Cultivating Support in Rural Alaska Native Communities

National Brownfields Training Conference
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Joy Britt
Alaska Native Tribal Health Consortium

Amy Dieffenbacher
Dept. of Environmental Conservation

Alex James
Yakutat Tlingit Tribe

Sandrine Deglin
Dept. of Health and Social Services

Session Roadmap

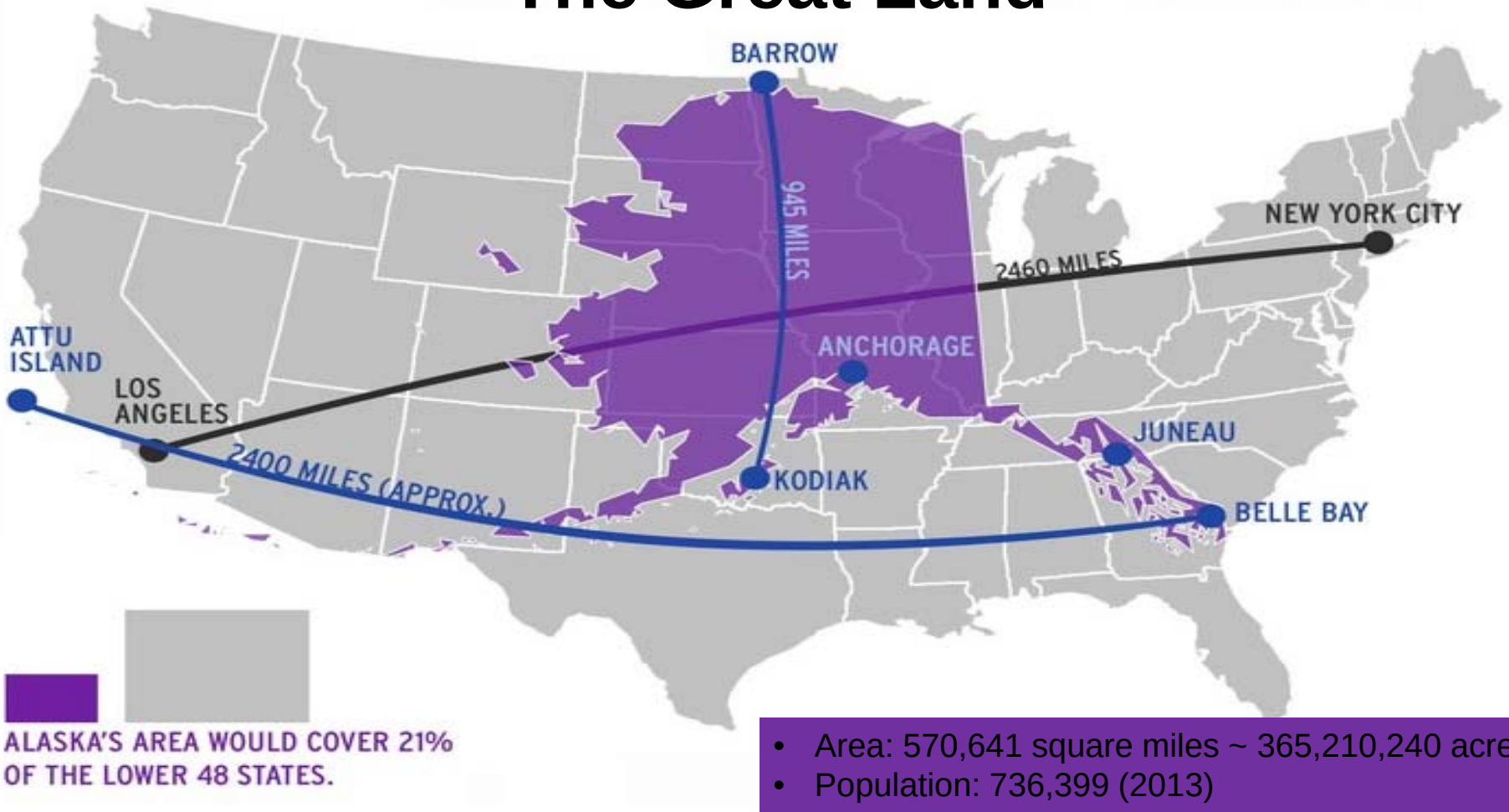
BACKGROUND
- Alaska Demographics
- Alaska Native Claims Settlement Act (ANCSA)
- Alaska's Tribal Response Programs

PARTNERSHIPS
- Key Partnerships
- Partnerships in Alaska
- Key Partnerships

SUCCESS STORY: Yakutat Tlingit Tribe
- Background
- Case Study Results
- Yakutat Cancer Study and Impacts on Community

CONCLUSION
- Communities + Partnerships = Success!
- Q & A

The Great Land



- Area: 570,641 square miles ~ 365,210,240 acres
- Population: 736,399 (2013)
- AK Native/American Indian: 123,154 (17%)
- 229+ Federally recognized Tribes in Alaska

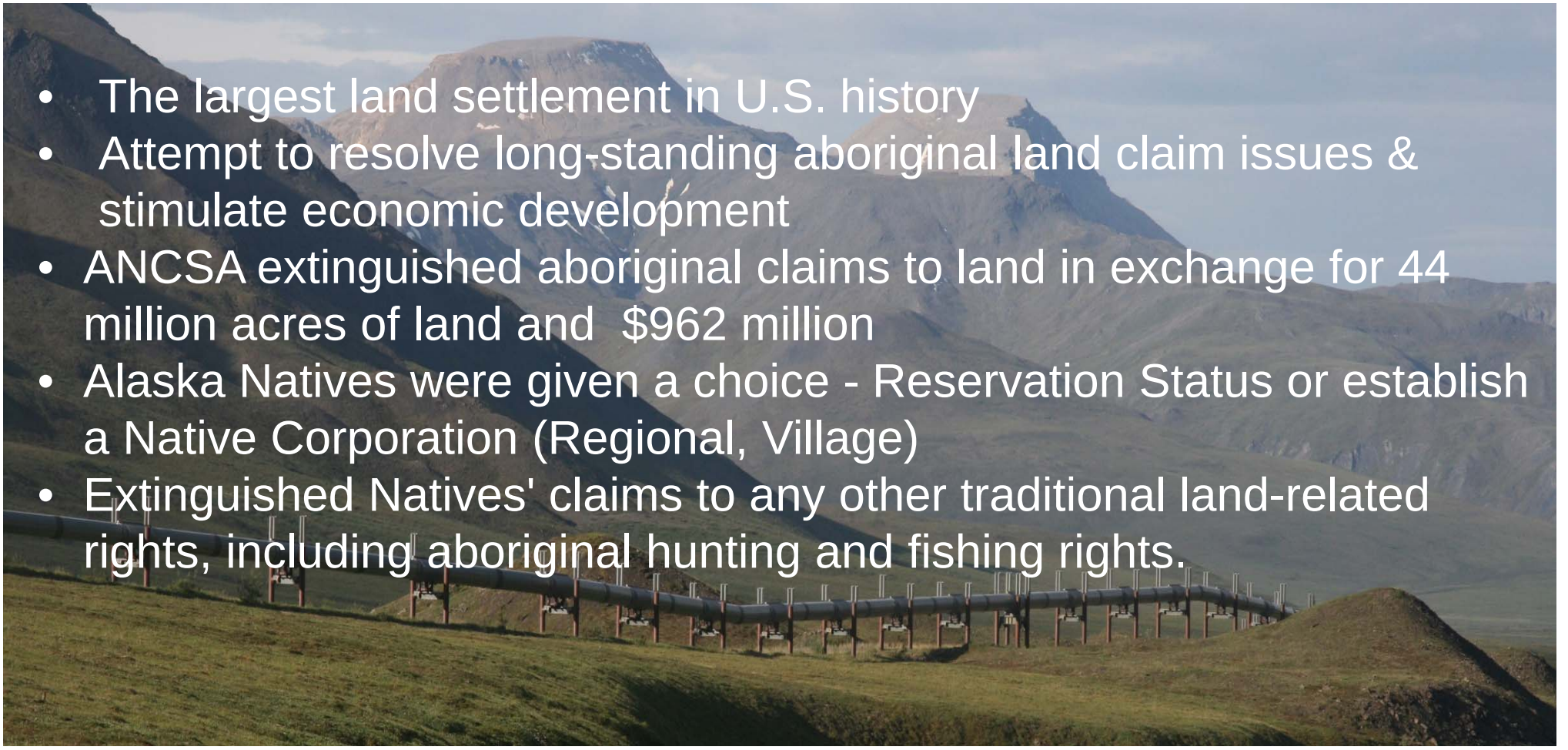
“We’ve always lived on the fish and wildlife around us. But it’s not only for our physical needs – it’s spiritual and sacred to us. ‘Subsistence’ has a different meaning than cultural and traditional use.”

