

# The Data Game

## Compiling Data on Fishing Communities in Alaska

**Dr. Jennifer Sepez, Alaska Fisheries Science Center**

**NOAA Fisheries**  
Silver Spring, MD, June 22, 2005



*Mr. Quan T. Tative*

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*Mr. Mystery Man*



# The Data Game



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# Purposes

- Identify Fishing Communities
- Select Fishing Communities for Profiling
- Profile Fishing Communities



# Fishing Communities

- Compiling Data
- Data in the Profiles
- Data Challenges
- Data and Profile Applications
- Data Gaps



# Fishing Communities

## National Standard 8 of MSFCMA:

“Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to **fishing communities** in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities. “



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# Census Places

- 349 in Alaska
- 522 in Washington
- 309 in Oregon
- 1081 in California



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# Indicator Criteria

- Indicate something about involvement in fisheries (commercial, recreational or subsistence)
- Quantitative or categorical
- Community level
- Available for all or almost all communities
- Already collected



# Fishing Communities

**MSFCMA defines a fishing community as:**

“a community which is **substantially dependent on or substantially engaged in** the harvest or processing of fishery resources to meet social and economic needs, and includes fishing vessel owners, operators, and crew and United States fish processors that are based in such community.”



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# Dependence vs. Engagement

## The operational difference between Dependence and Engagement

- **Dependence** is a measure of a community's participation in fisheries relative to other community activities.
- **Engagement** is a measure of a community's participation in a particular fishery relative to the overall level of participation in that fishery.



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# Example indicators

- Landings in tons
- Landings by value
- Number of processors
- Number of vessels delivering
- Number of vessels owned by residents
- Number of crew licenses
- Number of Federal Permits
- Number of State Permits
- Recreational Licenses
- Number of Vessels Homeported



Kodiak, Alaska



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Kodiak, Alaska



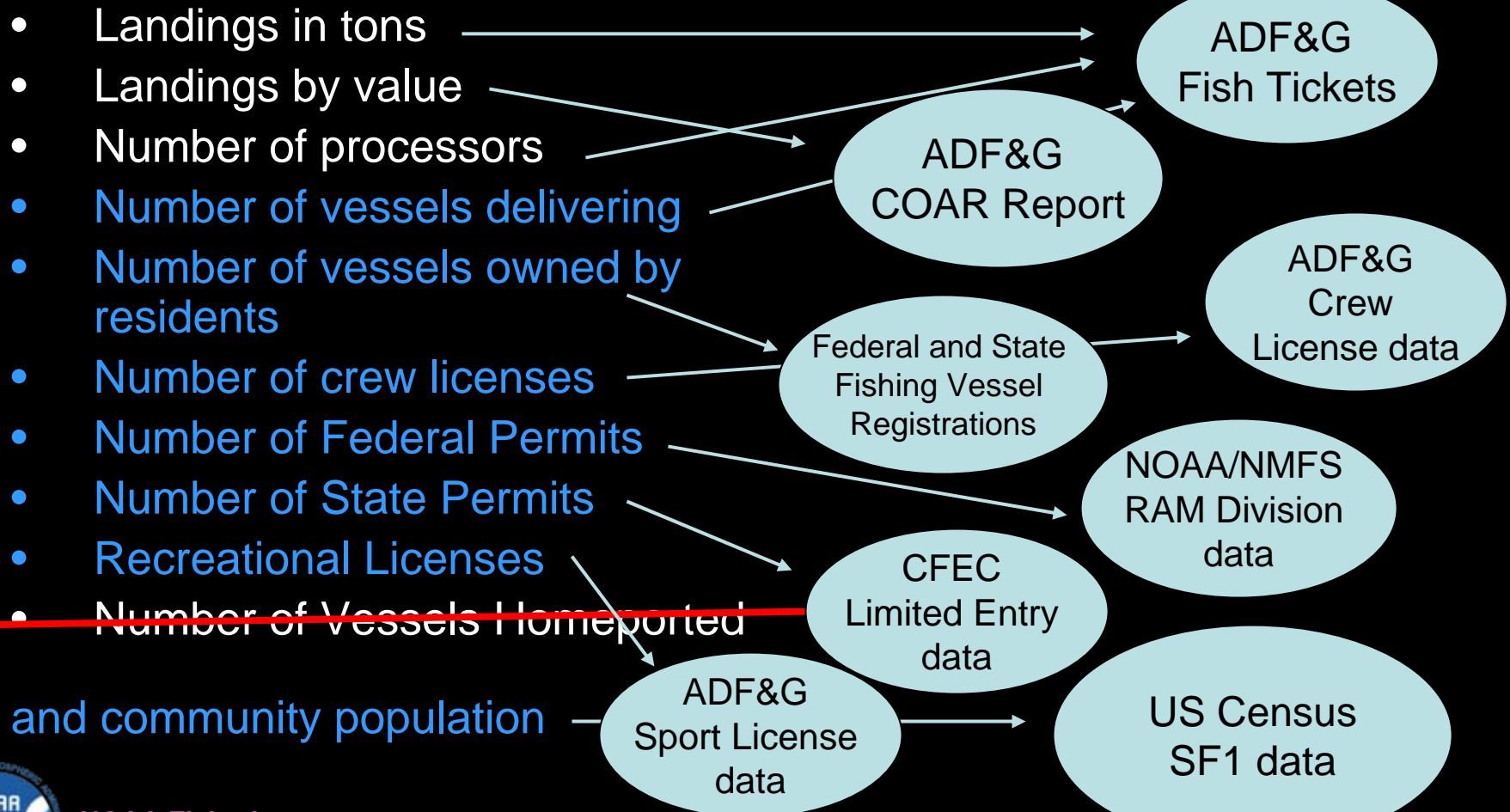
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/ population



