

ALASKA CIAP STATE TIER 1-10:

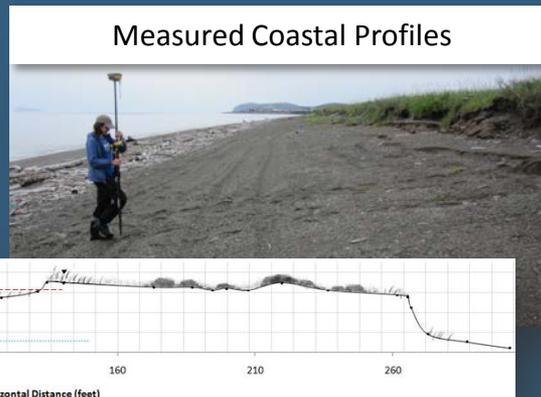
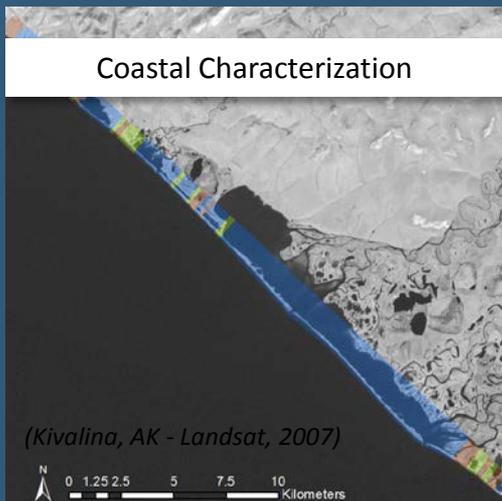
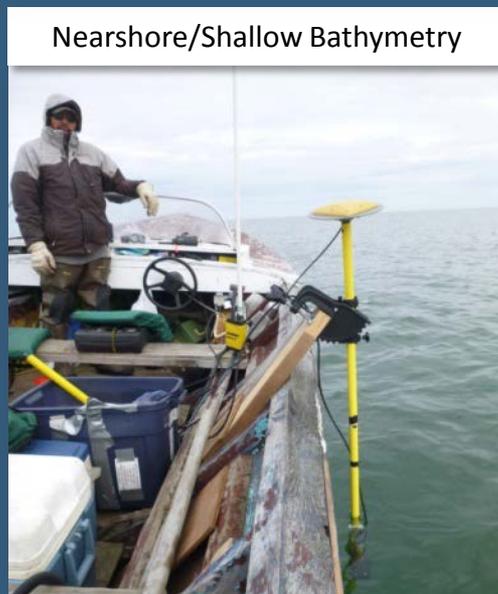
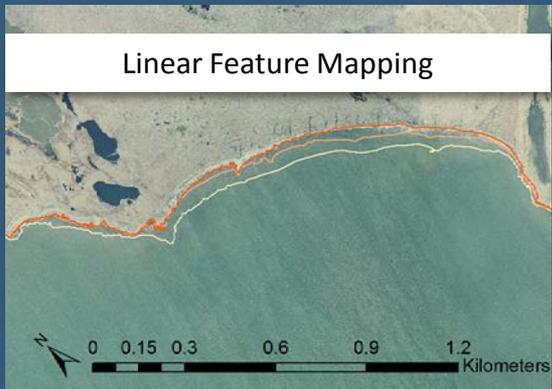
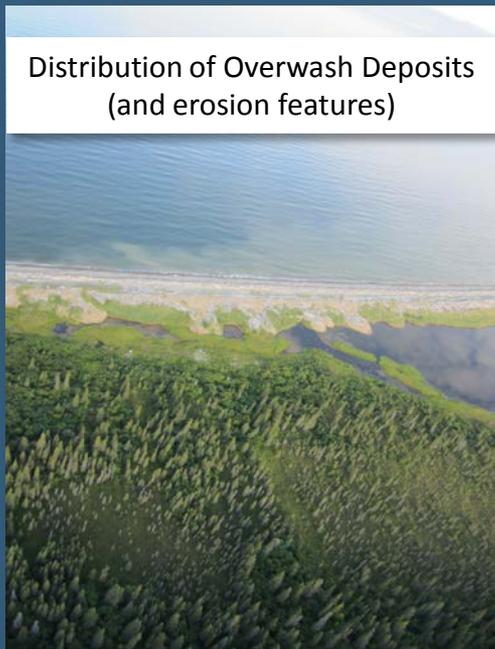
# GEOHAZARD EVALUATION & GEOLOGIC MAPPING FOR COASTAL COMMUNITIES