William L. Iggiagruk Hensely

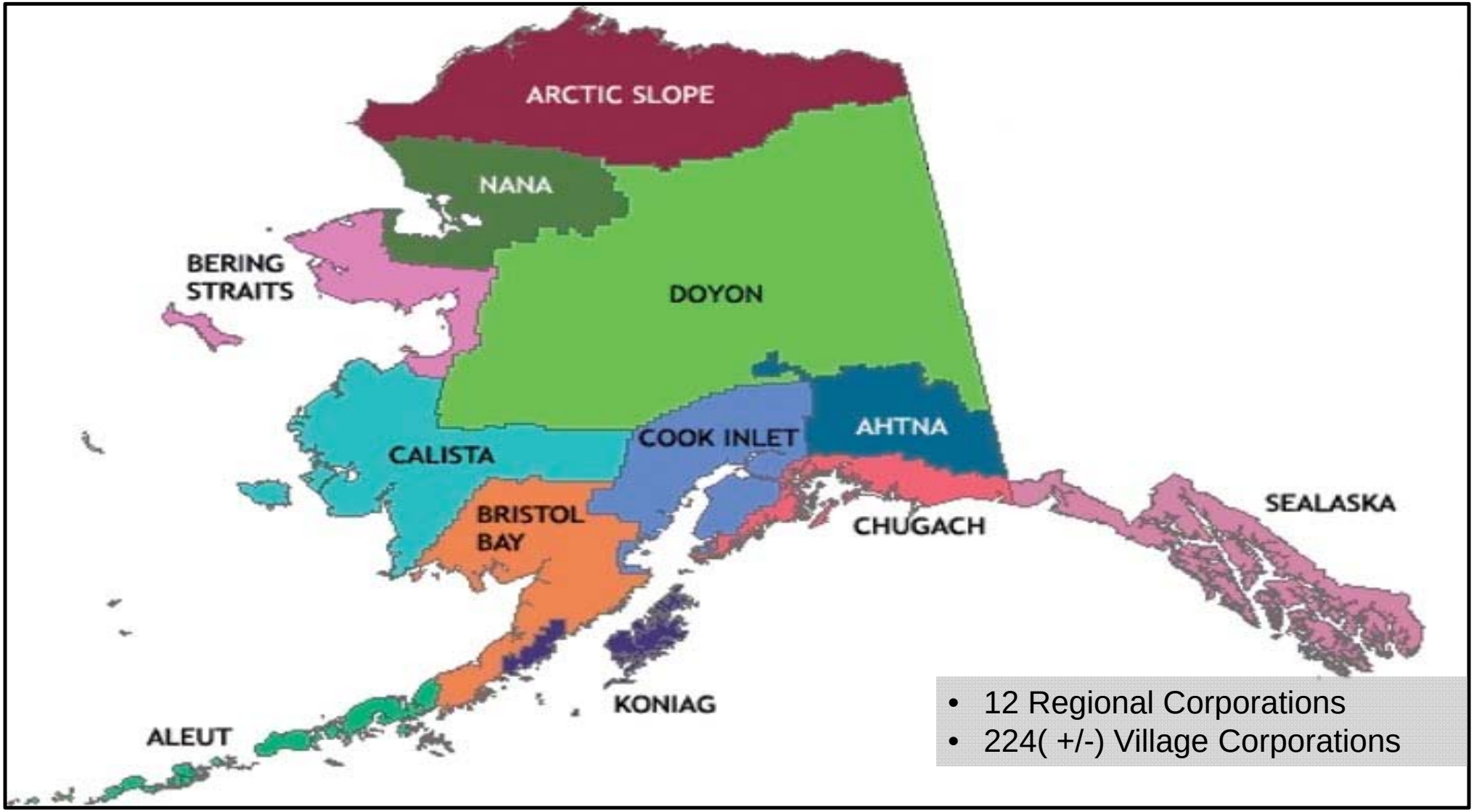
From Stewards to “Owners”

