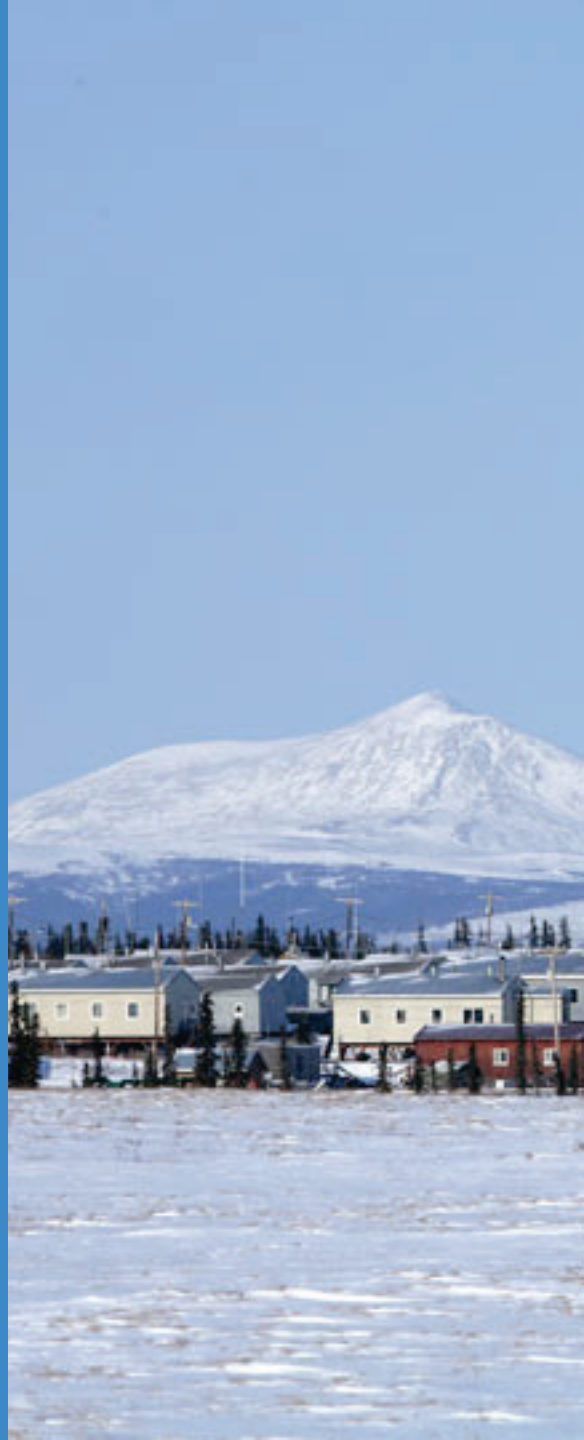
NANA

REGIONAL CORPORATION, INC.

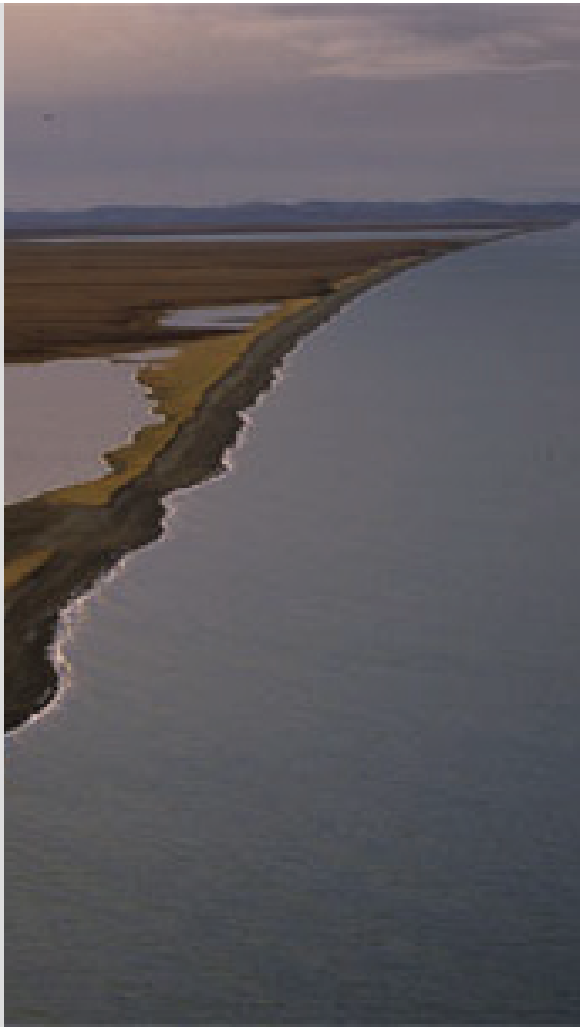



Kivalina R.
Red Dog Mine
Noatak River
Kivalina
Noatak
THE NANA REGION
Kobuk River
Ambler
Kiana
Shungnak
Kobuk
Kotzebue
Kotzebue Sound
Noorvik
Selawik
Arctic Circle
Selawik River
Deering
Buckland
Buckland River
30 miles
ARCTIC SLOPE
NANA
DOYON
CALISTA
COOK INLET
AHTNA
BRISTOL BAY

Overview of Region

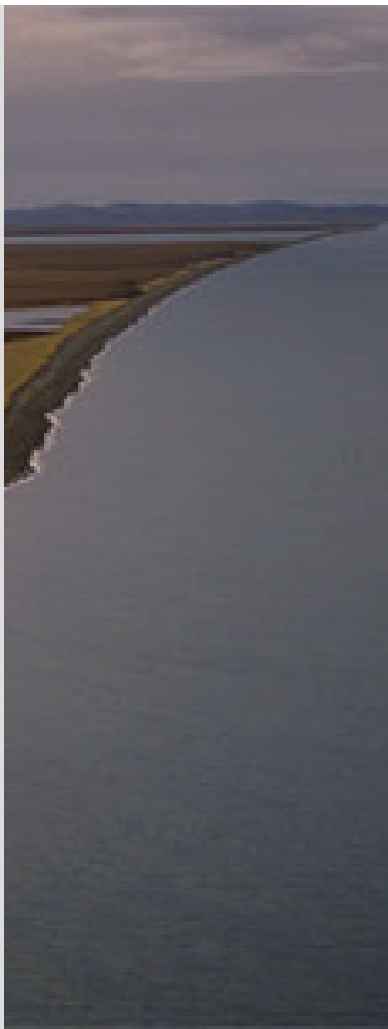
- 35,989 square miles
- 11 villages
- 7,400 (pop. 2008)
- 82.5 % Alaska Native
- More than 12,000 NANA shareholders
- 48 % more expensive than Anchorage

Source: Alaska Economic Trends, August 2009



Cost of Energy

- 55.4% of households received energy assistance last winter (2008)
  - Gasoline – $6.68 per gallon (average)
  - Stove oil – $630 per winter month (average)
  - Electricity – $ 294 per month (average)