# Multiple Data Sources

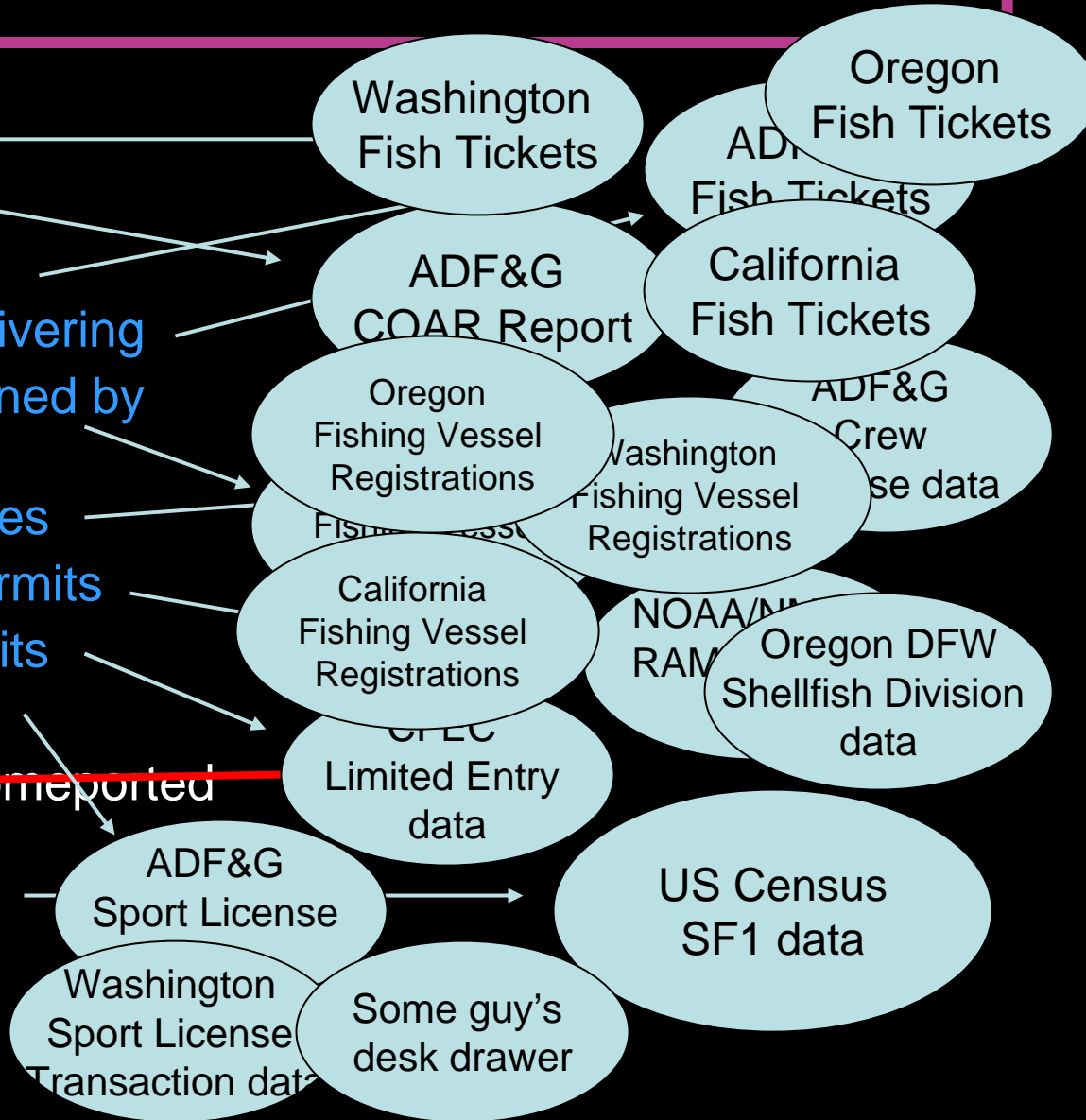




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and community population





# Aggregate Indicators

- Sum indicators (as appropriate) to find communities with participation in many categories.