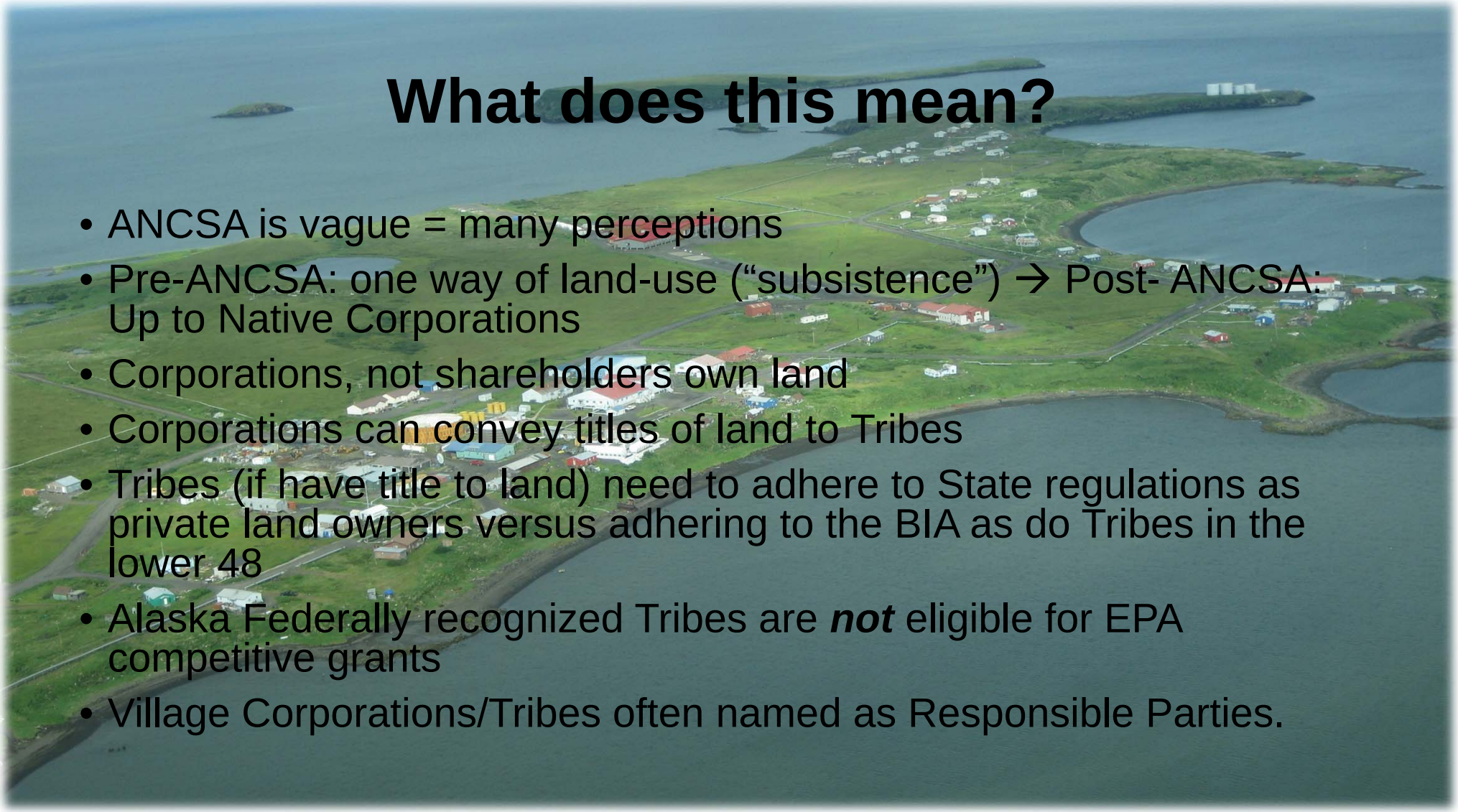
- **1867:** U.S. buys Alaska from Russia for $7.2 million
- **1959:** Alaska becomes a State
- **1966:** Alaska Federation of Natives (AFN) formed
- **1968:** Crude Oil Discovered in Prudhoe Bay
- **December 18, 1971:** ANCSA signed into law by President Nixon

Alaska Native Claims Settlement Act (ANCSA)



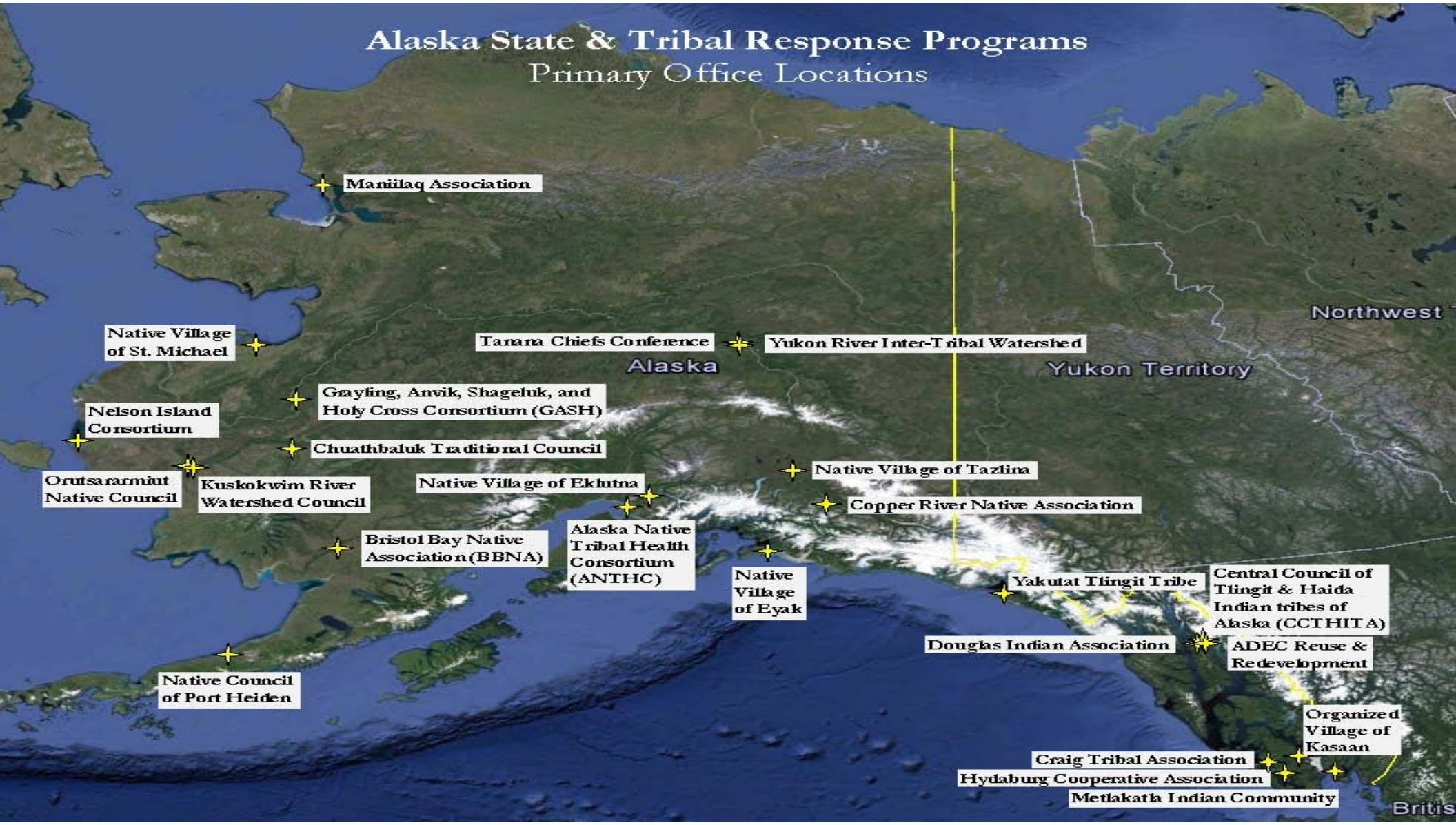
- The largest land settlement in U.S. history
- Attempt to resolve long-standing aboriginal land claim issues & stimulate economic development
- ANCSA extinguished aboriginal claims to land in exchange for 44 million acres of land and $962 million
- Alaska Natives were given a choice - Reservation Status or establish a Native Corporation (Regional, Village)
- Extinguished Natives' claims to any other traditional land-related rights, including aboriginal hunting and fishing rights.


ARCTIC SLOPE
NANA
BERING STRAITS
DOYON
CALISTA
COOK INLET
AHTNA
BRISTOL BAY
CHUGACH
SEALASKA
KONIAG
ALEUT
• 12 Regional Corporations
• 224(+/-) Village Corporations



What does this mean?

- ANCSA is vague = many perceptions
- Pre-ANCSA: one way of land-use (“subsistence”) → Post- ANCSA: Up to Native Corporations
- Corporations, not shareholders own land
- Corporations can convey titles of land to Tribes
- Tribes (if have title to land) need to adhere to State regulations as private land owners versus adhering to the BIA as do Tribes in the lower 48
- Alaska Federally recognized Tribes are ***not*** eligible for EPA competitive grants
- Village Corporations/Tribes often named as Responsible Parties.