Opportunities

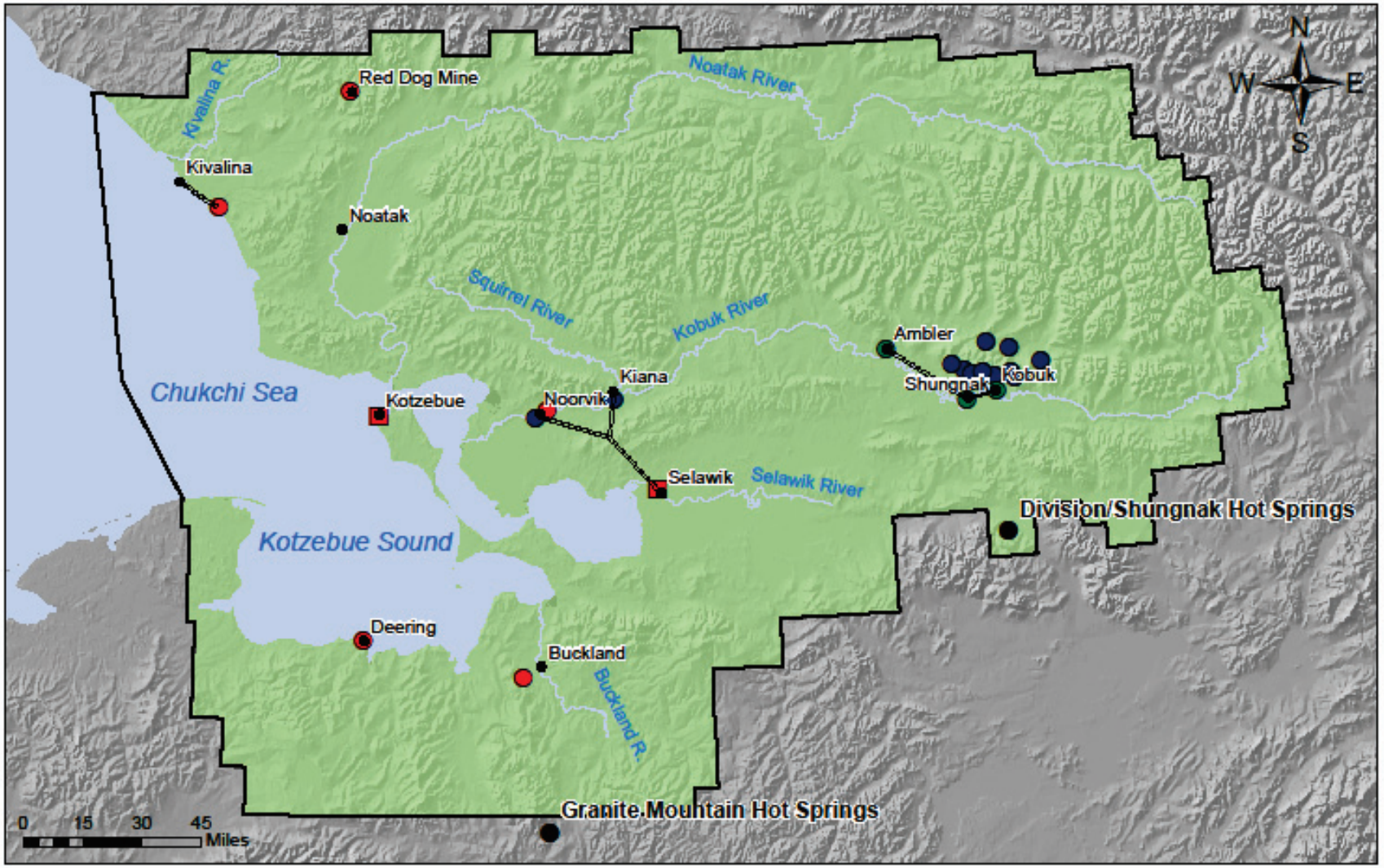
- Alternative and traditional energy sources
- Public/private partnerships
- Willingness of the people
- Unexplored potential
- Job creation

NANA Strategic Energy Plan (SEP)

- Energy Options Analysis completed
- Regional Energy Plan Completed (www.nana.com)
- Regional Energy Summit
- Energy Surveys Completed
- Secured funding in the amount of $16 million (WHPacific and NANA Pacific)

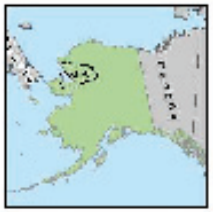
Regional Projects

- Wind diesel development
- Hydroelectric feasibility
- Biomass development
- Solar/Photovoltaic
- Energy efficiency & conservation
- Fossil Fuel



Legend

- Proposed/Under Investigation Powerline
- Existing Powerline
- Proposed/Under Investigation Biomass Site
- Proposed/Under Investigation Geothermal Site
- Proposed/Under Investigation Hydro Site
- Proposed/Under Investigation Wind Site
- Existing Wind Site
- NANA Region

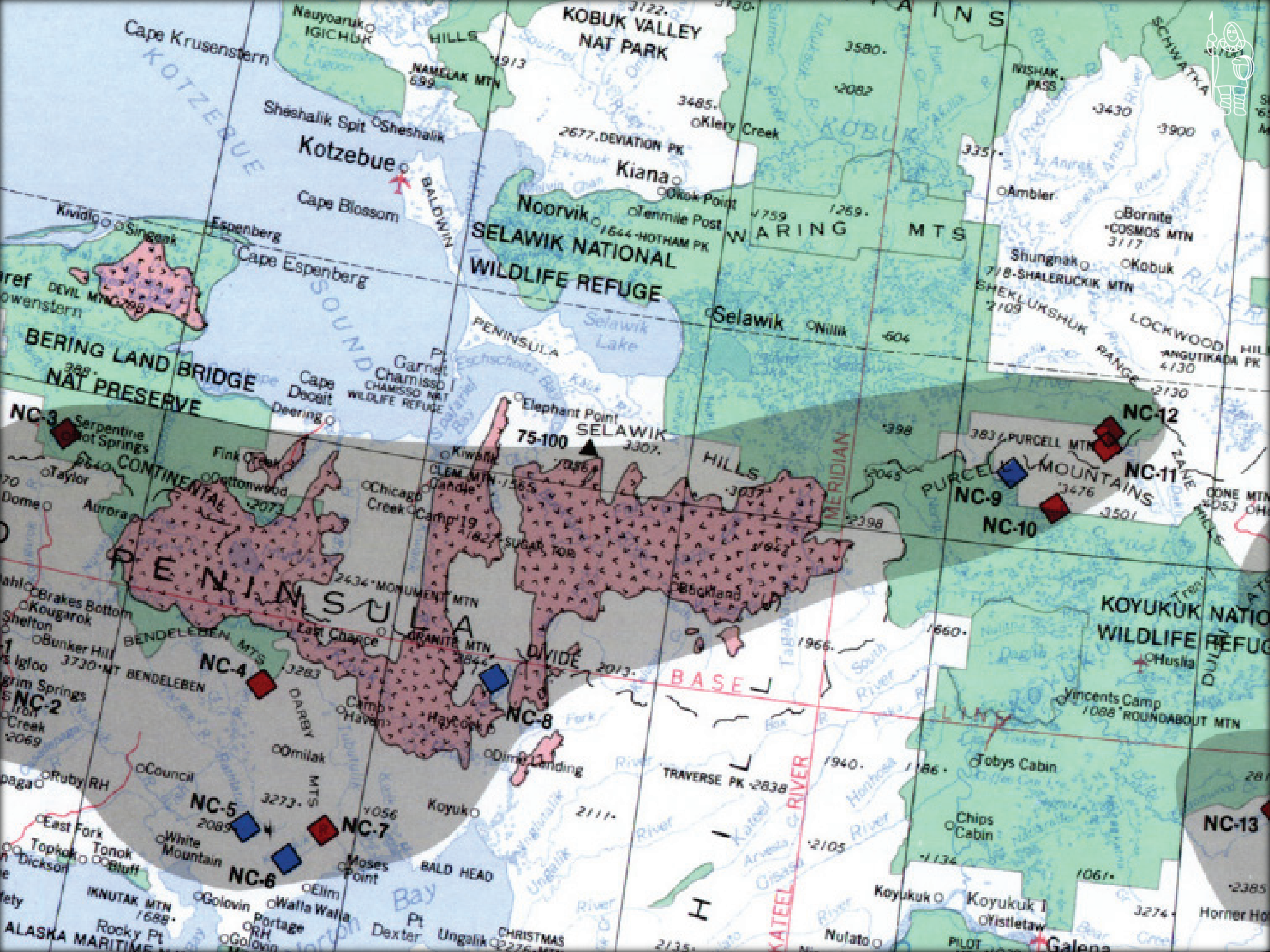


NANA Regional Corporation Renewable Energy Sources

Date: 03/24/2009
Projection: Alaska State Plane Zone 7 NAD 27

NANA Wind Resource Assessment Program (WRAP)