- Evaluate indicators across regions (west Coast and North Pacific) to find communities with participation in both regions.



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# Thresholds

Threshold based selection of  
communities

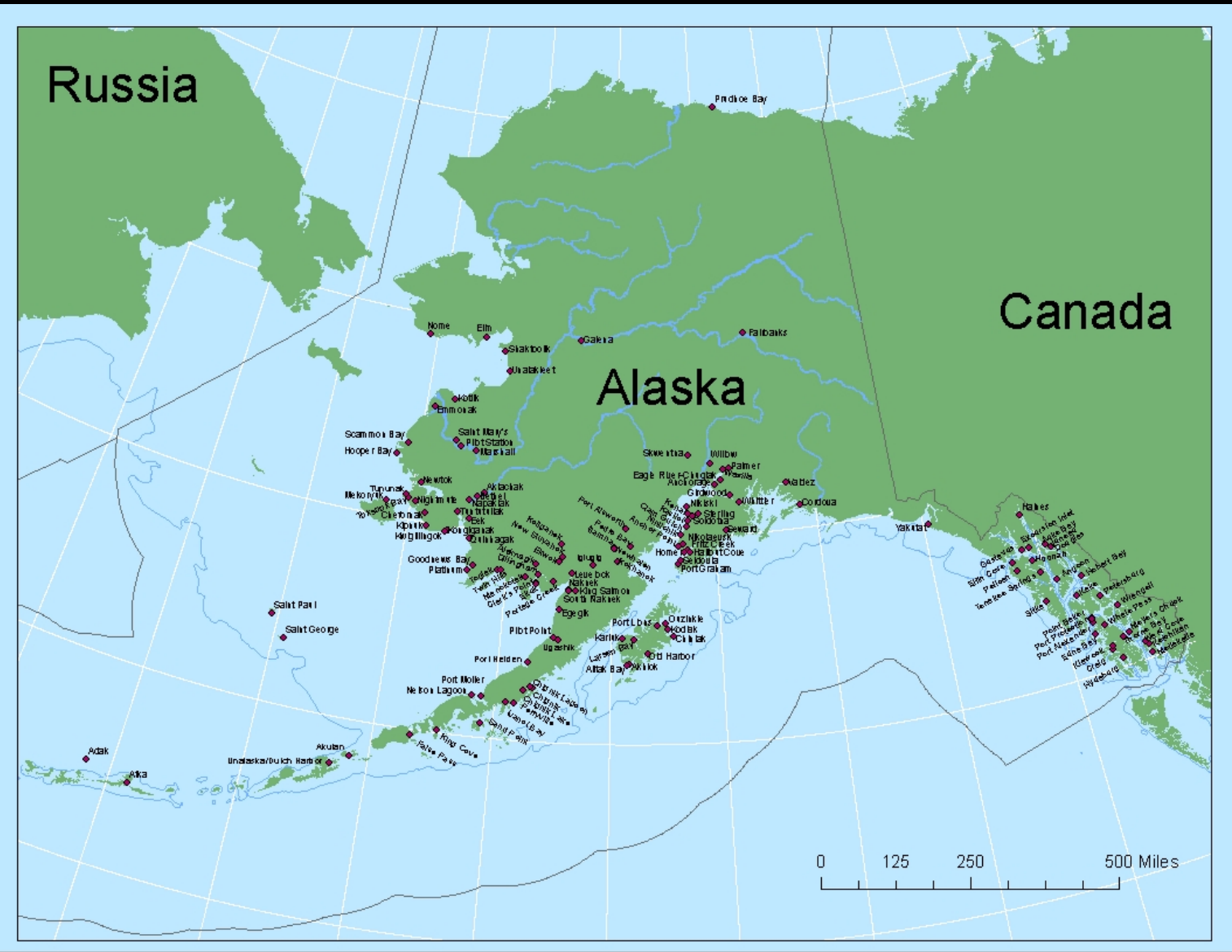
Alaska Profiles (Trigger Model)