Alaska State & Tribal Response Programs
Primary Office Locations
Maniilaq Association
Native Village of St. Michael
Tanana Chiefs Conference
Yukon River Inter-Tribal Watershed
Alaska
Yukon Territory
Northwest
Grayling, Anvik, Shageluk, and Holy Cross Consortium (GASH)
Nelson Island Consortium
Chuathbaluk Traditional Council
Orutsararmiut Native Council
Kuskokwim River Watershed Council
Native Village of Eklutna
Native Village of Tazlina
Copper River Native Association
Bristol Bay Native Association (BBNA)
Alaska Native Tribal Health Consortium (ANTHC)
Native Village of Eyak
Yakutat Tlingit Tribe
Central Council of Tlingit & Haida Indian tribes of Alaska (CCTHITA)
Douglas Indian Association
ADEC Reuse & Redevelopment
Native Council of Port Heiden
Organized Village of Kasaan
Craig Tribal Association
Hydaburg Cooperative Association
Metlakatla Indian Community
Britis

Key Partnerships

- Federally-recognized Tribes & Tribal Governments
- Native Regional & Village Corporations
- Economic Development Organizations
- Housing Corporations
- Non-profit Organizations
- City Governments & State Governments
- Grant Programs (IGAP, NALEMP, Environmental Justice)
- Federal Government (EPA, ATSDR & DoD)

Partnerships in Alaska

- Alaska: young state, small population, large area
- Project momentum is maintained
  - ➢Leverage of knowledge and resources
  - ➢Build trust for future projects through respect and communication

Environmental Resources used on the Ankau Saltchucks

YAKUTAT
TLINGIT TRIBE

By: Alex James, Yakutat Tlingit Tribe,
August 19, 2015

Yakutat Tlingit Tribe

YAKUTAT TLINGIT TRIBE

Ankau Saltchucks

- The clans of Yakutat still follows the paths our people have followed for generations in the gathering of our foods and herbs from the land and the seas.
- Sometimes we were referred to as the people of the tide or the “tides people.”
- The label the U.S. government and the State of Alaska use to define our territorial economy is “subsistence.”
- To the Tlingit People of Yakutat, the word “subsistence” is broader, it includes social and cultural activities of the clan and tribe, family values, reverence and gratitude.
- Federal Facilities debris cleanup does not rise to meet EPA’s definition of contaminates of concern, but to the Yakutat Tlingit’s lens it is both an environmental and health concern for the clans, we depend on our traditional and customary lands for the gathering of our foods and to live healthy life's. Diabetes has arrived to decimate our people.
- Yakutat Tlingit Tribe is not unique; most Alaskan villages survive, in some degree, by hunting, fishing, and gathering.

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- The Alaskan “subsistence” economy is estimated to produce over 40,000,000 pounds of food per year.
- Three quarters of all Yakutat ~~Tribal~~ families acquire at least 50 percent of their food from subsistence harvesting activities.
- We depend on the seasons the cycles of nature provide hunting, fishing, the gathering of medicines, wild plants, berries and seafood.
- The wealth of knowledge that makes it possible for us to survive by subsistence was provided to us by our parents and grandparents and so on through the generations back to perpetuity.
- To the Yakutat Tlingit people harvesting is a way of life and will always remain an essential part of our life’s.
- New laws continue to restrict access to an economy our people have depended on as a family, clan and tribe for millennia, our daily tasks are the family and community structures of our village, food sharing, and religious ceremonial offerings in the potlatch.

Ankau Saltchucks (our food)

“OUR BEACHES WERE OUR GARDEN…
ANKAU ALWAYS HAD THE BEST OF EVERYTHING”

- An estuary rich with clams, cockles, crab, gumboots, fish, seals, ducks, moose, deer, berries
- An area used extensively as a source of medicinal plants
- The clans year around breadbasket for hunting & gathering of ”subsistence” foods

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Ankau Saltchucks Culture Camp

- A place where children learned and lived the traditional Tlingit way of life
  - Song
  - Dance
  - Storytelling
  - Language
  - Arts and crafts
  - Preparation of traditional subsistence foods

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Military History

- U.S. military occupied the Phipps Peninsula and areas surrounding Yakutat since 1929
- Strategic World War II Air Base from 1940 to 1945
- U.S. Army, Navy, and Air Force facilities were located in and around Yakutat

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Military Impacts

- U.S. Department of Defense organized former military sites into Concern Groups to address health and safety issues
- Primary areas of concern
  - Yakutat Air Force Base
  - Minor Naval Air Facilities (Seaplane Base)
  - Point Carrew Garrison
  - Ocean Cape Radio Relay Station (OCRRS)

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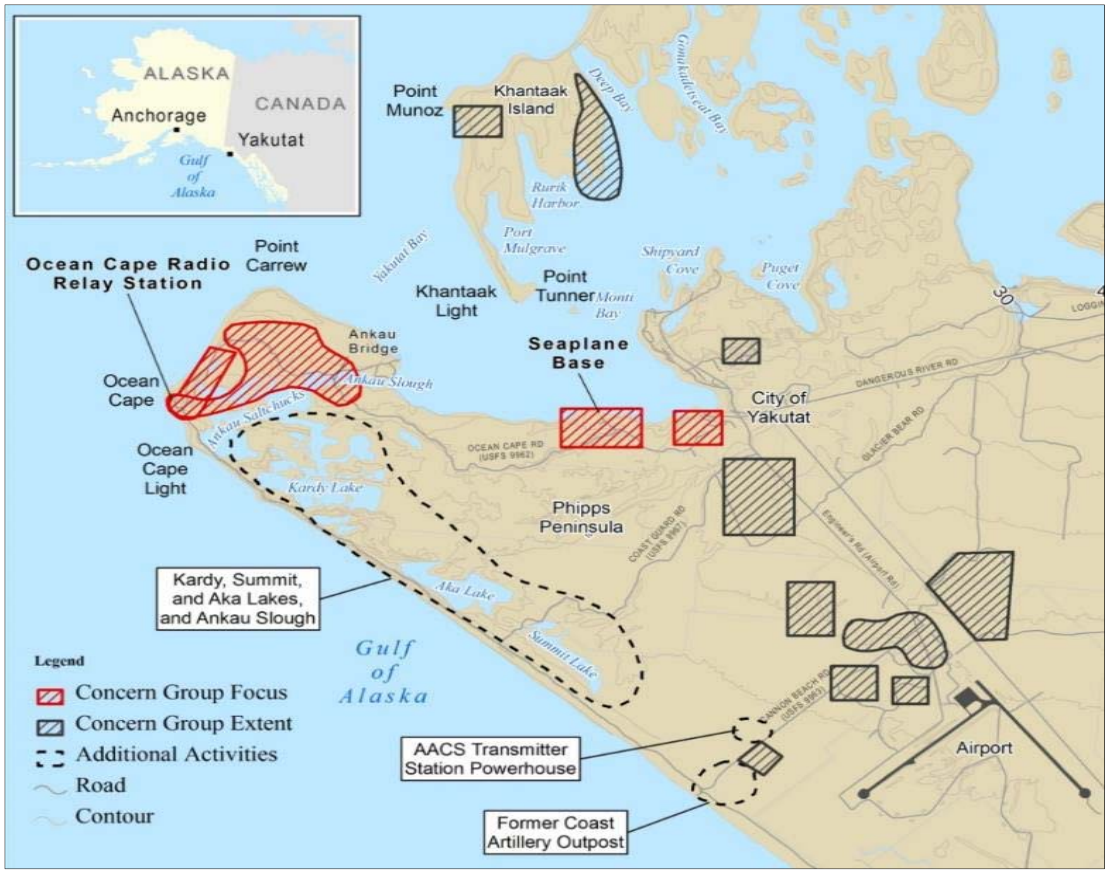
Military Impact Areas



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Military Impact Concerns

- Dioxins and furans
- Polychlorinated biphenyls (PCBs)
- Diesel
- Gasoline
- Oil
- Metals
- Asbestos
- Debris dumps
- Barrel dumps
- Fuel storage areas
- Firing ranges
- Septic systems
- Culverts and roads

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U.S. Department of Defense

What is NALEMP?