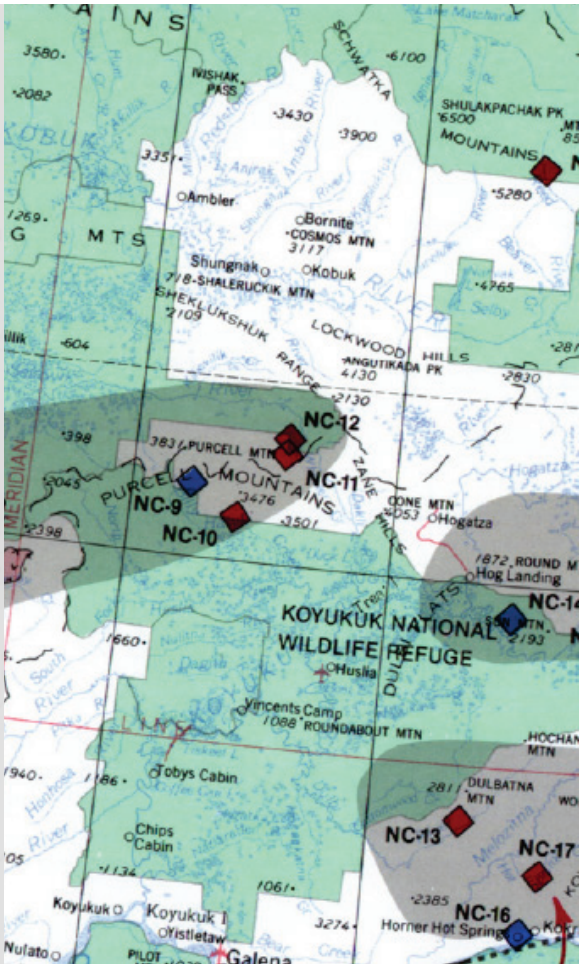
- Wind data collection
- New turbines
  - Noorvik, Deering, Buckland
- Erecting met towers
  - Noatak, Red Dog, Ambler
- Exploring public/private partnerships



KOBUK VALLEY NAT PARK
Cape Krusenstern
KOTZEBUE SOUND
Kotzebue
Sheshalik Spit
Sheshalik
Cape Blossom
BALDWIN PENINSULA
Kiana
Noorvik
SELAWIK NATIONAL WILDLIFE REFUGE
Selawik
Selawik Lake
WARING MTS
Ambler
Shungnak
Kobuk
Bornite
COSMOS MTN
LOCKWOOD HILLS
Cape Espenberg
Espenberg
DEVIL MTN
BERING LAND BRIDGE NAT PRESERVE
Cape Deceit
Deering
Chamisso I
CHAMISSO NAT WILDLIFE REFUGE
Elephant Point
SELAWIK HILLS
75-100
NC-3
Serpentine Hot Springs
CONTINENTAL
Taylor
Fink Creek
Cottonwood
Kiwalik
Chicago Creek
Candle
Camp 19
SUGAR TOR
PENINSULA
MONUMENT MTN
Buckland
BASE LINE
MERIDIAN
PURCELL MOUNTAINS
PURCELL MTN
NC-12
NC-11
NC-9
NC-10
ZANE HILLS
KOYUKUK NATIONAL WILDLIFE REFUGE
Huslia
Vincents Camp
ROUNDABOUT MTN
Tobys Cabin
Chips Cabin
Brakes Bottom
Kougarok
Shelton
Bunker Hill
Igloo
MT BENDELEBEN
BENDELEBEN MTS
NC-4
NC-2
East Chance
GRANITE MTN
DIVIDE
NC-8
DARBY MTS
Camp Haven
Haycock
Omilak
Dime Landing
Council
Ruby RH
TRAVERSE PK
Koyuk
NC-5
NC-6
NC-7
NC-13
East Fork
White Mountain
Topkok
Tonok
Dickson
Bluff
Moses Point
Elim
BALD HEAD
IKNUTAK MTN
Golovin
Walla Walla
Portage
Rocky Pt
Dexter
Ungalik
CHRISTMAS
Koyukuk
Koyukuk I
Nulato
Galena
Horner Hot Springs
ALASKA MARITIME

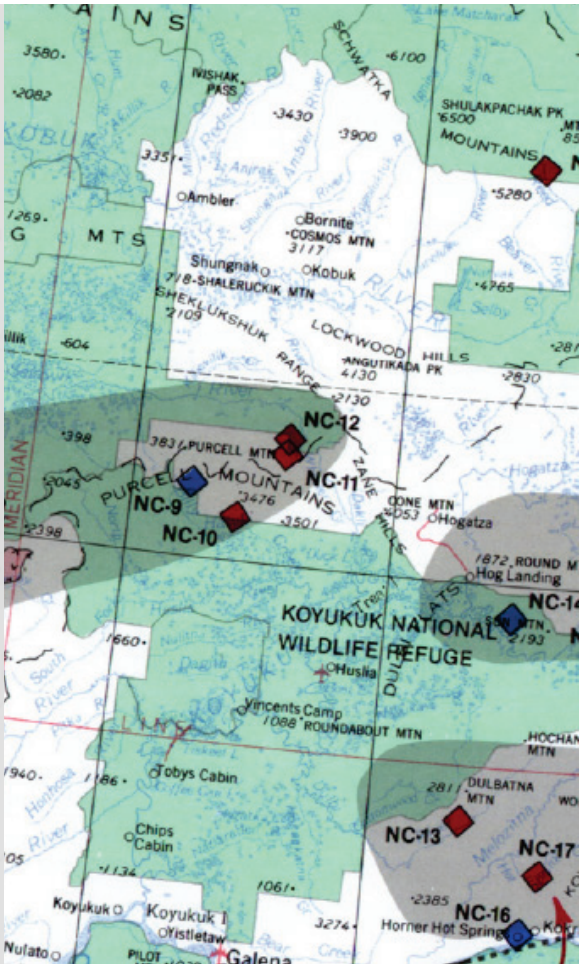
NANA Geothermal Assessment Program (GAP)

- Report completed –site identification (www.nana.com)
- Seven hot springs in the NANA region
- Mapped hot springs are 40 miles or more from NANA region communities
- Collaboration with the University of Alaska, Fairbanks (Alaska Center for Energy & Power)



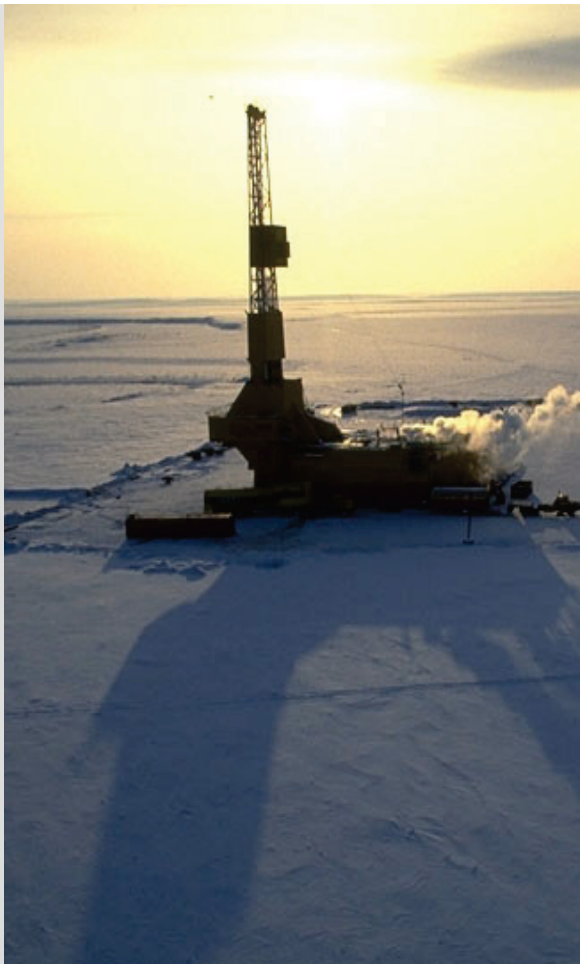
Biomass, Hydro, Solar

- Biomass resource assessment for upper Kobuk (Partner: NIHA)
- Hydro feasibility study (AVEC)
- Solar (AVEC)