*Photo collected by DGGs July 2012, Golovin AK*

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# DGGS Coastal Fieldwork & Baseline Data Collection



# DGGS Approach to Coastal Geohazard Mapping



U.S. Army Corps  
of Engineers  
Alaska District

Study Findings and Technical Report

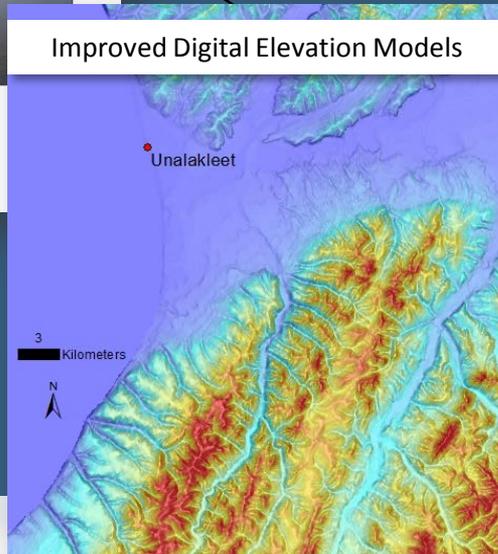
Alaska Baseline Erosion Assessment



Division at the community of Eganook

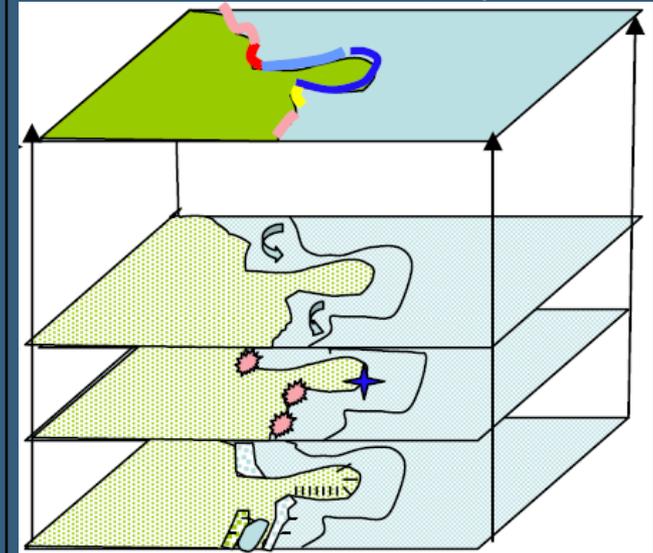
Outside reports, maps, model results, expert and resident knowledge

Improved Digital Elevation Models



Synthesis

Coastal Classification and Vulnerability Bands/Ribbons/Lines/Strips



(RESPONSE & BRGM, 2006)