- Native American Lands Environmental Mitigation Program (NALEMP)
- Established in 1996 to address impacts from former military sites to Tribal lands
- Current budget for NALEMP is $12 million per year with $9 going to federally recognized tribes

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U.S. Department of Defense

- Cooperative agreements are negotiated between federally recognized tribes and U.S. Department of Defense (DoD)
- Tribes identify sites that are eligible for work under NALEMP, develop strategic plans, and manage the work
- U.S. Army Corps of Engineers administers cooperative agreements for DoD

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Yakutat NALEMP Objectives

- Protect and provide for the health and safety of the Yakutat Tlingit Tribe's traditional and customary use area
- Protect and enhance the environment
- Preserve the Yakutat Tlingit culture

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Protecting Traditional and Customary use Land

- Fiscal Year 2006 - First NALEMP Cooperative Agreement between Yakutat Tlingit Tribe and DoD
- Developed Strategic Project Implementation Plan
- Determined that Ocean Cape Radio Relay Station was eligible under NALEMP
  - Former military site
  - Not scheduled for work by other DoD programs
- Developed Site Investigation Plan to collect and analyze samples from the site

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Challenges

Convincing others there is a problem

- Limited options under NALEMP
  - Eligibility criteria
  - USACE resistance (increases level of effort)
- Limited sampling and inconclusive results from Culture Camp under FUDS
- Limited support from Alaska Department of Public Health

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U.S. Environmental Protection Agency

Tribal Response Program (TRP)

- Funded by U.S. Environmental Protection Agency (EPA) as part of the Brownfields Program (***The Glue***)
  - Brownfields are real property that has been adversely affected by the presence or potential presence of contamination
  - Expansion, redevelopment, or reuse may be complicated by the presence or potential presence of hazardous substances, pollutants, or contaminants of concern

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U.S. Environmental Protection Agency

Tribal Response Program (TRP)

- Noncompetitive one-year grants
- Site contamination can be real or perceived
- Establish and enhance tribal response programs
  - Assessment
  - Cleanup
  - Redevelopment of brownfields and other sites

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EPA allowed Review of Dioxin Sampling Conducted Under FUDS

- During 2003, 2004, and 2006, samples of soil, surface water, sediment, and shellfish tissue were collected within the Yakutat area
- Of the contaminants of concern detected, dioxins and PCB”s are of greatest concern to the Yakutat Tlingit Tribe and Yakutat community
- The Tribe compiled and evaluated existing dioxin data that were collected within the usual and accustomed lands of the Yakutat Tlingit Tribe

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2010 Site Investigation

- Funded under EPA Tribal Response Program
- Built on results of previous investigations
- Soil sampling in the Culture Camp area and analysis at lower detection levels
  - Developed a sample profile for the dioxins
  - Compared to typical source profiles
- Seafood sampling within the Ankau Saltchucks
  - Determined whether elevated dioxin concentrations in tissue are localized or wide-spread

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2010 Site Investigation
Culture Camp Soil

- Soil sample collected was a 9-point composite sample centered on the previous sample location

- Dioxin result was 62.62 ng/kg
  - About three times higher than previous concentration
  - About 14 times higher than screening level of 4.3 ng/kg

(ng/kg = one part per trillion)

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U.S. Environmental Protection Agency

Environmental Justice (EJ) Grant

- Supports and empowers communities working on solutions to local environmental and public health issues
- Assists recipients in building collaborative partnerships
- Understands and addresses environmental and public health issues in their communities

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Site Investigation Under EJ Grant

Following release of 2010 results, the community asked whether there were dioxins in the southern part of the Ankau Saltchucks and if crabs are impacted

- Collected and analyzed 5 Dungeness crab samples
  - 3 crab samples collected from south end of Ankau Saltchucks
  - 2 crab samples from background reference locations
  - 3 samples of cockles were collected and analyzed for dioxin

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Ankau Saltchucks Sediment and Shellfish Sampling and Analysis

- Funded under 2012 Tribal Response Program
- Designed based on results of previous investigations
- Co-located shellfish and sediment samples
  - 1 pair from location with known impacts
  - 2 pairs downstream of 1984 military dumps
  - 1 pair downstream of WWII military dump

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Co-located Shellfish and Sediment

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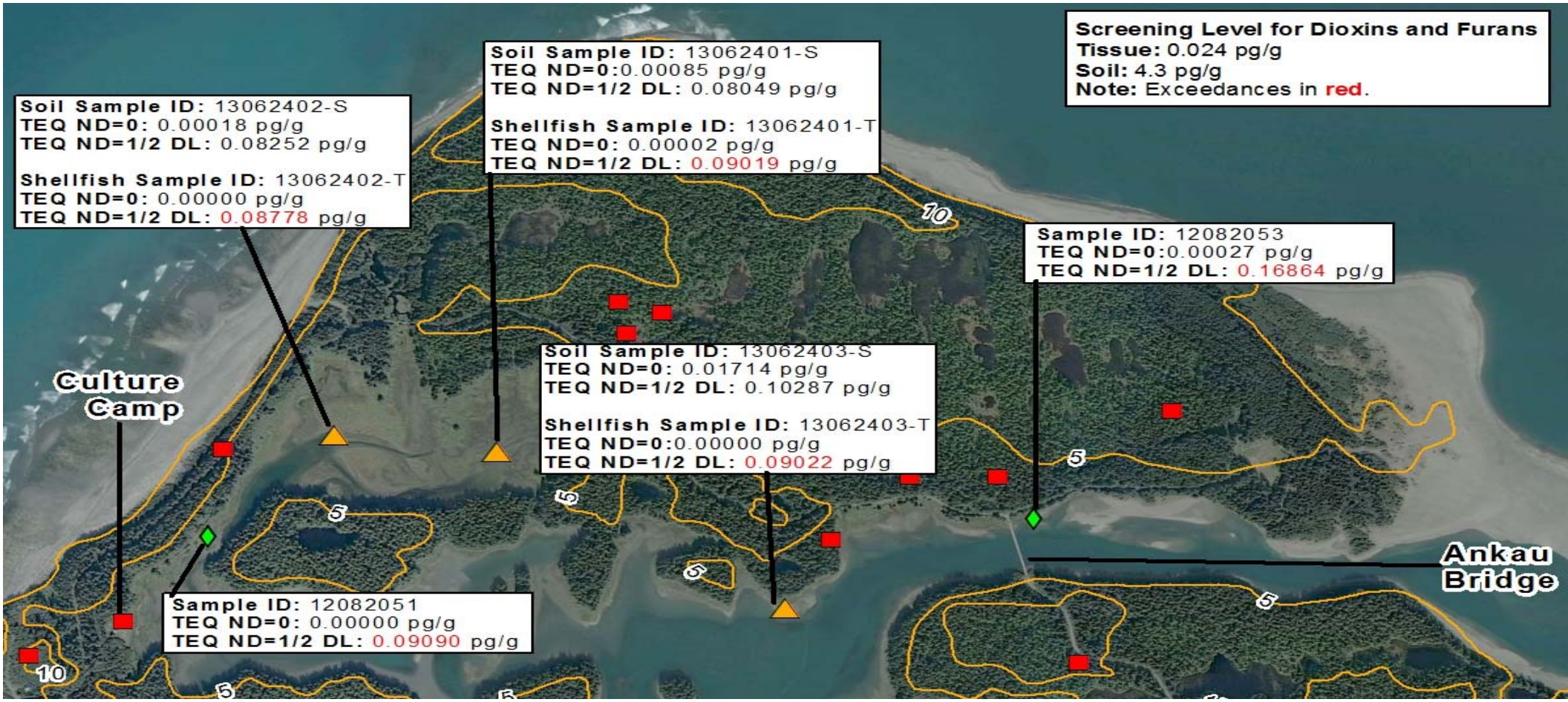