Natural Gas & Oil Exploration

- Partnered with Trio
- One of the largest unexplored areas in North America
- 3 on-shore potential drill locations
  - Kobuk Delta, the Baldwin Peninsula, and Cape Espenburg
- Village outreach
- Currently working on permits to perform drilling operations



Energy Efficiency and Conservation Block Grant

- Department of Energy (DOE) and Denali Commission
- Funds projects that:
  - Reduce energy use
  - Reduce fossil fuel emissions
  - Improve in energy efficiency.
- 9 of 11 villages elected to participate
- Tribes decide on grant use

Constraints & Concerns

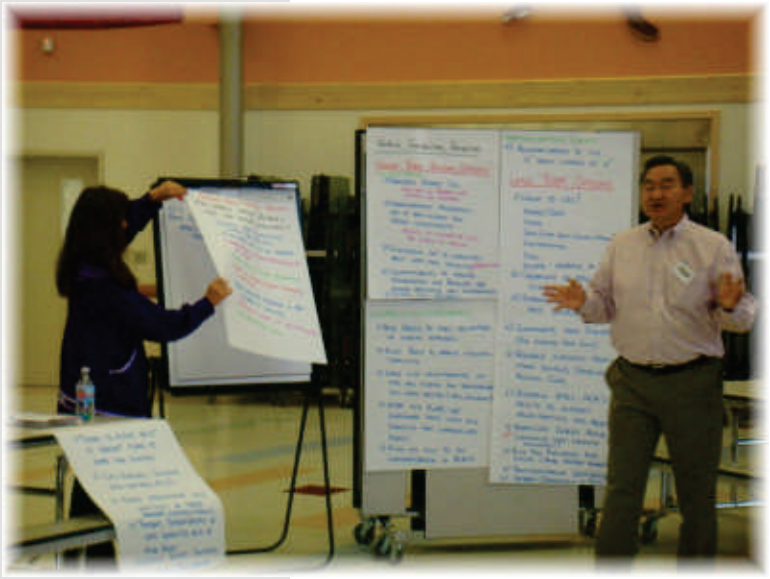
- Government
  - Streamline funding process
  - Uncertain permit requirements
  - Not eligible for AEA grants

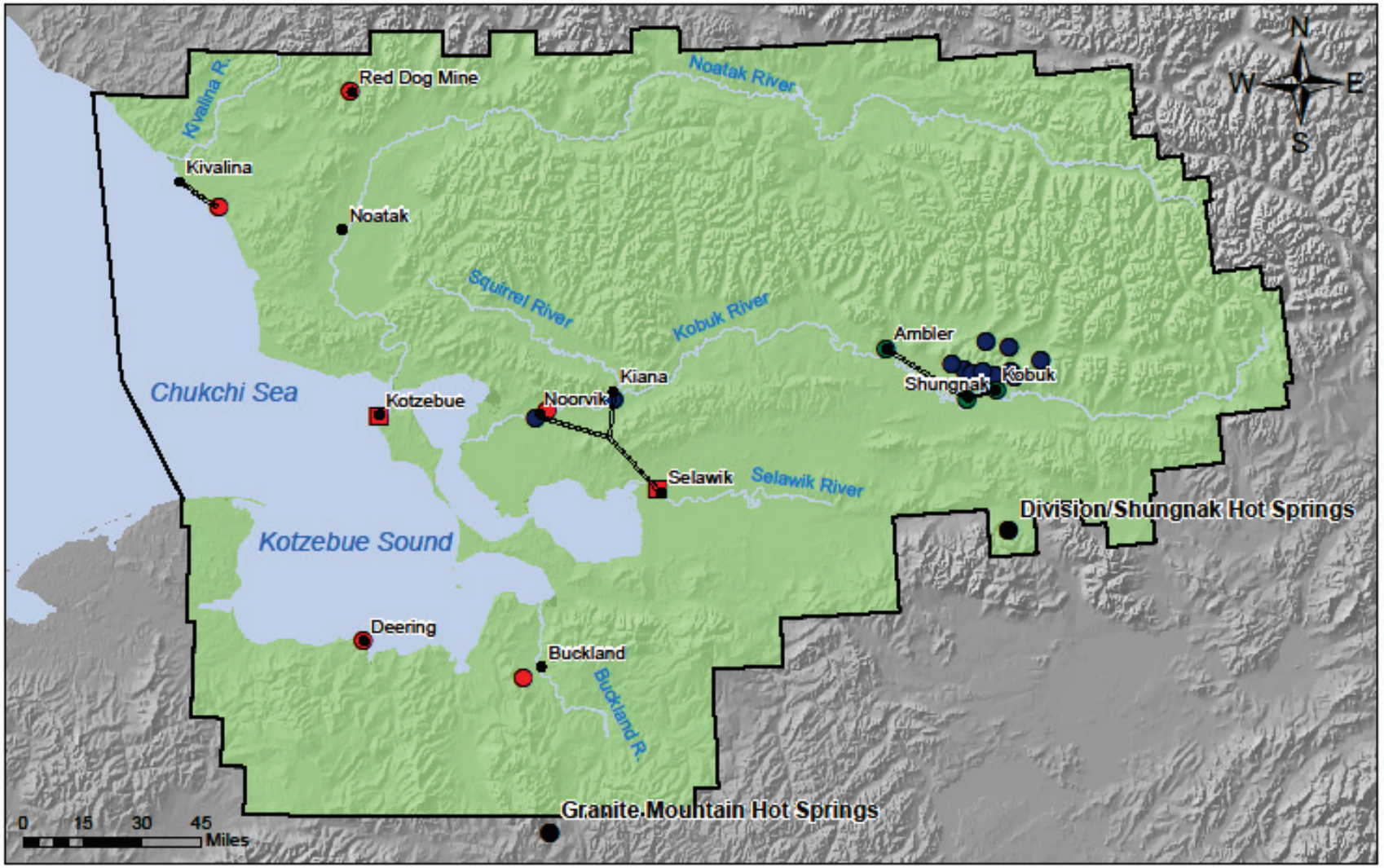
- Immediate concerns
  - Fuel crisis in 4 villages
  - Fuel providers
  - Lack of choice

Next Steps

- Update Strategic Energy & Energy Options plan
- Continue collaborations
- Identify potential demonstration and research opportunities
- Monitor Funding Opportunities
  - Federal Department of Energy
  - AEA
- Develop “bankable” regional energy projects

Wind Energy in NW AK/NANA Region





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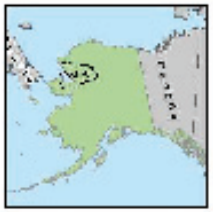

NANA Regional Corporation Renewable Energy Sources

Date: 03/24/2009
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Existing Wind Power in NANA Region

Need to improve penetration level

- Kotzebue – Utility, KEA
  - Class 4 to 5 wind resource
  - Ten AOC 15/50 (65 kW) wind turbines
  - One NW100 (100 kW) wind turbine
  - One Vestas V15 (65 kW) wind turbine
  - Since 1997
- Selawik – Utility, AVEC
  - Class 2 to 3 wind resource
  - Four AOC 15/50 (65 kW)
  - wind turbines
  - Since 2001