Top 35%

Joint Profiles (DEA Model)

Top 15%





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Map by Angie Grieg, AFSC

# Narrative Profiles



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# People and Place

- Location
- Demographic profile
- History

figures: population pyramid, racial structure, ethnicity, group quarters





I WANT **YOU**  
TO "FILL UP MY  
**CENSUS**"



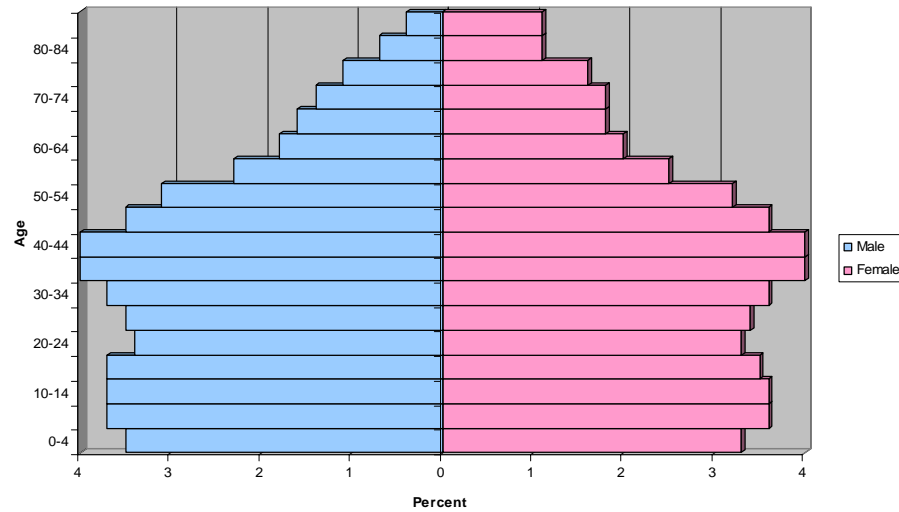
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# Population structure