**Composite Coastal Hazard Maps for Alaskan Communities**

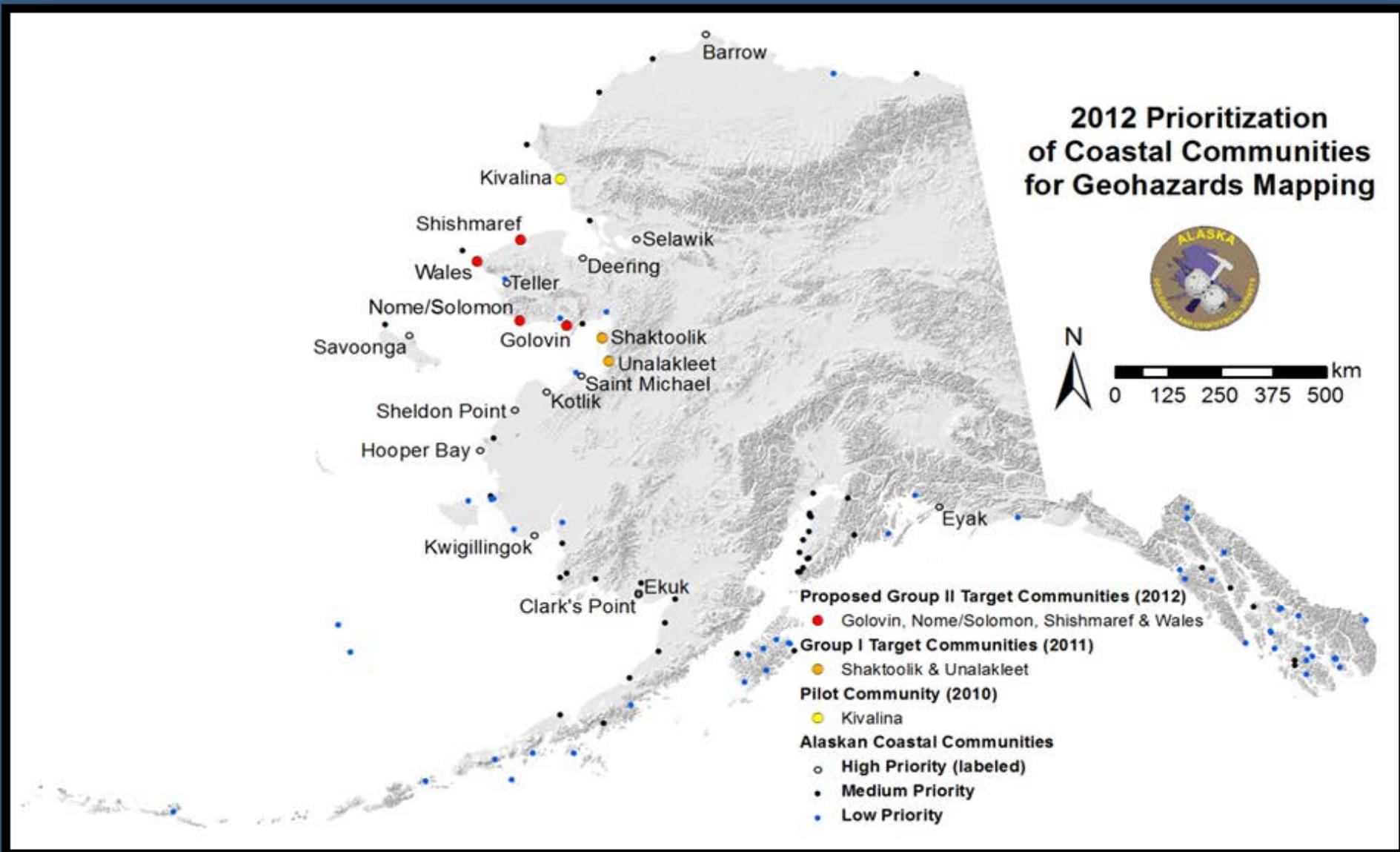
Included Information:

- Geomorphology & Coastal Processes
- Historically Recorded Hazards
- Existing Defenses
- Local Knowledge

Field investigations including baseline data collection & ground truthing



# Project Field Areas



# DGGS Winter 2011 Activities

## Rapid Response to November Bering Sea Storm

- On site less than 24 hours after storm surge
  - 2 days in Unalakleet
  - 2 days in Shaktoolik
  - 1 day in Nome
  - 1 day in Golovin
- Used precision GPS equipment to document
  - 20 post-storm coastal profiles
  - >50 storm-induced water levels
- Used a range of techniques to document various ocean surface heights such as storm surge and wave run-up elevations
- Collected photographs, video and eyewitness accounts from community residents



# DGGS Summer 2012 Activities

## Coastal Mapping

- Seward Peninsula:
  - Golovin
  - Nome
  - Wales
  - Shishmaref
- 40 days of field work
  - 15 helicopter supported days
  - 10 boat supported days
- ~300 km of coast investigated for geohazard mapping
- ~900 km<sup>2</sup> of surficial geology mapped
- Concurrent collection of water level measurements