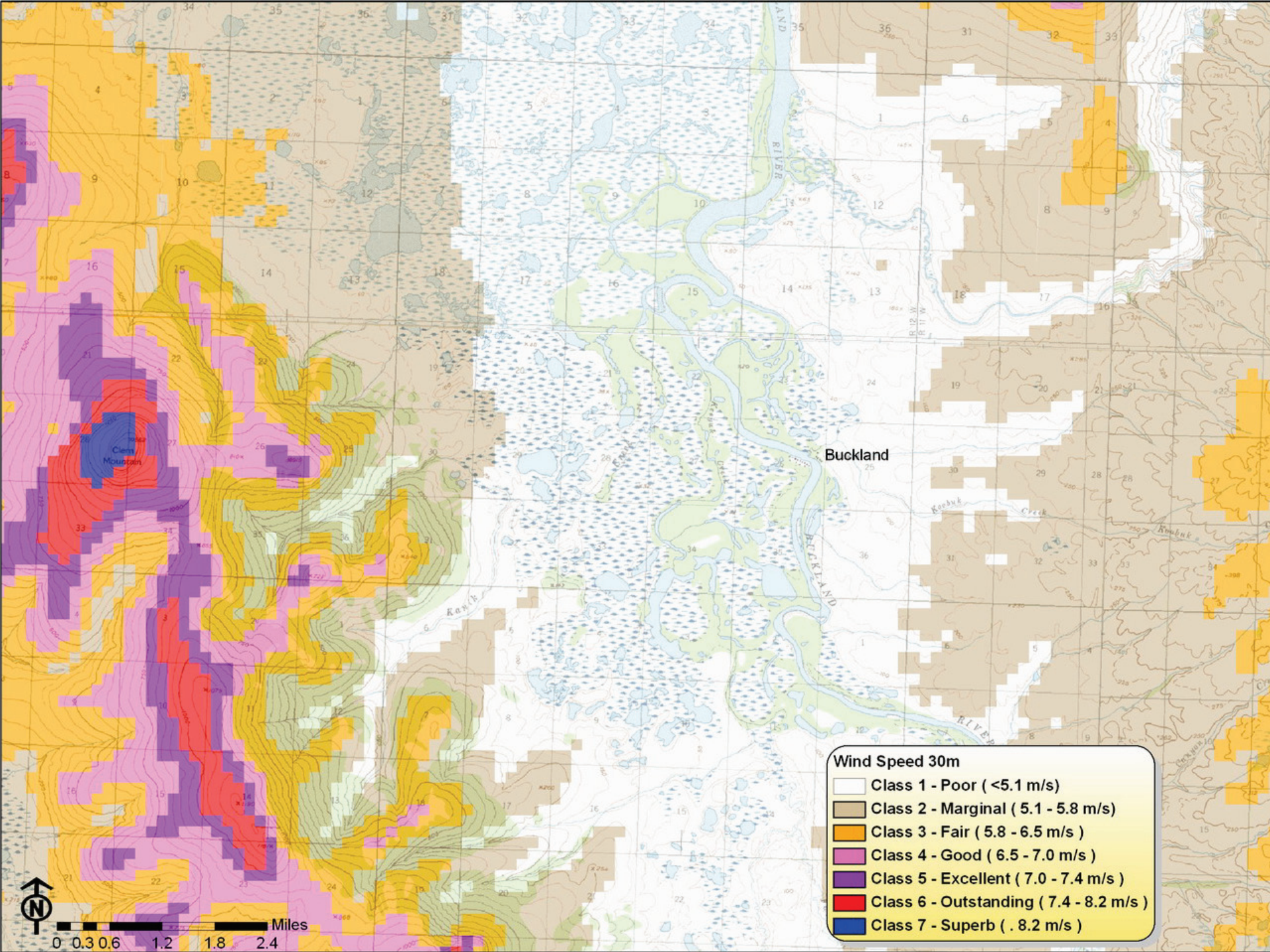
Predicted Wind Resource in NANA Region Villages

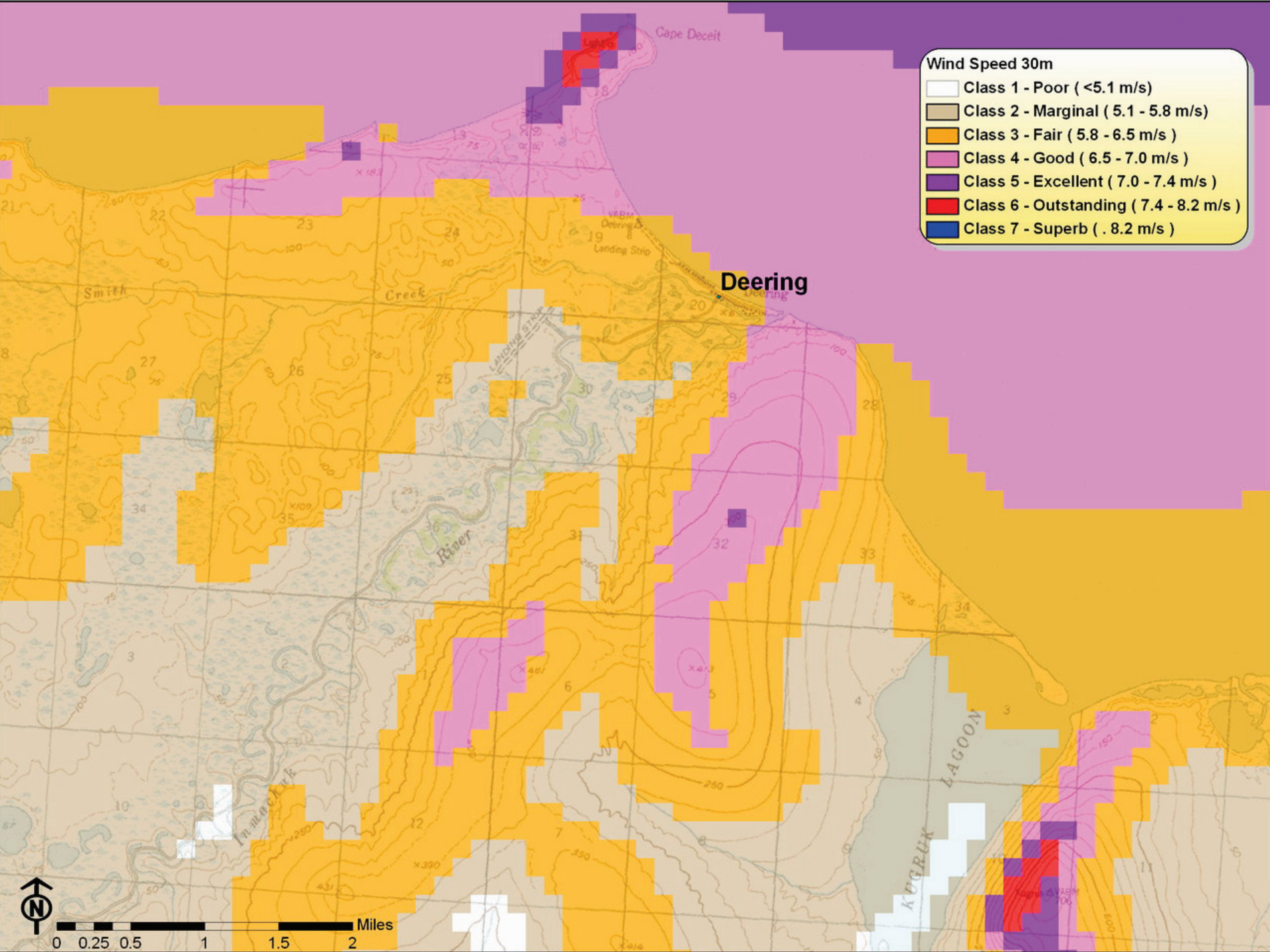
One Year data

Buckland- class 3
Noorvik- Existing class 2-3
Deering- class 6
Kivalina- class 6-7

