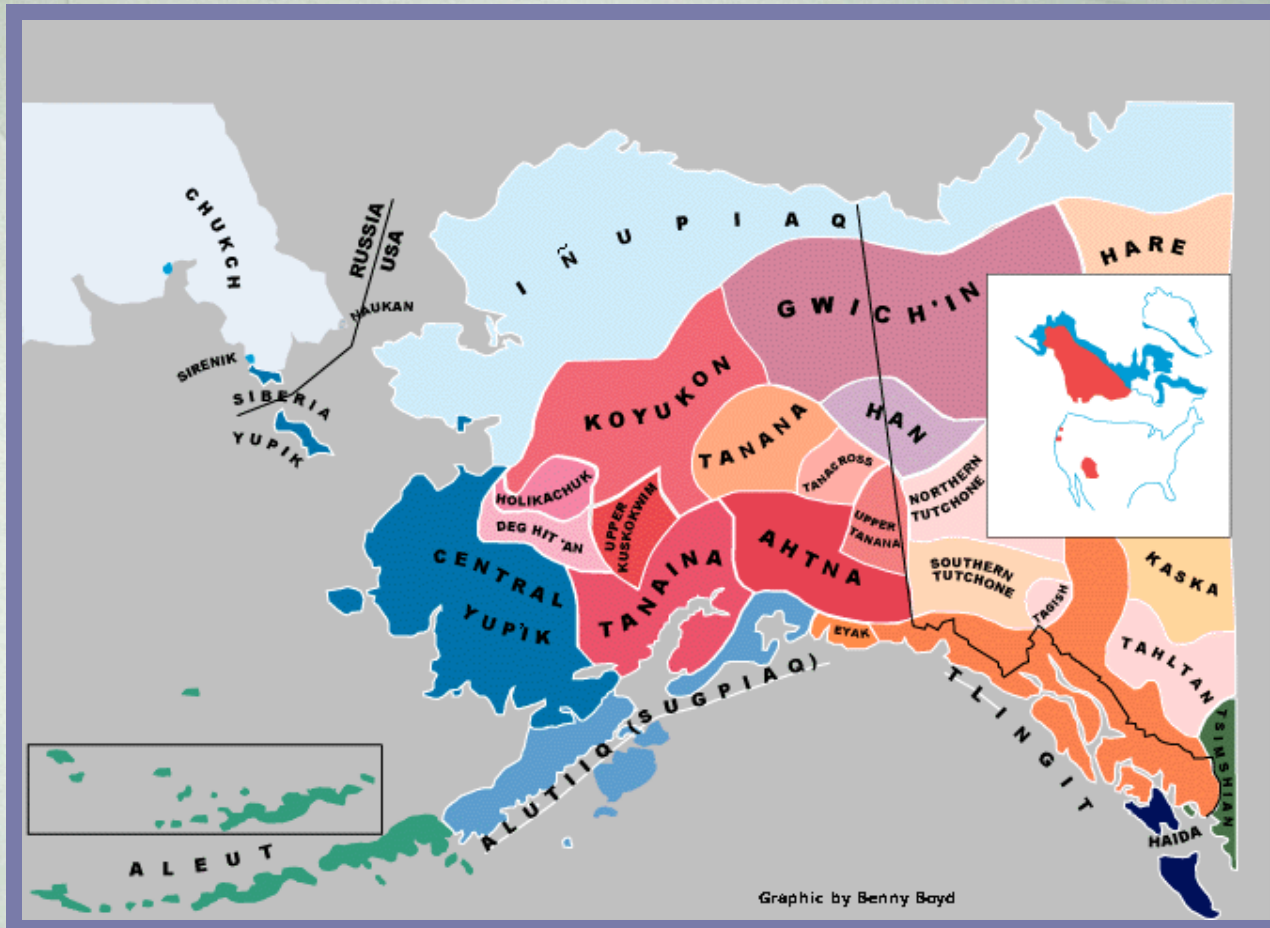


Sea Otter Management in Alaska



Dolly Garza
Professor Emerita
University of Alaska

Alaska Native Cultures



Cultures such as the Tlingit, Haida and Tsimshian of the Pacific Northwest held clearly defined territories and hence stewardship to their lands, waterways and natural resources.

Territories Demarcated

Tribes and Clans established and guarded territories large enough to accommodate the needs of the Clan.