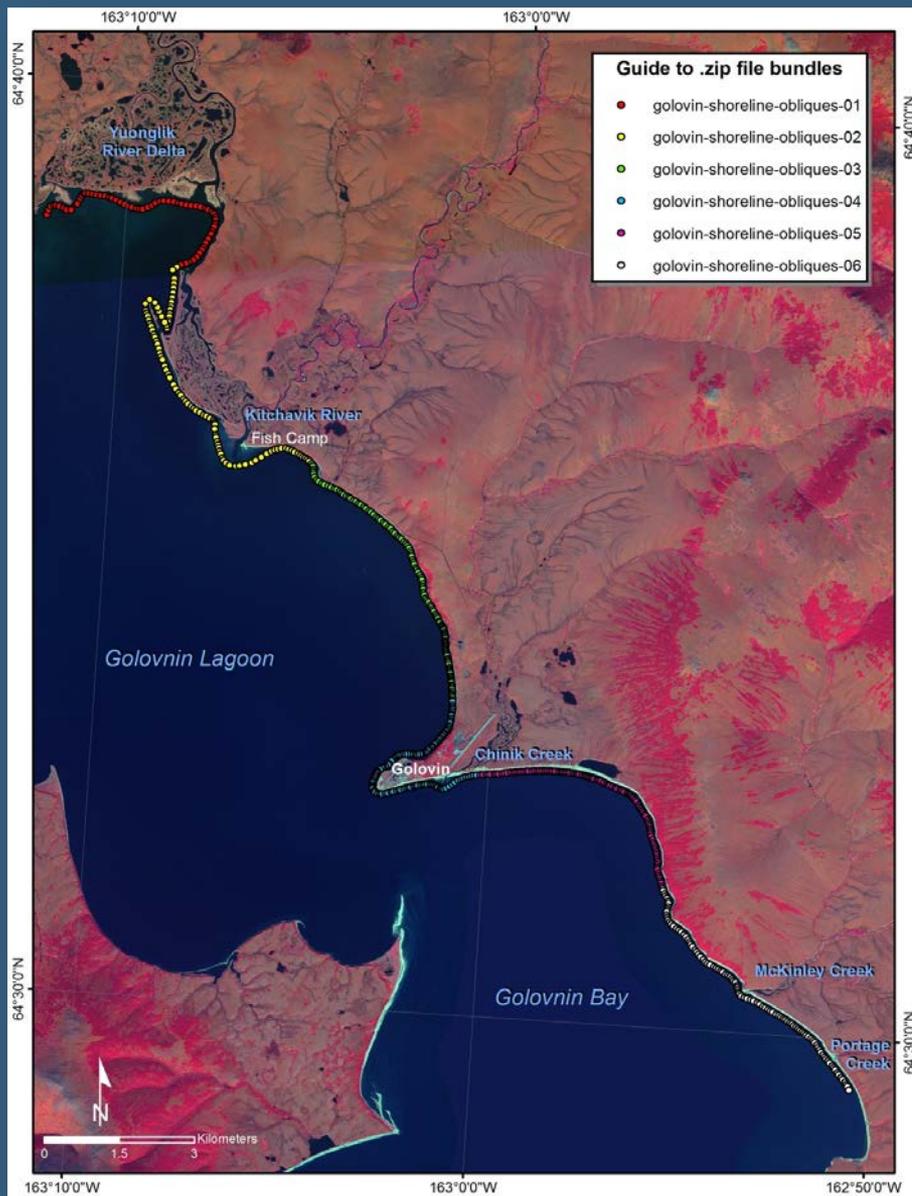
[Check out our field areas on AOOs](#)

## Involvement with ShoreZone

- \$11,000 towards 2012 imaging
- On site promotion of ShoreZone project in Wales and Shishmaref
- Providing feedback on new Coastal Vulnerability Module