Under Assessment

Ambler- 4 months of data
Kiana
Bornite/NOVA Gold- could benefit
Upper Kobuk


Buckland
Clems Mountain
Wind Speed 30m
Class 1 - Poor (<5.1 m/s)
Class 2 - Marginal (5.1 - 5.8 m/s)
Class 3 - Fair (5.8 - 6.5 m/s)
Class 4 - Good (6.5 - 7.0 m/s)
Class 5 - Excellent (7.0 - 7.4 m/s)
Class 6 - Outstanding (7.4 - 8.2 m/s)
Class 7 - Superb (. 8.2 m/s)
N
0 0.3 0.6 1.2 1.8 2.4
Miles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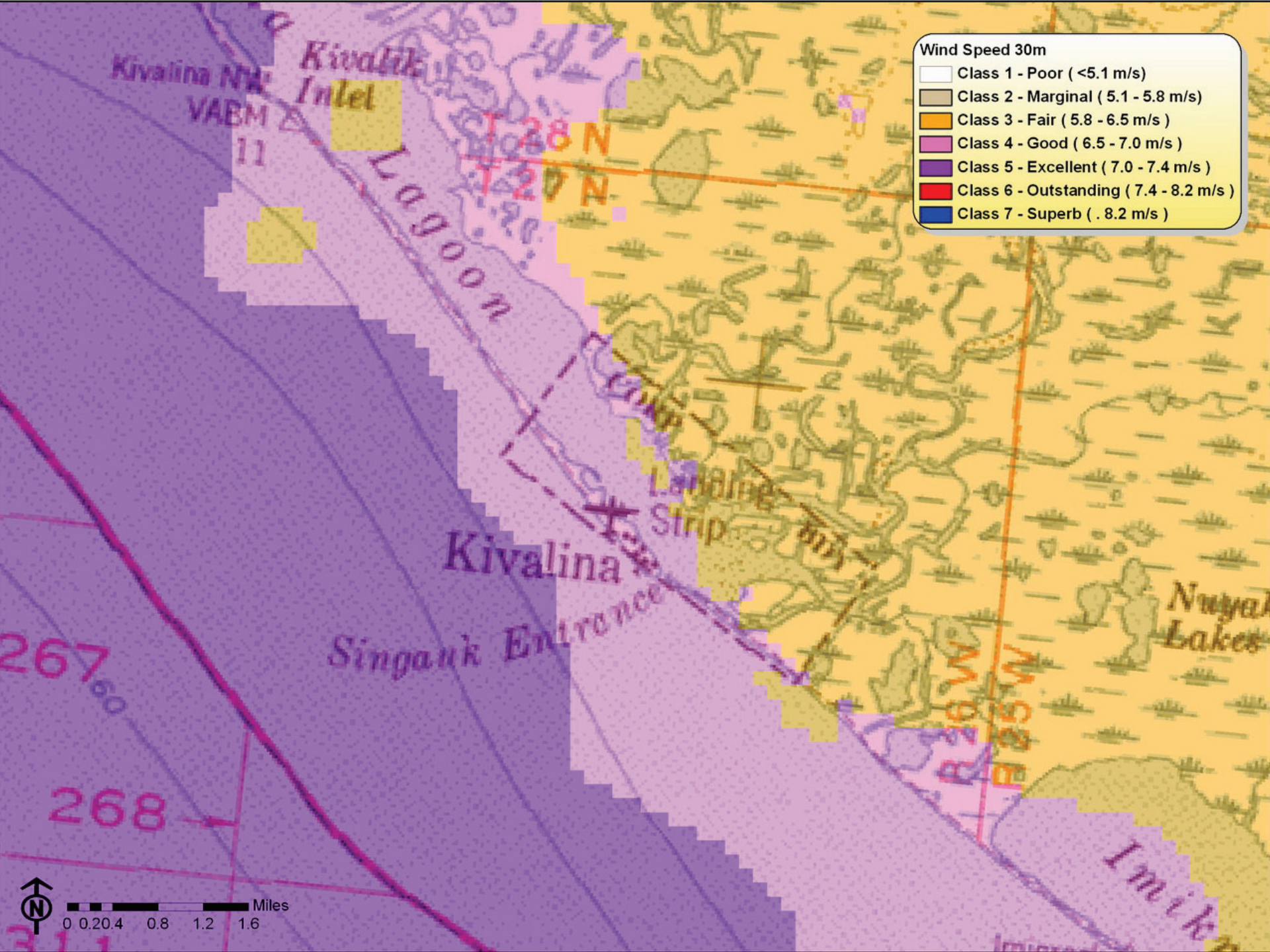
Class 6 - Outstanding (7.4 - 8.2 m/s)
Class 7 - Superb (. 8.2 m/s)
Deering
Cape Deceit
Smith
Creek
River
LAGOON
Miles
0 0.25 0.5 1 1.5 2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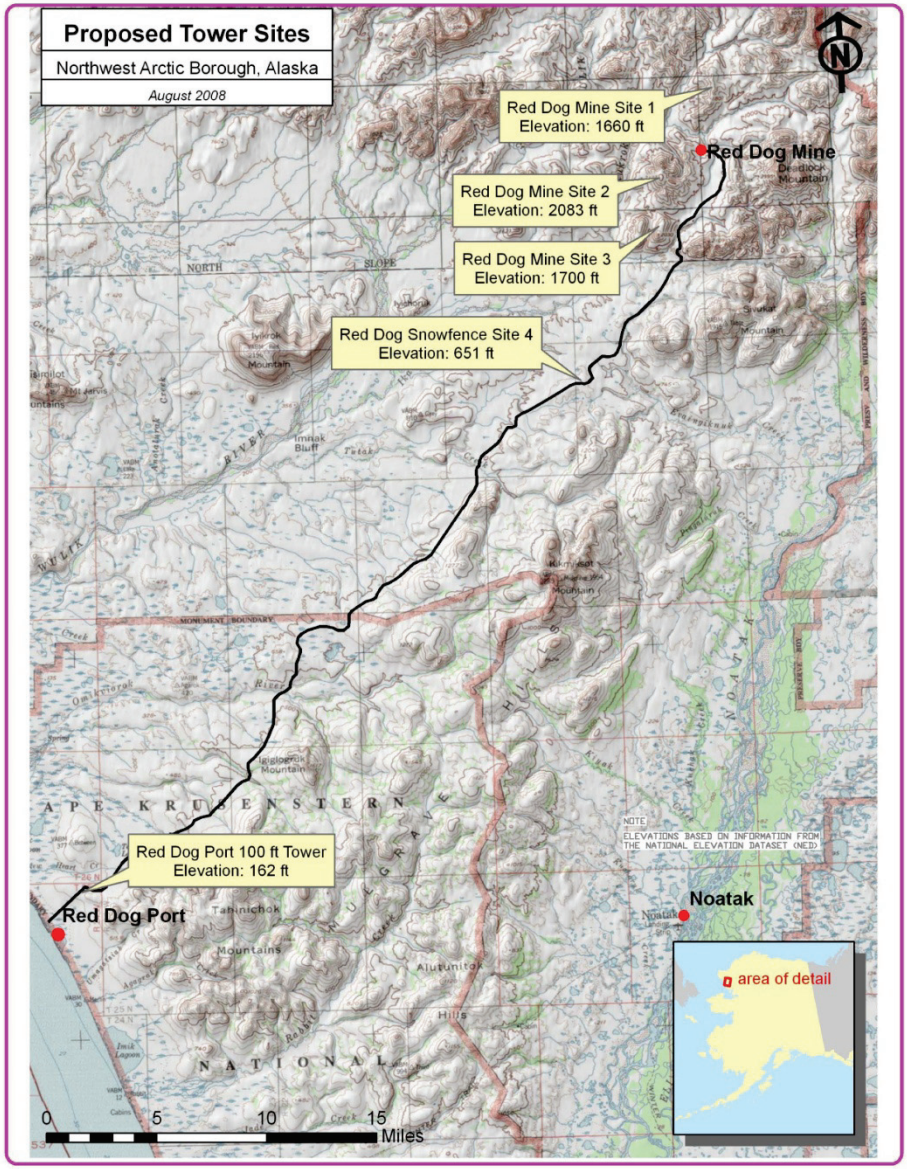
Class 6 - Outstanding (7.4 - 8.2 m/s)
Class 7 - Superb (. 8.2 m/s)
Kivalina NA
VABM
11
Kivalik
Inlet
Lagoon
T 28 N
T 27 N
Strip
Kivalina
Singauk Entrance
R26W
R25W
Nuyal
Lakes
Imik
267
60
268
N
Miles
0 0.20.4 0.8 1.2 1.6