- salmon streams
- berries & access to other greens
- halibut or black cod grounds
- herring spawning areas
- access to cedar, hemlock & spruce
- inter-tidal shellfish and seaweed beds



Cultural/Tribal Survival Depends On Resource Conservation

Generational knowledge of resources:

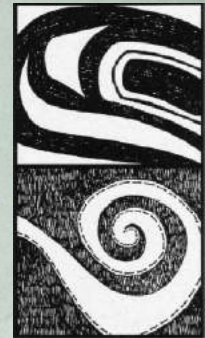
- life histories
- significant migrations
- critical habitat
- weather patterns
- sustainable harvest practices



Recognition of Territorial Rights Varies across North America

- Treaties recognizing hunting and fishing rights
- Federal Court case recognizing tribes resource management rights on reservations
- Recognition of rights in pre-treaty negotiations
- Rights still being hammered out in court/policy arenas
- Alaska has Federal Subsistence Management (ANILCA)
- Federal law providing for co-management (Marine Mammal Protection Act)

Co-management Efforts



MISSION:

The mission of **The Alaska Sea Otter and Steller Sea Lion Commission** (TASSC) is to ensure and further Alaska Natives' role in sea otter and Steller sea lion conservation, management, research, education, and artistic development.

TASSC Activities

Sea Otter Co-management Programs:

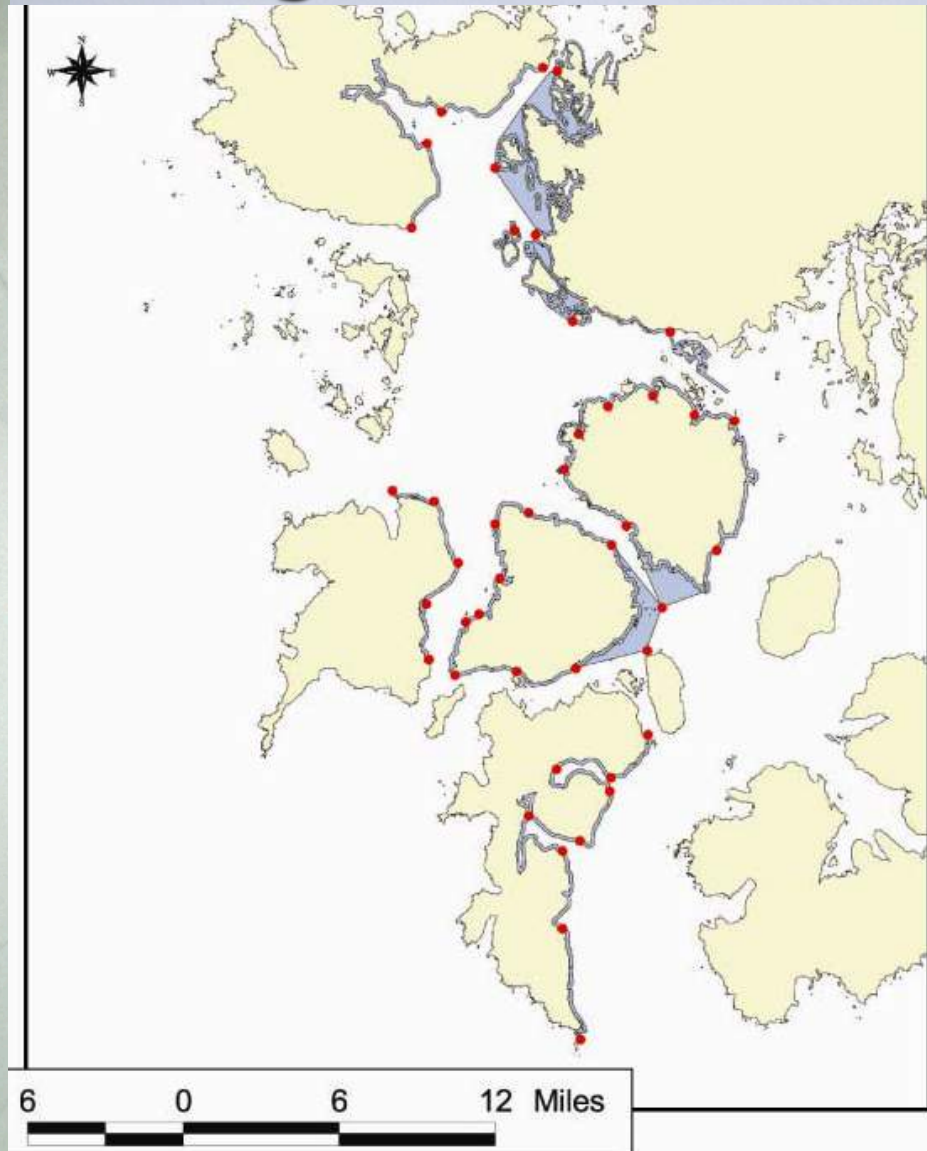
- Sea Otter Biosampling Program
- Sea Otter Winter Mortality Surveys
- Sea Otter Small Boat Survey
- Sea Otter Small Research Grants to Tribes