Results for North Portion of Saltchucks

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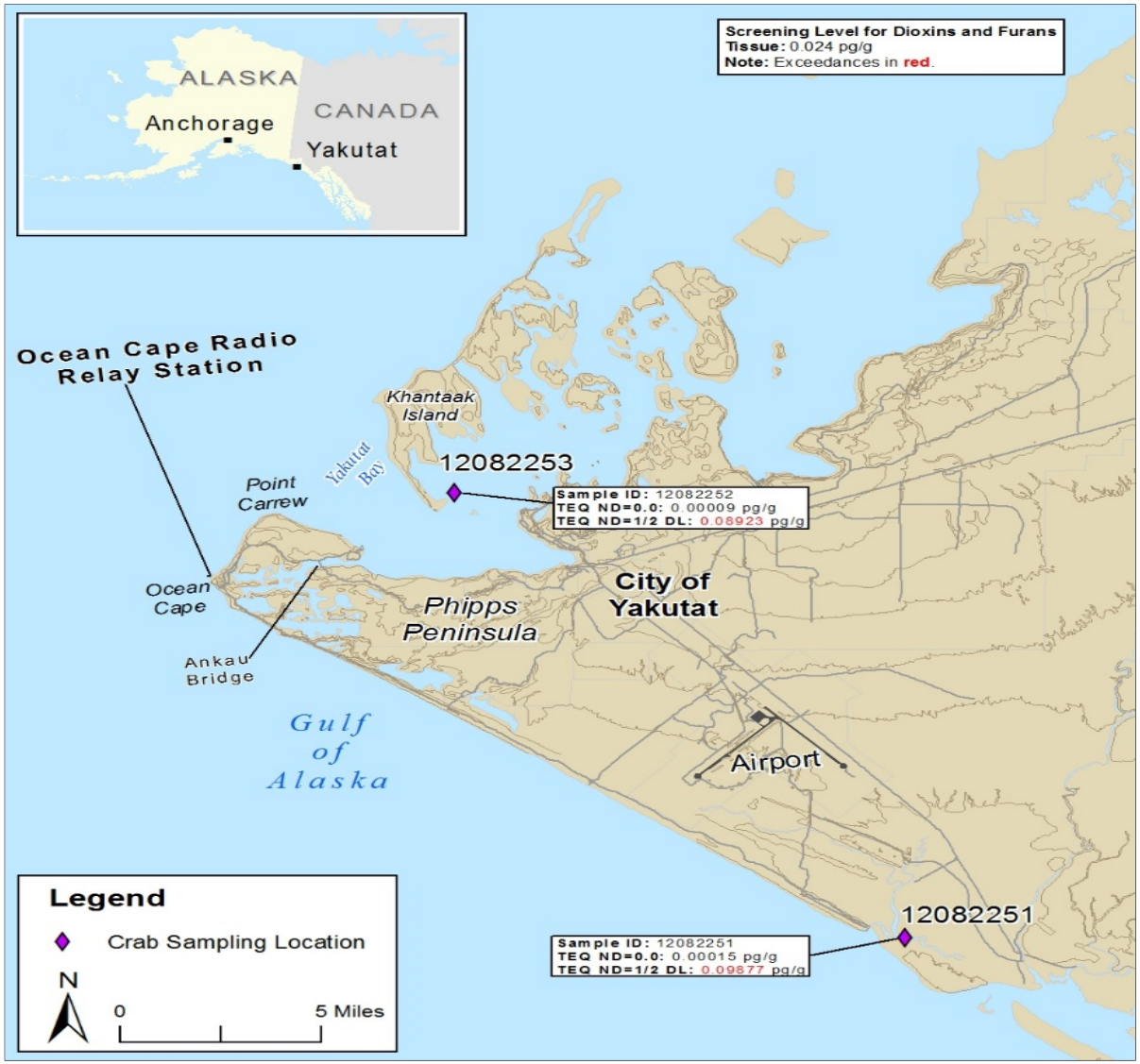
Results for South Portion of Saltchucks



Background Crab Samples

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Agency for Toxic Substances and Disease Registry (ATSDR)

- Yakutat Tlingit Tribe petitioned ATSDR for assistance in evaluating findings
  - Working with Joe Sarcone, Environmental Health Scientist
- ATSDR reviewed results of 2010 investigation
  - Determined that quality of data
  - Identified additional data needed
  - Developing a public health consultation

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ATSDR Concerns and Public Health Consultation

- ATSDR met with the community to compile information on subsistence use of the Saltchucks and assessed:

  1) Whether community members still gathered food from the area

  2) What kinds of subsistence foods were gathered

  3) How much of each subsistence d is consumed

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Next Steps with ATSDR

- ATSDR agreed to perform a health consultation based on dioxin data from investigations of the Ankau Saltchucks
  - 2010 shellfish and soil
  - 2012 shellfish and crab
  - 2013 shellfish and sediment
  - 2013 Culture Camp soils

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NALEMP Funding Obtained!!!
Based on TRP and EJ Investigations

- Elevated dioxins were found in soil at the Culture Camp site
- Data quality meets high standards
- Results were used to leverage funding under NALEMP for additional site investigation
  - Multi-incremental sampling strategy was developed for the Culture Camp site

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STUDY OF DIOXIN LEVELS IN SOIL AND SUBSISTENCE FOOD IN THE ANKAU SALTCHUCKS AREA

Sandrine Déglin, Ph.D.
Alaska Division of Public Health
Environmental Public Health Program

September 4, 2015

Problem Overview

- Apparent dioxin contamination in the Ankau Saltchucks area
  - Contamination potentially originating from former DOD sites (herbicides).

⇨ Some people stopped harvesting clam and crab in the area

⇨ Culture camp was closed

Main Questions

- Is it safe to consume crab and clam from the area?
- Is it safe to use the culture camp?
- Is it safe to consume crab and clam collected at the culture camp?