Teck Alaska

Renewable Energy Public Private Partnership



NANA Region Wind Program- Next Steps

- Support on-going efforts- AVEC, KEA, & Teck
- Conceptualize small (10 kw and less) deployment for certain applications
- Conceptualize regional remote monitoring controls/strategy
- Further expand work-force development in the region
- Identify opportunities for technology

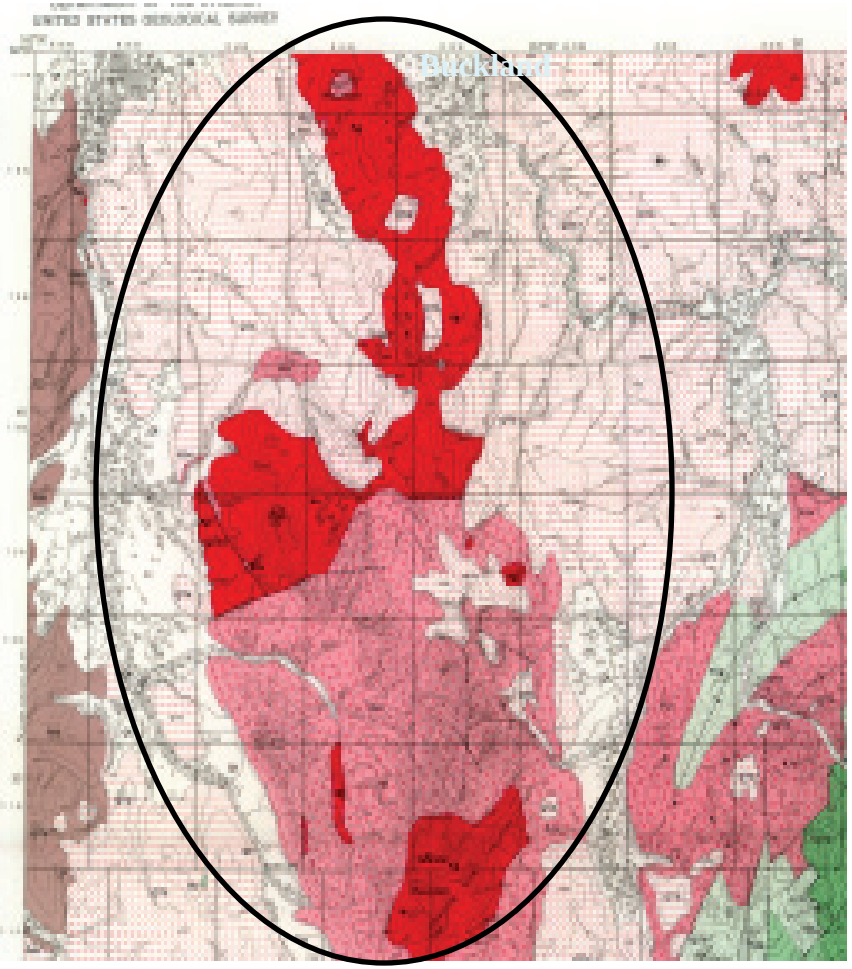
Geothermal Assessment Program

- Initial enthusiasm with geothermal potential
- Limited data and analysis
- Development of NANA GAP Report
- Identified 7 hot springs
- Granite Mountain & Division Hot Springs- higher likelihood of development


Red Dog Mine
Noatak River
Kivalina
Noatak
THE NANA REGION
Kobuk River
Kiana
Noorvik
Selawik
Shungnak
Kotzebue Sound
Arctic Circle
Selawik River
Deering
Buckland
Buckland River
30 miles
Selawik & Kotzebue Basins province
Yukon-Koyukuk province
Seward Peninsula province