2000 Population Structure

USA

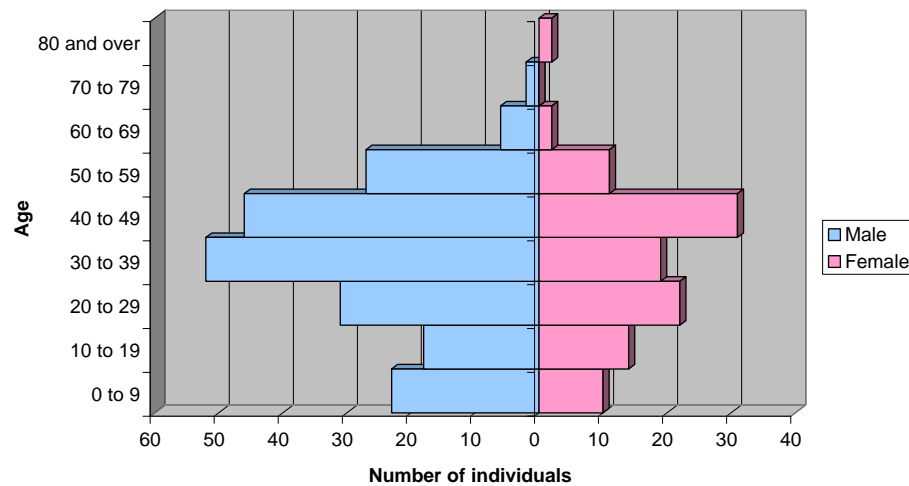
Data source: US Census



2000 Population Structure

Adak

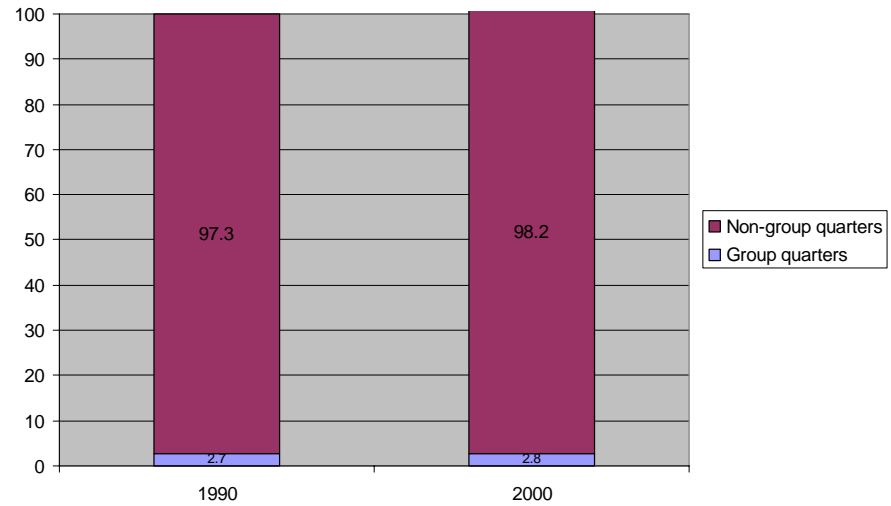
Data source: US Census



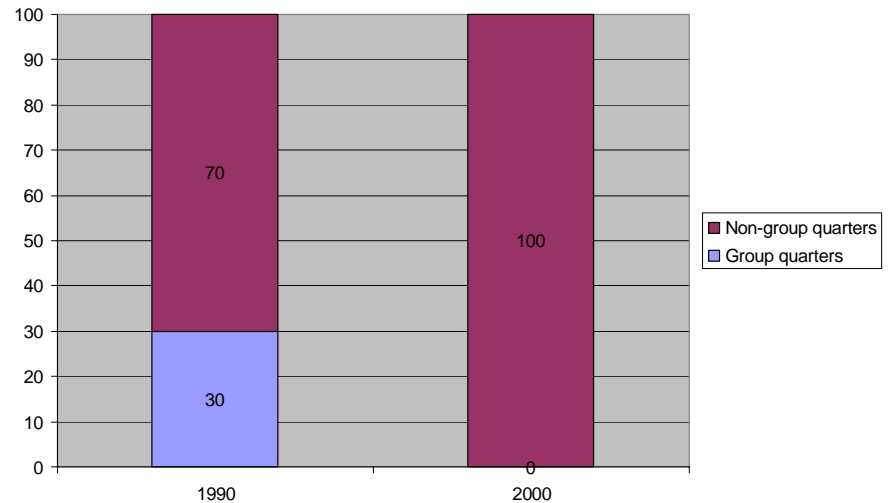
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# Group quarters

**% Group Quarters  
United States**  
Data source: US Census



**% Group Quarters  
Adak**  
Data source: US Census





# Infrastructure

- Current economy
- Governance
- Facilities

figures: employment

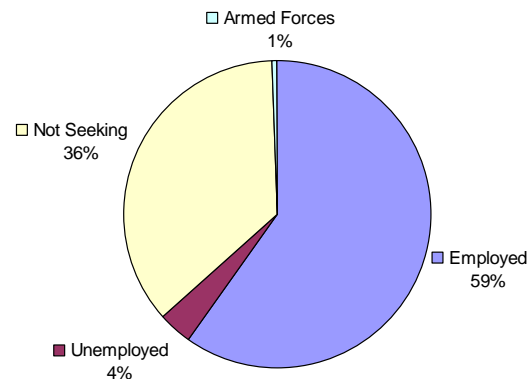


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# Employment structure

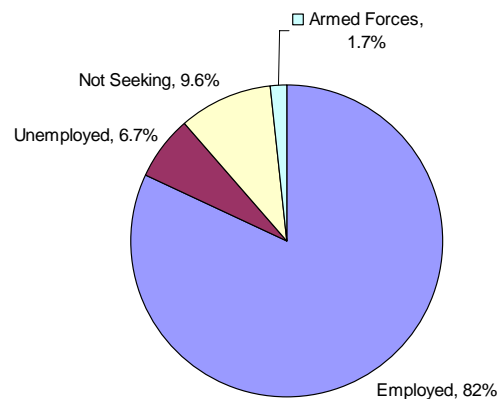
2000 Employment Structure  
United States