A RISK ASSESSMENT WAS NECESSARY

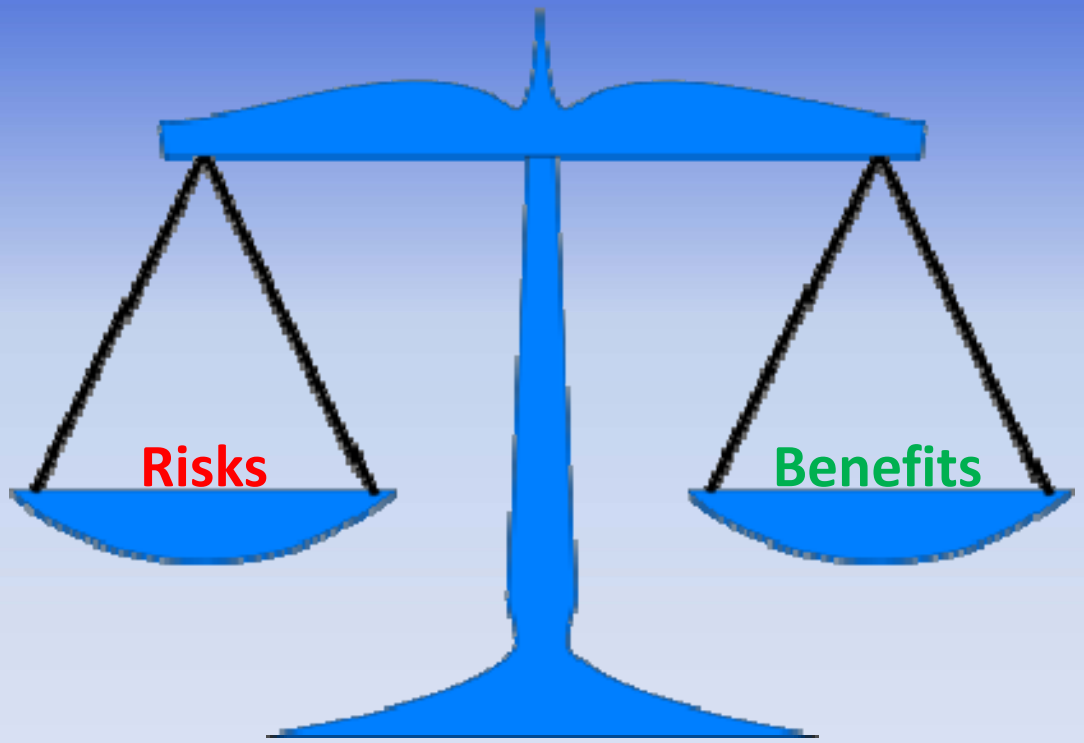
Risk Assessment

RISK = HAZARD X EXPOSURE

- Hazard Evaluation
  - Dioxin physical and chemical properties
  - Scientific evidence regarding dioxin toxicity
  - Dioxin sources
- Exposure Evaluation
  - Exposure media: clam, crab, soil (ingestion)
  - Exposure Levels:
    - ✓ Dioxin concentration
    - ✓ Clam and crab consumption in Yakutat?
    - ✓ Length of stay in Yakutat?

↳ Uncertainty associated to the risk assessment

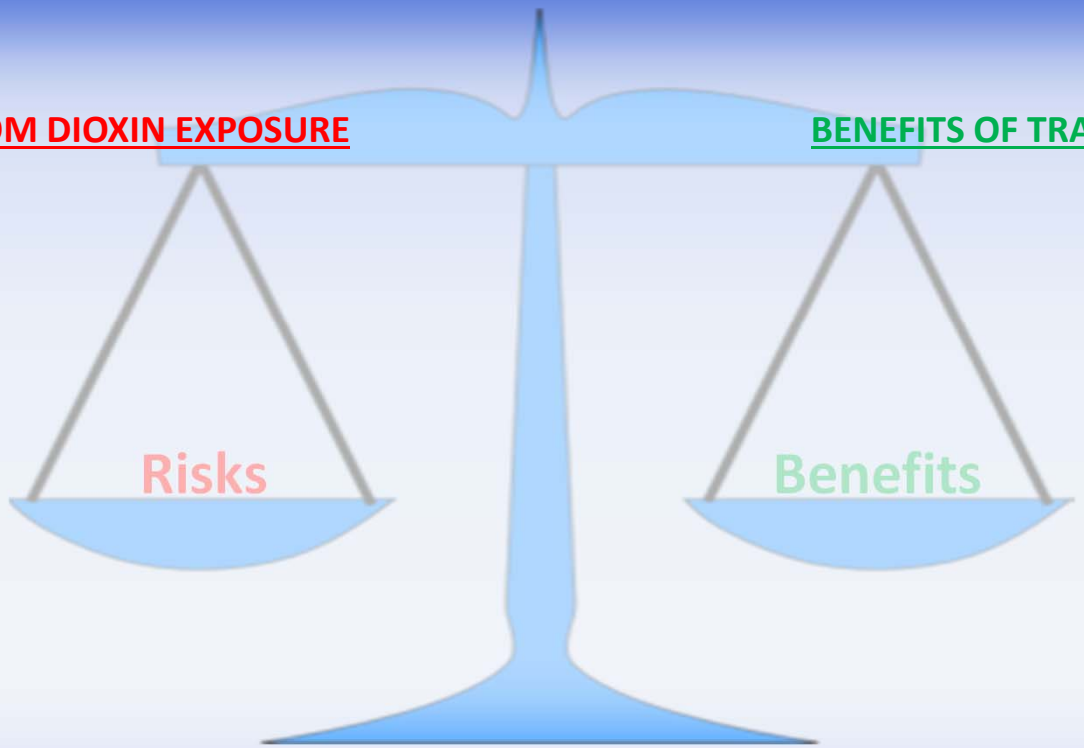
Dealing with Uncertainty



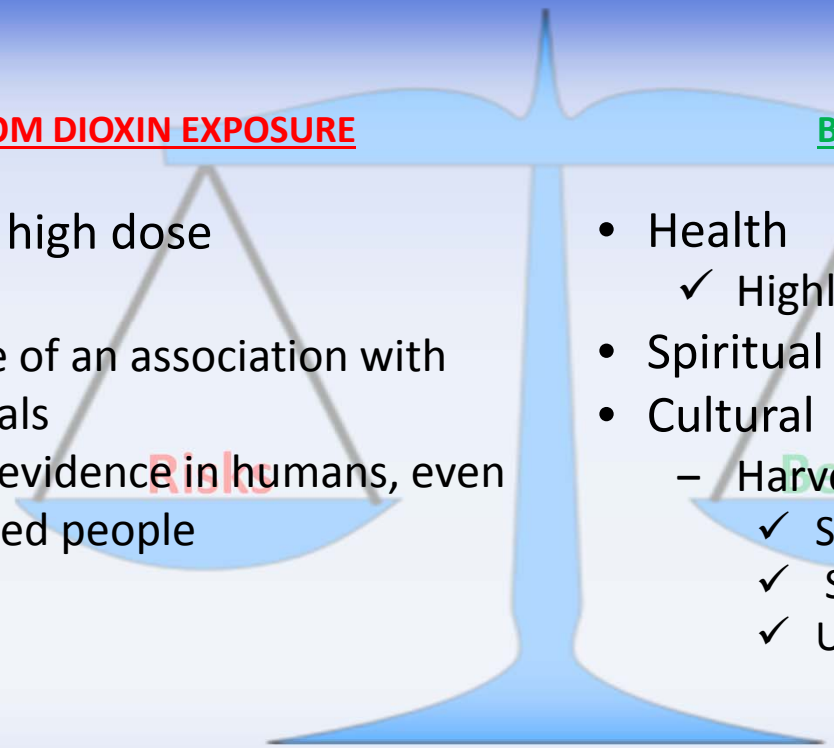
Dealing with Uncertainty

RISKS FROM DIOXIN EXPOSURE

BENEFITS OF TRADITIONAL FOOD



Dealing with Uncertainty



RISKS FROM DIOXIN EXPOSURE

- Chloracne at very high dose
- Other diseases?
  - Some evidence of an association with cancer in animals
  - No convincing evidence in humans, even in highly exposed people