# 2012 Oblique Image Aerial Image Collection – Golovin, Alaska





*Photo collected by DGGs July 2012, Golovin AK*

# 2012 Oblique Image Aerial Image Collection – Golovin Storm Deposits



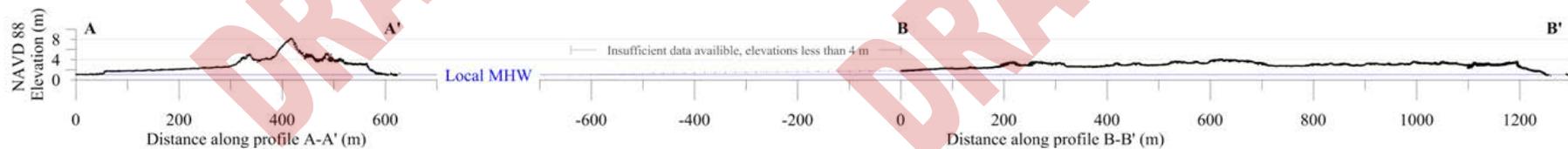
Fish Camp, Golovin, Alaska



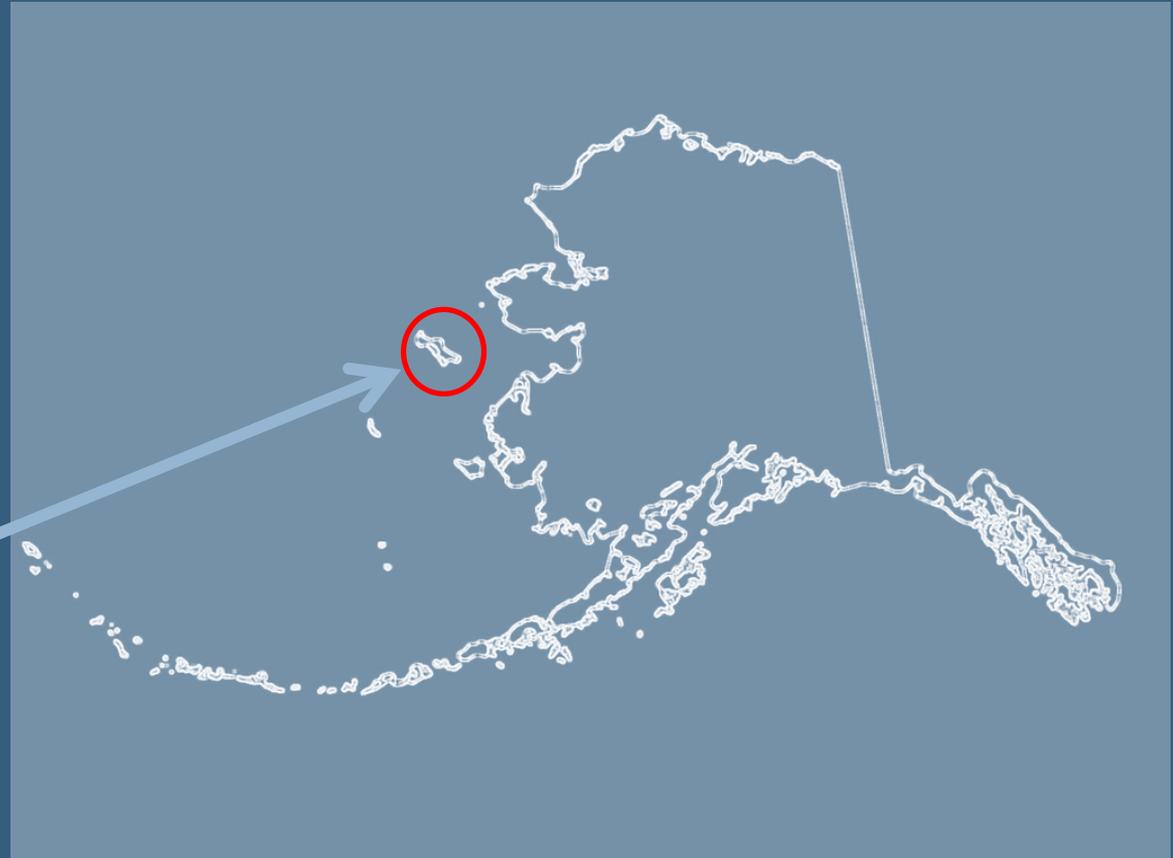
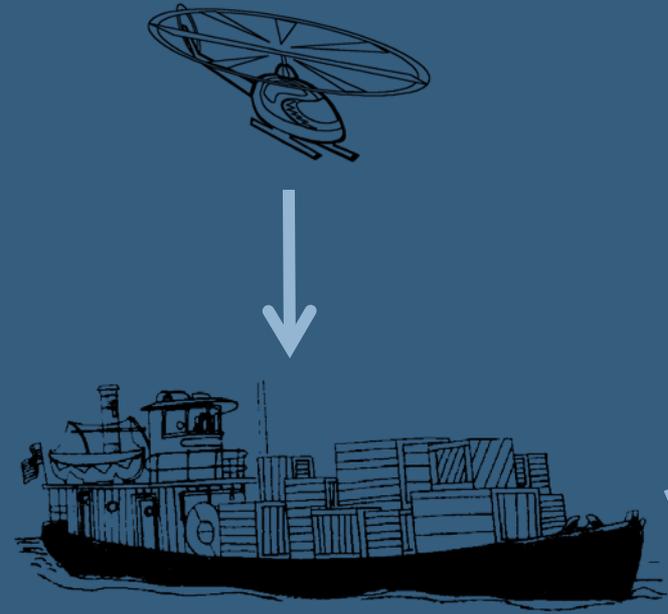
*Photo collected by DGGs July 2012, Golovin AK*



# 2012 ShoreZone Imagery is already being used in upcoming DGGS Publications



## 2013 – Savoonga and Gambell



July-August window

CIAP funding is already in place for DGGs geohazard mapping

Significant mobilization cost – Helicopter RFP by January 2013

We would like to invite ShoreZone & partners to join us on St. Lawrence Island next Summer