Data source: US Census



2000 Employment Structure  
Adak

Data source: US Census



# Involvement in North Pacific Fisheries

- Commercial fishing
- Sport fishing
- Subsistence

## Involvement in North Pacific Fisheries

### *Commercial Fishing*

Since Aleut Corporation acquired the land on Adak there has been an attempt to turn the village into a fishing center for the area. In the year 2000 there were four commercial fishing permits issued to residents of Adak. There was one community member who owned a vessel participating in federal commercial fisheries who was a resident of Adak and according to the Commercial Fisheries Entry Commission there were two licensed crew members from Adak in the year 2000.

Of the four commercial fishing permits issued to residents of the community all were issued for the harvesting of groundfish. Of those four, one was issued for miscellaneous salt water finfish using a hand troll, one was for miscellaneous salt water finfish using a mechanical jig, one was for demersal shelf rockfish with a longline vessel under 60' in the southeast, and one permit was for demersal shelf rockfish using a mechanical jig in the southeast, although this last permit was not actually fished during that particular year. There were 49 vessels which delivered 'Other Groundfish' landings in Adak, 24 which delivered sablefish, 32 which delivered halibut, and 12 vessels which delivered Bering Sea and Aleutian Islands (BSAI) crab landings to the community. In accordance with confidentiality regulations, data for fish landings in the community is unavailable. There is one land-based processing plant, Norquest-Adak Seafood Co., located in the community of Adak which processes BSAI crab, groundfish, halibut, and sablefish. The plant has been in operation as Norquest since the year 2000 and the land for the plant is leased from Aleut Corporation.

The City of Adak was recently granted \$88,548 by the Southwest Alaska Municipal Conference as part of the Steller Sea Lion Mitigation program "in recognition of the negative economic impacts of federal measures to protect the Steller sea lion" with money which had been allocated by the United States government (Southwest Alaska Municipal Conference 2003).



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# Involvement in North Pacific Fisheries

- Commercial fishing
- Sport fishing
- Subsistence

## **Involvement in North Pacific Fisheries**

### ***Sport Fishing***

The tourism industry in Adak is currently made up of visitors attracted by sightseeing on cruise vessels, but there is no recent evidence of sport fishing. It is expected that tourism will grow in Adak in the next few years and the accommodations facilities exist to make the sport fishing industry a possibility in the future. No sport fishing permits were sold in the year 2000 in Adak.



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# Involvement in North Pacific Fisheries

- Commercial fishing
- Sport fishing
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## Involvement in North Pacific Fisheries

### *Subsistence Fishing*

In recent history Adak has been considered a Federal Non-rural area because of the naval base which was present on the island and the larger population on the island at that time. As recently the establishment of the 2003-2004 Federal Subsistence Fishery Regulations, Adak was still considered a non-rural area in regards to Federal subsistence. In order to have the right to harvest subsistence wildlife, fish, and shellfish on Federal land a status of rural must be granted. Rural status has been requested by Adak, but has not been granted. Therefore, residents of Adak are not allowed to harvest resources for subsistence on Federal lands. However, Adak is considered rural by the State of Alaska and residents are thus eligible to harvest subsistence resources on State lands. Based on the island's location, history, isolation, ethnic make-up, and salmon harvests, it may be surmised that Adak residents are engaging in a variety of subsistence activities. However, there is no information available from the Alaska Department of Fish and Game for any species other than salmon because of the non-rural designation.