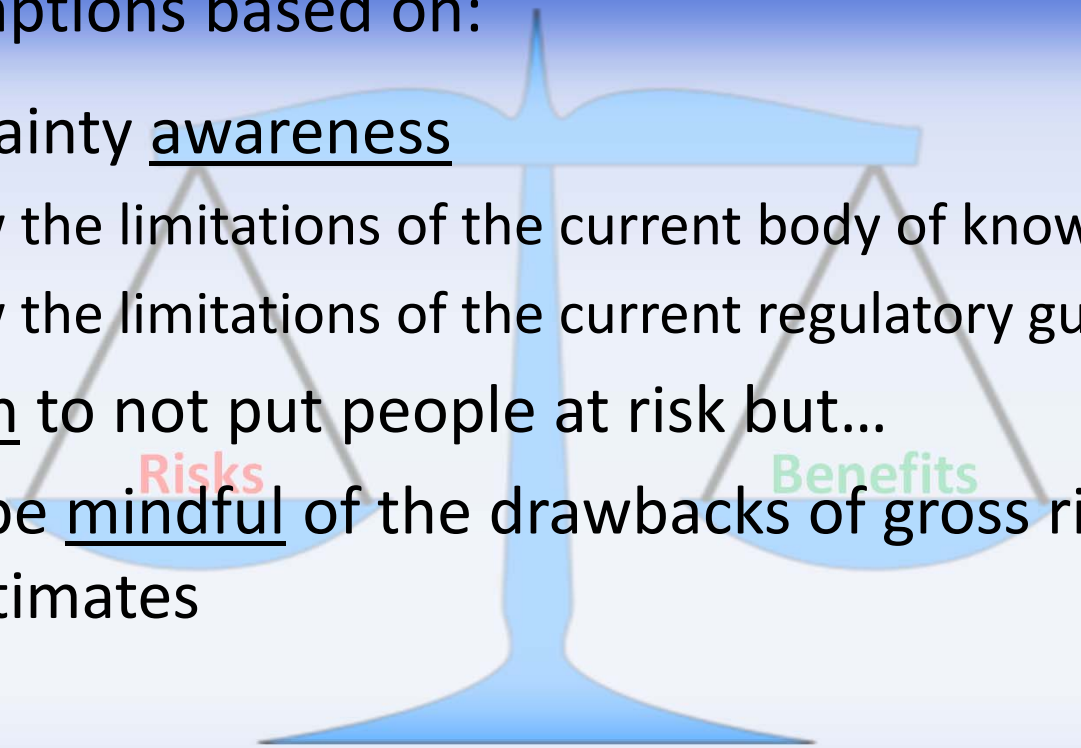
BENEFITS OF TRADITIONAL FOOD

- Health
  - ✓ Highly nutritious food
- Spiritual
- Cultural
  - Harvest of traditional food allows for
    - ✓ Sharing and cooperation
    - ✓ Speaking native languages
    - ✓ Using traditional medicines

Dealing with Uncertainty

Make assumptions based on:

1. Uncertainty awareness
   - Know the limitations of the current body of knowledge
   - Know the limitations of the current regulatory guidelines
2. Caution to not put people at risk but…
3. …also be mindful of the drawbacks of gross risk overestimates



Dioxin in Soil, Clam and Crab

DATA ANALYSIS

- Soil
  - Levels
  - Comparison with US rural background levels
  - Congener profile (What kind of dioxin?)

  ↳Impact on the use of the culture camp

- Crab and Clam
  - Levels
  - Comparison with US store-bought clams (FDA data)
  - Congener profile

  ↳Dietary implications for the population of Yakutat

  (Based on high-end consumption and residence time)

Dioxin Soil Levels

- Dioxins detected in 6 out of 21 soil samples only
- Only three soil samples above US rural background (> 10 ppt)
  - Overall, samples contain very low dioxin levels
- Studies show that living in an area with dioxin soil contamination does not result in increased dioxin levels in the body

Soil samples do not indicate any major threat to public health.

Dioxin Levels in Crab

- Dioxin levels in crab are extremely low
  - Highest detected level ≈ ½ levels measured in store-bought crab in the U.S.

No appreciable risk from crab consumption,
even for heavy consumers living in Yakutat for up to 50 years

Dioxin Levels in Clam

- Dioxins were NOT detected in 9 out of 15 clam samples
- 1 out of 15 samples exceeded the levels measured in U.S. store-bought clams by 5 fold
  - Such concentration may pose a health problem to heavy consumers
  - Unique sample from the culture camp
- 3 samples collected had “higher” dioxin levels
  - < concentrations measured in store-bought clams
  - Collected in area preferred by the community for harvest (Ankau bridge)
  - Such dioxin concentration do not represent an appreciable risk, even for heavy clam consumers

Clam collected in the area appears to be safe

Some reservations about the camp and maybe the bridge

Recommendations

- Inspect the location where soil samples with higher levels were collected
  - Identify a possible dioxin source (Old wood structure, fire pit…?)
  - Possible remediation?

- Culture camp could be reopened as exposure to dioxin from soil does not present an appreciable risk

Recommendations

- Crab from the Ankau Saltchucks can be consumed at will
- Clam from the Ankau Saltchucks is safe “on average”
- It is recommended not to exclusively collect shellfish in the bridge area
- Reservations about the culture camp
  - More sampling is necessary
  - Consumption of clam from the camp should be limited but not necessarily interrupted
    - ↳ Suggestion < 15 lbs/yr
  - Clams can be collected in the surroundings of the camp

Yakutat Cancer Study

David O'Brien, PhD, GISP
Data Analyst
Alaska Cancer Registry
Section of Chronic Disease Prevention & Health Promotion
Alaska Department of Health and Social Services

Site Investigation Activities

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TRIBE

Asbestos-Wrapped Pipe Removal

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TRIBE

Diesel Fuel Tank (AST) Removal

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Water Pumphouse Gasoline Tank (UST) Removal

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TRIBE

Former Garage Building Removal

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TRIBE

Petroleum-Contaminated Soil (PCS) Removal

After PCS Removal

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2013-2014 NALEMP

Point Carrew Garrison and Minor Naval Air Facilities Removal Actions

- Debris removal from 5 areas at Point Carrew Garrison
- Removed from our FY14 CAMitigate impacts at Seaplane Base
  - Close septic tanks and manholes
  - Remove debris

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Lessons Learned

- Start with what you know
- Keep compiling information
- Tell your story
- Tell it again
- Keep action steps small
- Perseverance pays off

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Thank you!

Gunalchèesh
(Tlingit)