Other Programs

- Sea Gull Egg Contaminant Testing
- Marine Mammal Stranding Response Program
- Traditional Knowledge of Steller Sea Lions



Craig Sea Otter Small Boat Survey



- Transects set up by locals
- 3 boat captains trained
- 6 counters: 2 per boat
- 3 years of data

Small Boat Surveys

- Tribal based
- Co-management funds TASSC, USFWS, Tribes
- Statewide survey protocols developed and implemented
- Provides baseline, over-time estimates of sea otter abundance and distribution
- Valuable data for Tribes and useful in events like oil spills (**Unalaska Tribe**)

Small Boat Survey Requirements

Small boats or skiffs appropriate for the local waters,
Including insurance/licensing and proper safety equipment
TASSC trained Boat operators with knowledge of the area
Two observers.

Commitment:

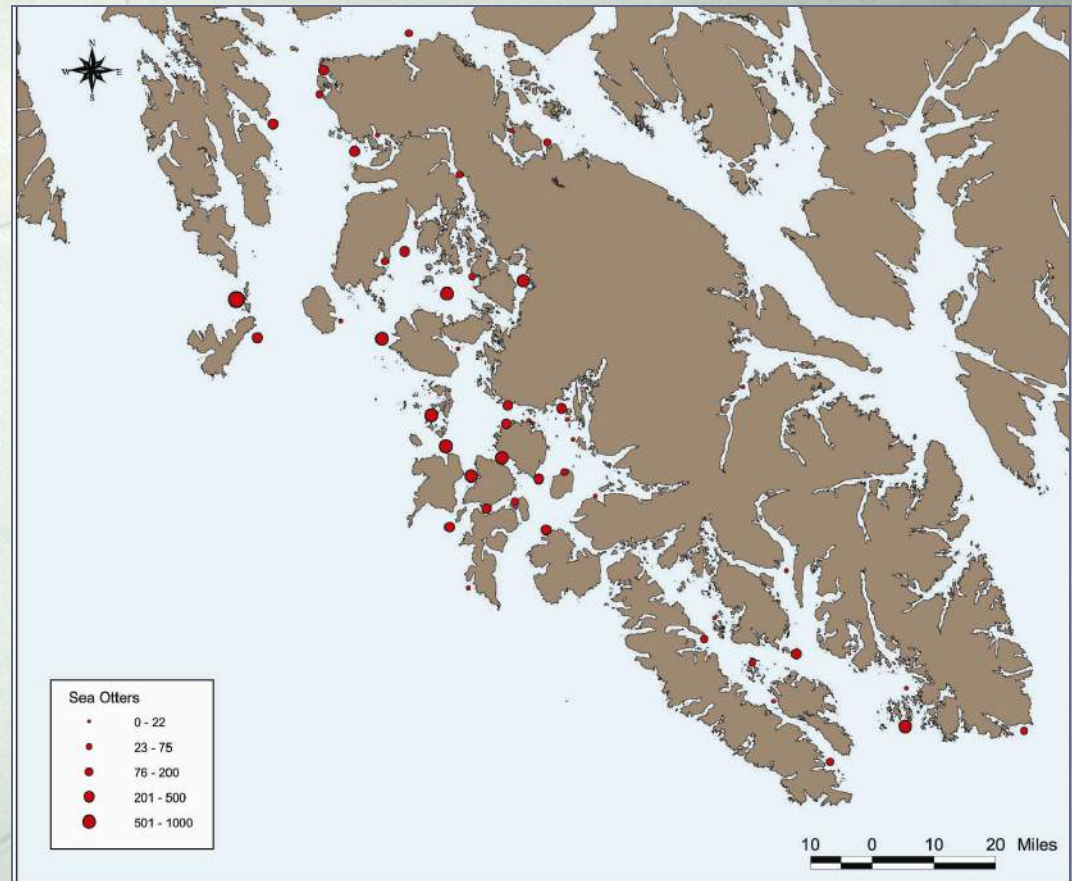
- every year, same time each year
- same operators and observers
- Use same protocol statewide
- consistent sighting shorthand in forms
- Reports written and sent to TASSC & USFWS
- Data belongs to Tribe



