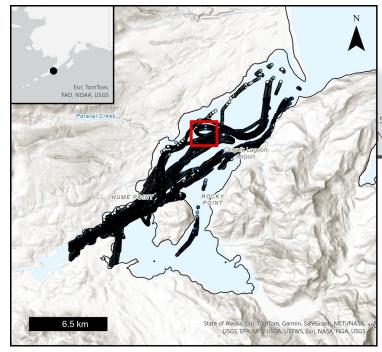


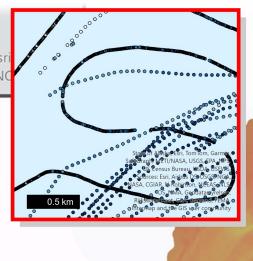






Community-based Bathy Mapping



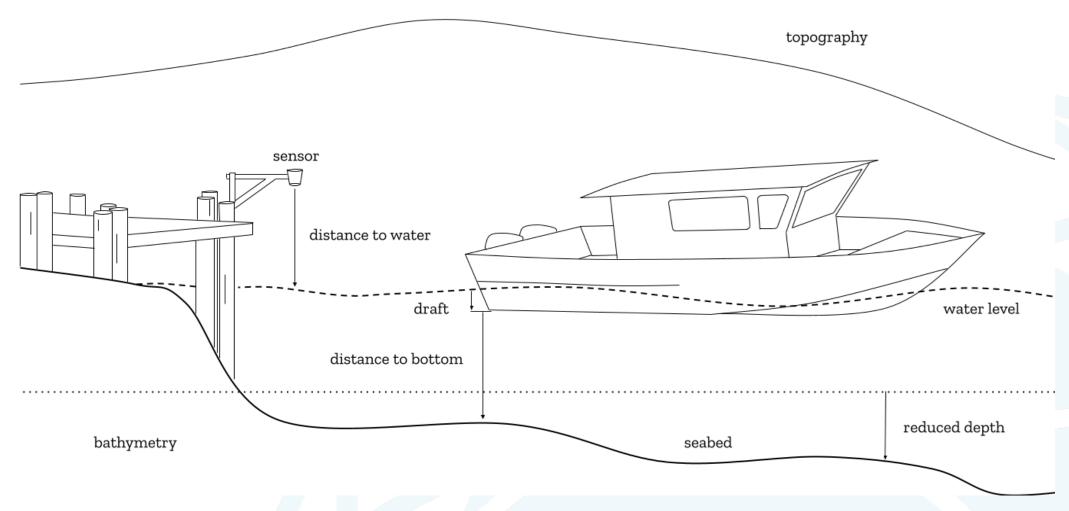












Schematic of measurements and offsets to obtain corrected depths

 $Depth_{NAVD88} = (H_{NAVD88}) - (+D_{water}) + (-D_{draft}) + (-D_{bottom})$

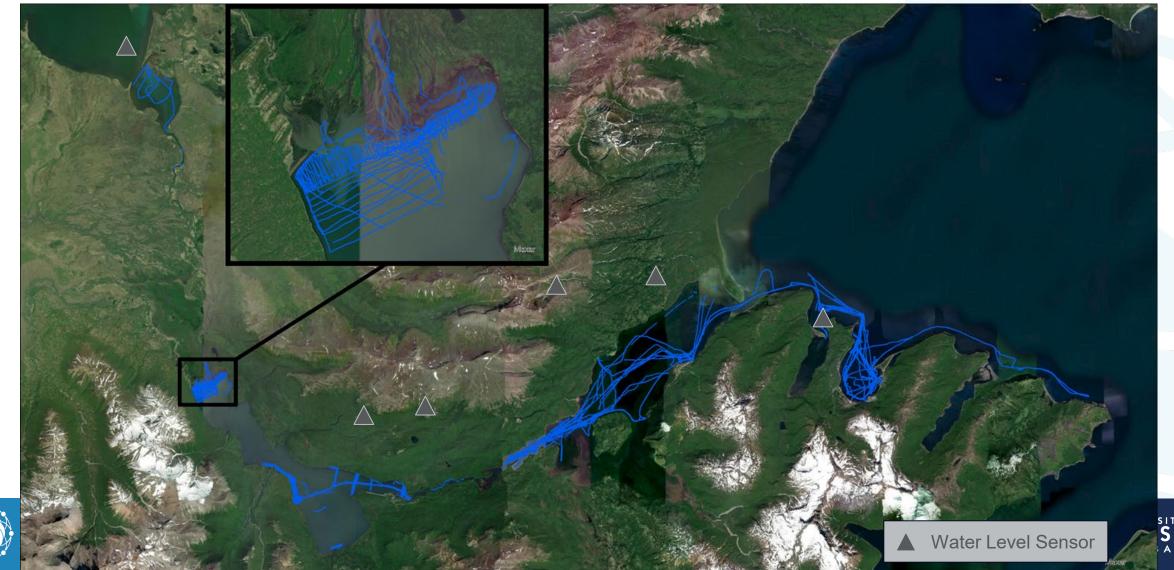








Single Beam Survey Track Lines (2023-24)