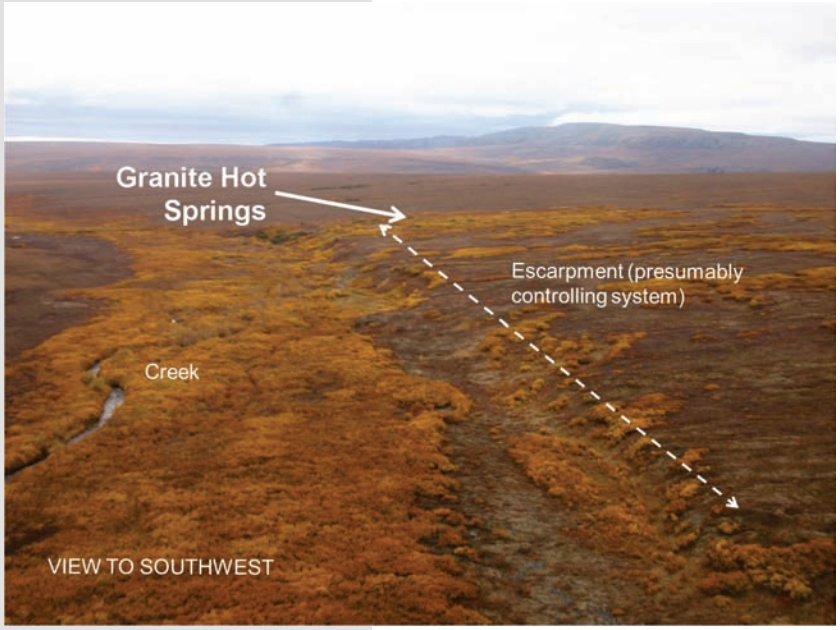
Geologic map of the Buckland region

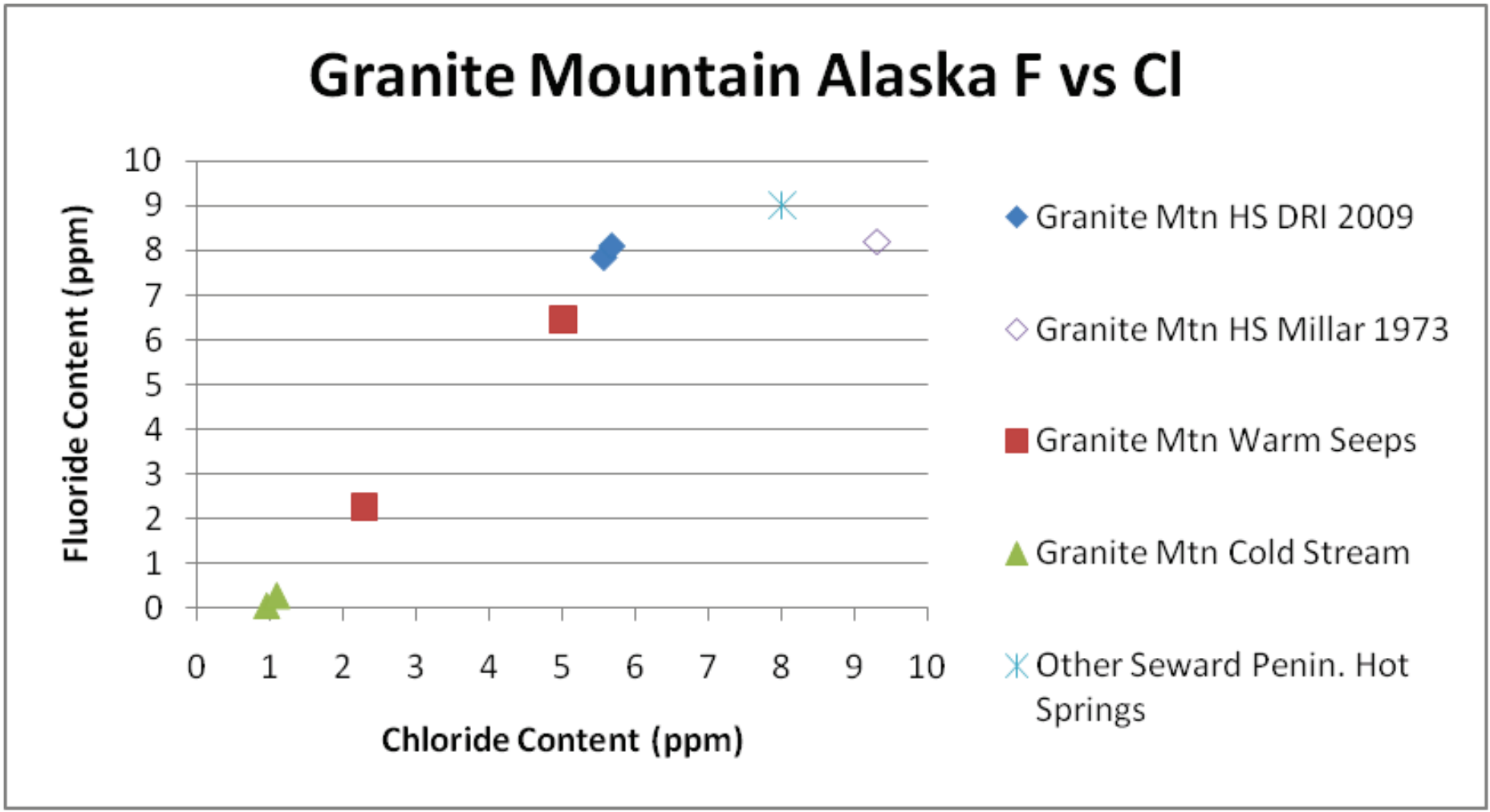
- Buckland/Deering Geologic map
  - Red = granitic rocks, which are favorable host rocks for geothermal resources;
  - all others = which are probably not good host rocks for geothermal resources.
  - Strong Possibility that geothermal resources could extend northward as well. Geothermal exploration should focus on the circled area.

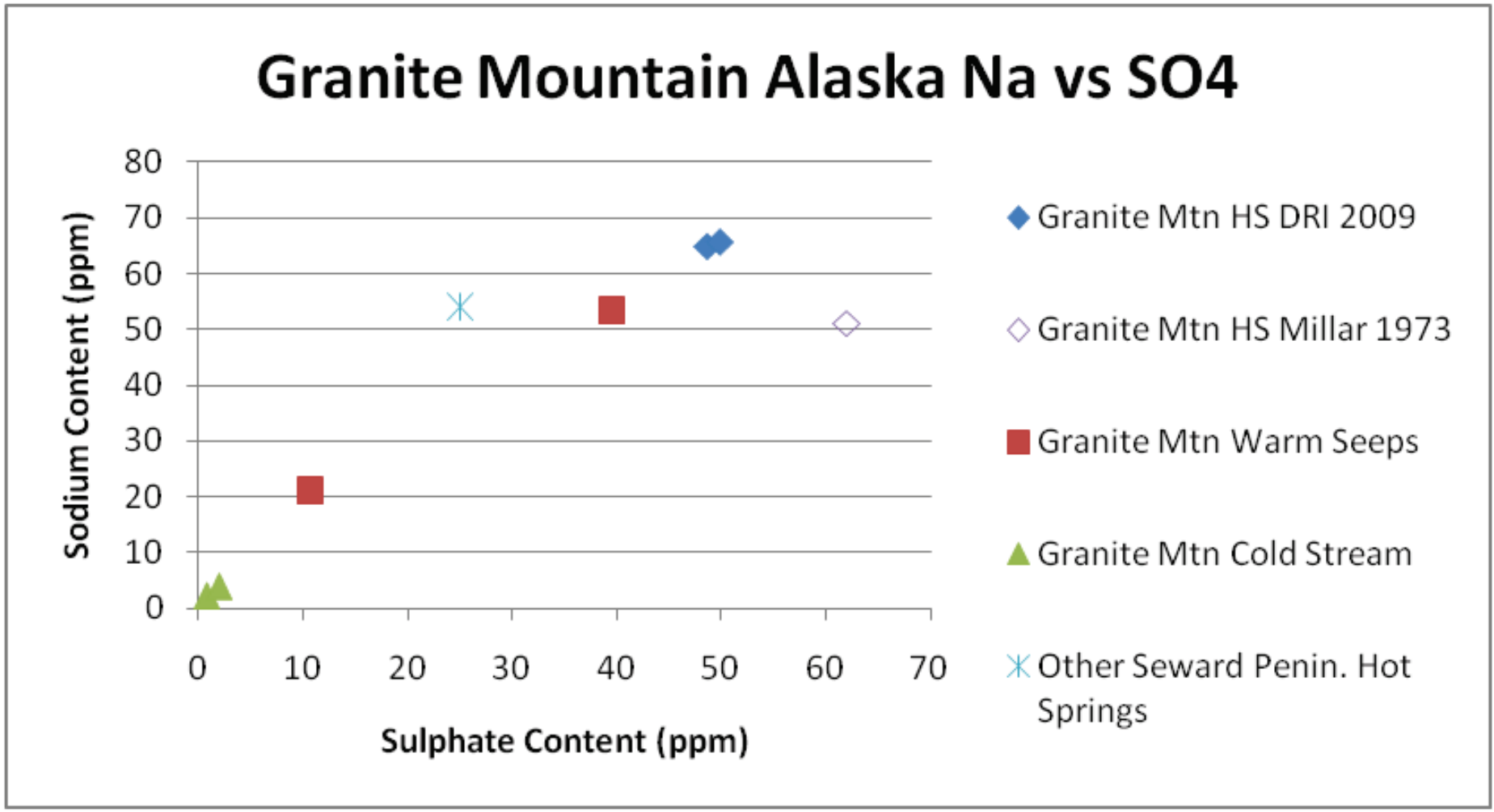


Granite Mountain Field Work-2009

- Field work activities
- Geological Assessment
- Chemistry Analysis
- Geothermometry
- Heat flow assessment




Granite Mountain Alaska F vs Cl
Fluoride Content (ppm)
0
1
2
3
4
5
6
7
8
9
10
Chloride Content (ppm)
0
1
2
3
4
5
6
7
8
9
10
Granite Mtn HS DRI 2009
Granite Mtn HS Millar 1973
Granite Mtn Warm Seeps
Granite Mtn Cold Stream
Other Seward Penin. Hot Springs


Granite Mountain Alaska Na vs SO4
Sodium Content (ppm)
80
70
60
50
40
30
20
10
0
0
10
20
30
40
50
60
70
Sulphate Content (ppm)
Granite Mtn HS DRI 2009
Granite Mtn HS Millar 1973
Granite Mtn Warm Seeps
Granite Mtn Cold Stream
Other Seward Penin. Hot Springs

Geothermal Development- Discussion and Next Steps

- Fairly typical of geothermal systems in the interior of Alaska.
- <1mw power production potential
- Comparable in temperature to Chena
- Isolated no infrastructure
- Significant cost to develop

Taikuu

NANA
REGIONAL CORPORATION, INC.