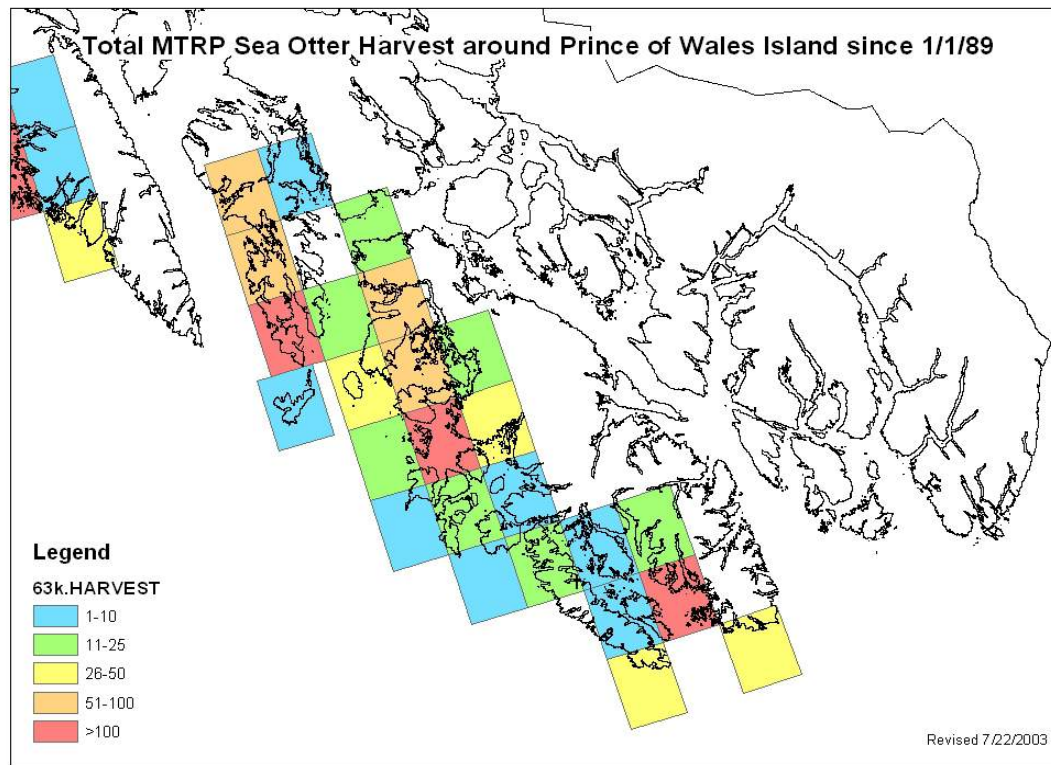
Prince of Wales Sea Otter Abundance TEK Project

Tribal members trained to conduct local knowledge surveys

They knew who spent time on and around the water and thus knew who to survey



Sea otter harvest around Prince Of Wales since 1989



Sea Otter Bio-Sampling Program

- 3 levels of necropsies
Tier I, II, III
Collect data and samples
- 60 + village members trained in data and sample collection protocols
- 360 + samples collected through program since inception
- Sample sources from hunters
- Presumably samples from a healthy population -- a unique data set in the research world
- Samples stored with FWS and used by researchers with TASSC consent and access to resultant data