2025 Convergence Science Cruise

Bringing the ACTION project to sea

- 1. Enhance Communication
- 2. Advance Applied Research
- 3. Build Technical Capacity



R/V Sikuliaq

- 16 day cruise
- Indigenous and western scientists and educators
- Port calls to Chignik Bay, Atka, and Gambell
- Convergence of science, people, and place
- Visit demonstrates importance of rural coastal communities





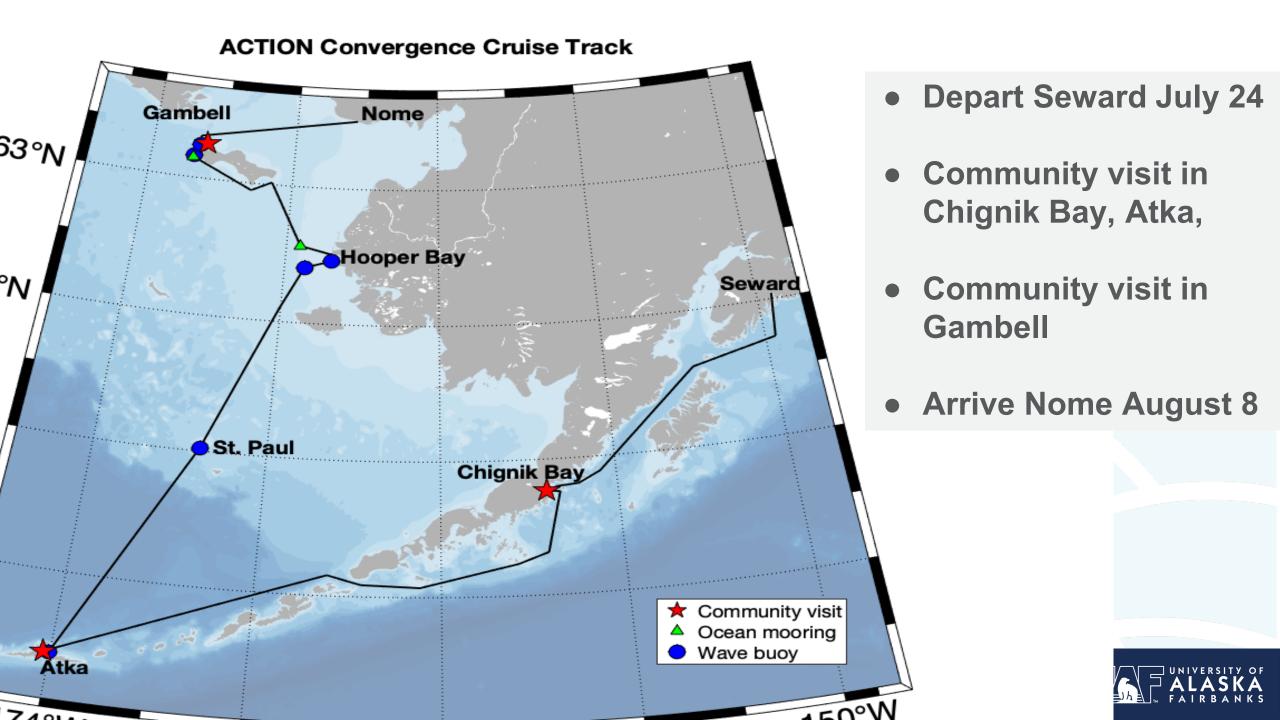






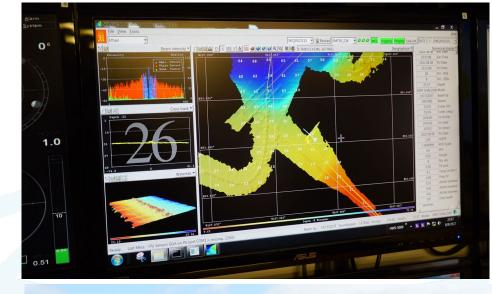






Training and Education

- Learning how to operate ship survey technology
- Marine operations
- Subsistence hunting and processing practices
- Drone pilot training
- Indigenous Art and Culture













Enhance communication

- Community Visits Chignik Bay, Atka, Gambell (Tentative on weather)
- Learning from each other on the ship
- Art, dance, cultural sharing
- Social media filmmaking