Sea Otter Necropsy Form		SOBMP - Tier I																										
MTRP Certificate Number: <u>970944</u>		Sample Number: <u>97 PW 96002</u>																										
Hunter Name: <u>[REDACTED]</u>		Sample Collector: <u>JOHN K. BOONE</u>																										
Kill Date (mm/dd/yy): <u>1-14-97</u>		Necropsy Date (mm/dd/yy): <u>1-15-97</u>																										
Kill Time (24 hr): <u>9:45 AM</u>		Necropsy Time (24 hr): <u>10 AM</u>																										
Kill Location: <u>SHOULOS BAY</u>		Sample Source: <u>HUNTER</u>																										
Latitude (deg min sec): <u>60° 9'</u>		Other Sample Collectors:																										
Longitude (deg min sec): <u>146° 35'</u>		<u>SOPHIA M. BOONE</u>																										
CHART # <u>16708</u>		<u>JOHN D. BOONE</u>																										
General Physical Condition: Body: Thin <input type="checkbox"/> Haircoat: Normal <input checked="" type="checkbox"/> Normal <input checked="" type="checkbox"/> Slip <input type="checkbox"/> Fat <input type="checkbox"/> Nose Scars: Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Estimated Age: Old Adult <input type="checkbox"/> Adult <input checked="" type="checkbox"/> Subadult <input type="checkbox"/> Pup <input type="checkbox"/>		Oral Cavity: Oral Lesions: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> If present, describe appearance: _____ Length: _____ mm Width: _____ mm Tooth Wear: Heavy <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Light <input type="checkbox"/> None <input type="checkbox"/> Tooth Abscesses: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Tooth Loss: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> If 'yes', describe location and appearance: _____																										
Body Measurements: Skinned Unskinned Weight: <u>37</u> <u>44</u> (Kg/Lbs) Length: <u>117</u> <u>122</u> cm Girth: <u>48</u> <u>62</u> cm Rt. Forepaw Width: <u>6</u> cm Skull Length: <u>15</u> cm Skull Width: <u>10</u> cm		Teeth Collected: (check which teeth are collected) URP <input checked="" type="checkbox"/> LRP <input checked="" type="checkbox"/> URC <input type="checkbox"/> R Canine Width: <u>9.5</u> mm ULP <input checked="" type="checkbox"/> LLP <input checked="" type="checkbox"/> ULC <input checked="" type="checkbox"/>																										
Sex: Male <input checked="" type="checkbox"/> Female <input type="checkbox"/> Unknown <input type="checkbox"/> If Female: Lactating Y <input type="checkbox"/> N <input type="checkbox"/> Pregnant Y <input type="checkbox"/> N <input type="checkbox"/> Fetus sex M <input type="checkbox"/> F <input type="checkbox"/> Fetus length _____ cm Uterus collected Y <input type="checkbox"/> N <input type="checkbox"/> If (Male): R Testicle weight <u>2.6</u> g R Testicle length <u>42</u> mm R Testicle width <u>19</u> mm Baculum length <u>13</u> cm		Estimates of Body Fat Stores: <table border="1"> <thead> <tr> <th></th> <th>None</th> <th>Little</th> <th>Average</th> <th>Excessive</th> </tr> </thead> <tbody> <tr> <td>Subcutaneous</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Groin <u>2</u> cm</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Kidneys</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Mesenteric</td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table> Comments: _____ _____ _____			None	Little	Average	Excessive	Subcutaneous	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Groin <u>2</u> cm	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Kidneys	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mesenteric	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Comments: _____ _____ _____																												

Sea Otter Co-management

- Provides opportunities for Tribes to work with marine mammal managers
- Different projects conducted by different Tribes depending on needs and capabilities.
- Data gathering and analysis is standardized and comparable over regions and time
- The data collected and traditional knowledge of the Tribes gives them a “seat at the policy/management table”
- As the changing environment affects resources Tribes are suited to collect historic and local resource data

Sea Otter Management Plans

Develop Tribal management plans to monitor sea otter health, and Native harvest

Scale - Jurisdiction: Regional, tribal territory, local

- Tribal ordinances
- Jurisdictional boundaries
- Local knowledge of sea otter populations and trends
- Local research and monitoring
- Intensive harvest areas/No harvest areas
- Enforcement

Additional Benefits to Tribal Involvement in Research & Mgmt

- Can access research and monitoring dollars not available to federal or state agencies
- Have local capacity to monitor and collect data
- Have local knowledge of when and where to find natural resources
- Local knowledge is a plus for safety & timing
- Can respond quickly when access may be too costly or problematic by centrally located managers
- Co-operative efforts strengthen management and increase knowledge

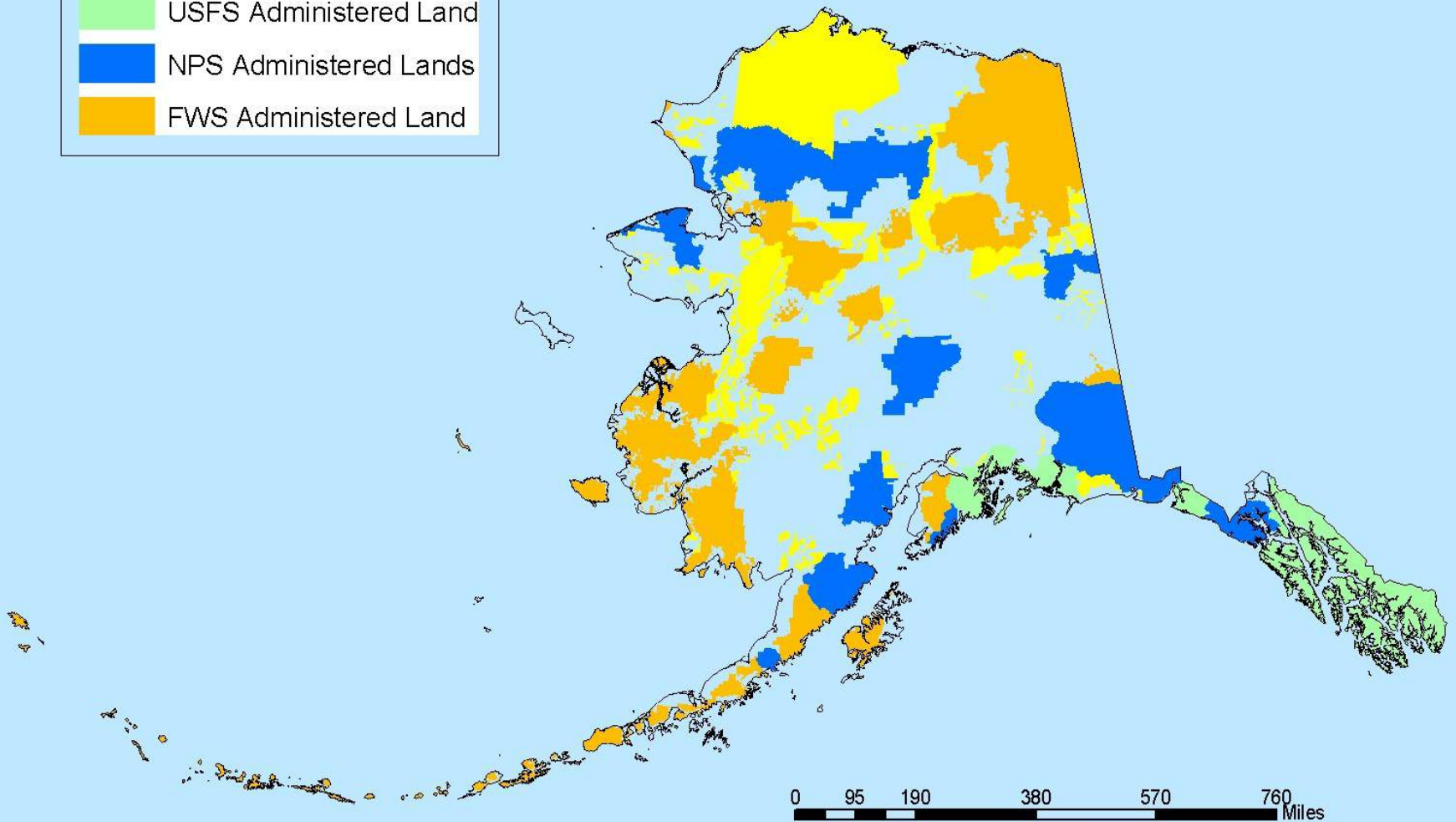
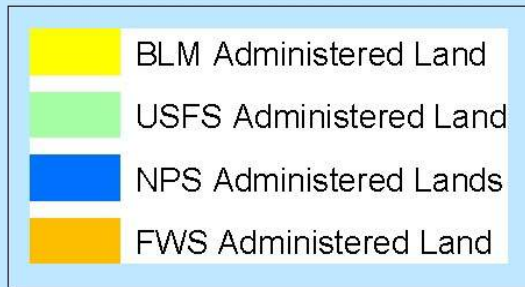
Subsistence Harvests in Rural Alaska

- 44 million pounds of food per year
- 375 pounds per person per year
- \$130-220 million per year replacement costs
- Includes 143,000 rural Alaskans – 26% of Alaska's population (1995)



Composition of Subsistence Harvest





Alaska's land management

Benefits of Tribal Participation

- Tribal territories are spaced across the landscape
- They monitor and protect small resource bases which may not receive research funding
- They have collective memories with information on changes in the environment, human use, or stocks
- Will continue to occupy the space long after biologists and managers have retired and moved

Stewardship Efforts:

Tribes are successfully involved in:

- research,
- monitoring,
- habitat restoration,
- teaching respect and responsibility, and
- always carrying on customary activities.