Advance applied science

- Deploy wave buoys and other oceanographic equipment
- Conduct temperature/depth/salinity profiles (CTDs) at mooring and other locations
- Map the seafloor in areas of communities
- Drone and GPS surveys on land
- Monitor for harmful algal blooms





Chignik Bay Visit

- July 26 or 27, 2025
- Around 42 hours in area
- Mix of learning about doing research and knowledge exchange and learning

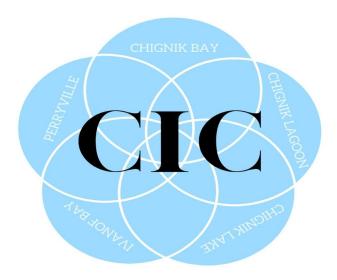






JJ Orloff

Chignik Intertribal Coalition



COMING THIS SUMMER! CONVERGENCE RESEARCH CRUISE





Alaska Coastal Cooperative

With a dynamic crew of western and Indigenous scientists, educators, and rural community members the R/V Sikuliaq will sail from Seward to Nome, visiting partner communities along the 2200 mile, 16-day trip. The research cruise will include visits to the communities of Chignik Bay, Atka, and Gambell.

Tentative Community Dates

Chignik Bay: 7/26 - 7/27 Atka: 7/30 - 7/31 Gambell: 8/5 - 8/6

During weather dependent community visits coastal research collaborations, knowledge exchange, and other engagement activities will take place. We look for community guidance on how to 57 best take advantage of this incredible opportunity.

Contact us to get involved!

UAF

Chris Maio, 508-280-2831, cymaio@alaska.edu Kay McMonigal, ktmcmonigal@alaska.edu Chiqnik Bay:

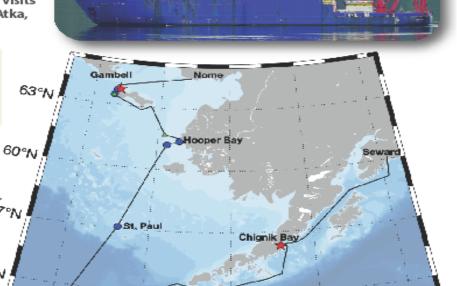
JJ Orloff, dc.crl.jj@gmail.com

Atka

Alex Zaochney, azaochney@gmail.com

Gambel

Chase Apassingok, chase.puwlima@gmail.com



Zoom ship-to-shore Indigenous knowledge exchange opportunities also available!









168°W



162°W



156°W





174°W





Community visit
 Ocean mooring

Wave puby

Ship Tours

 Morning and afternoon timeslots for ~30-45 min tours (8-10 people per tour)

Youth 5 and above with a care-giver





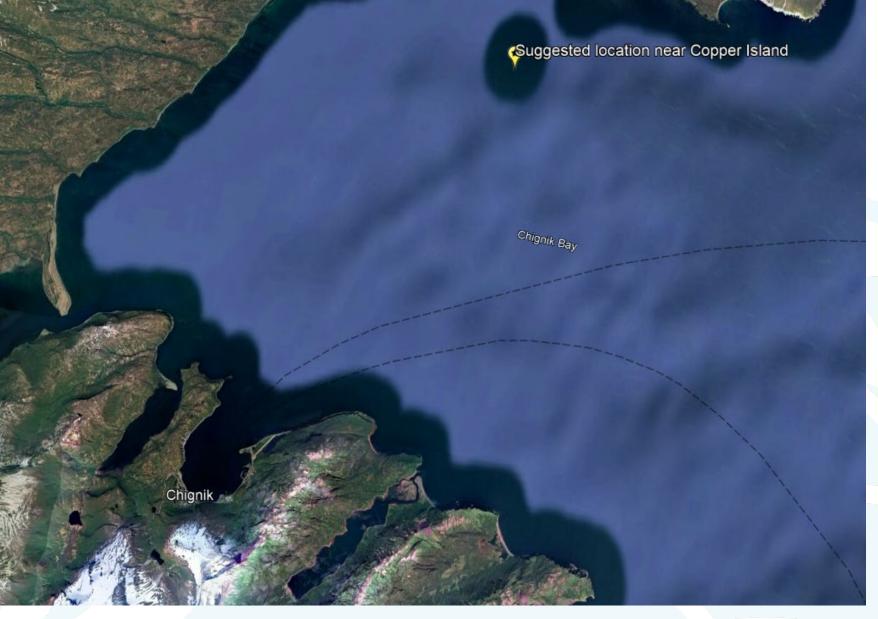
What activities should we do to teach the participants about the Chigniks

What can we do to make it a engaging experience for you?

Ideas on research such as mapping airport lake

Where to put the wave buoy?













THANK YOU!