Regarding salmon subsistence, prior to the year 1988, the non-commercial salmon net fishery at Adak was classified as a subsistence fishery. In 1988 it became a personal use fishery, but was reclassified as a subsistence fishery again in 1998 (Division of Subsistence ADF&G 2001). In 1999, all fresh water on Adak Island and all salt waters within 100 yards of a stream terminus were closed to subsistence fishing for salmon because of the federal position on non-rural subsistence. In the Adak district in 1999 it is estimated that five subsistence salmon permits were issued in the area by the State and that 164 sockeye and four chum were harvested. In the community of Adak itself, one household salmon permit was issued in the year of 1999.

In 2003, NOAA began a program to distribute subsistence halibut permits to certain rural residents in Alaska. Because the NOAA program uses the State designations of rural and non-rural, residents of Adak were classified as rural for the purposes of this program and have been eligible to apply for permits. The application process for this fishery began in May 2003 and is ongoing.



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# Other

- A category at the end of the profiles for important information that does not fit in any of the given headings
- Allows for flexibility within a standardized structure



# Data Challenges

- Aggregation Problems
  - Geographic differences
  - Summability issues

## SPELLING BEE

Cord Elaine

Cors Dalene

Couer Da'Lene

Cour D Alane

Couer d"Alene

Couer d'Alene



**Coeur d'Alene, Idaho**



# Summability Issues

- WCPMTNUM = number of permits registered to people residing in the community for West Coast fisheries
- NPPMTNUM = number of permits registered to people residing in the community for North Pacific fisheries
- WCPMFED = number of individuals that hold registered Federal permits for West Coast fisheries
- NPPMFED = number of individuals that hold registered Federal permits for North Pacific fisheries
- NPHALIFQ = number of North Pacific halibut IFQ registered to people residing in the community
- NPSABIFQ = number of North Pacific sablefish IFQ registered to people residing in the community
- WCPMST = number of individuals that hold registered State permits for West Coast fisheries
- NPPMST = number of individuals that hold registered State permits for North Pacific fisheries



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# Data Challenges

- Aggregation Problems
  - Geographic differences
  - Summability issues
- Validity Problems
  - Homeports
  - Seasonal Population Fluctuations
  - Intentional non-compliance
- Availability Problems
  - Unincorporated places
  - Non-public sources



# Applications

- Magnuson Act
- NEPA
- National Database
- Outreach



# Benefits

- Provides data on many communities
  - Many communities were profiled that have never been formally assessed by NMFS before
  - Such broad coverage is not possible during issue-driven assessments written under extreme time pressure



# Benefits

- Provides Uniform Assessments
  - Enables comparisons within State, Region, Nation.

State	DEA Model FCs	Census Places	Percent
Alaska	102	349	30%
Washington	40	522	8%
Oregon	30	309	10%
California	52	1081	5%



# Benefits

- Bang for Buck

## **Fieldwork-based Long-form Profiles**

Ethnographic depth and analytical insight

Up-to-date and changing conditions

Average **\$27,000** per community

## **Existing Data-based Short Form Profiles**

Broad coverage and uniform assessment

Average **\$1300** per community



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# Drawbacks

- Absence of fieldwork in communities
- Repeat or compound errors from large scale databases
- Systematic undervaluation of data gaps
- Politics of selection process



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# Drawbacks

## Data Gaps

- Crew
- Processing Workers
- Recreational Fisheries
- Subsistence Fisheries
- Seasonal Population Fluctuations
- Fleet Profiles



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# Acknowledgements

## Special thanks to Christina Package

- Alaska Profiling Team
  - Christina Package, Bryan Tilt, Ismael Vaccaro, Heather Lazrus
- Joint North Pacific/West Coast Profiling Team
  - Karma Norman, Heather Lazrus, Christina Package, Bryan Tilt, Suzanne Russell, Kevin Grant, Robin Petersen, Nicole Milne, Megan Styles
- AFSC Socioeconomics Staff
  - Ron Felthoven, Terry Hiatt, Joe Terry, Dan Lew, Chang Seung, Alan Haynie, Angie Grieg, Courtney Carothers
- NMFS and Council Staff
  - Susan Abbott-Jamieson, Rita Curtis, Palma Ingles, Stewart Allen, Trish Clay, Patricia Pinto da Silva, Peter Fricke, Lisa Colburn, Brent Stoffle, Nicole Kimball, Ben Muse
- Pacific States Marine Fisheries Commission
  - PacFIN, AkFIN, Dave Colpo, Peggy Murphy, Jennifer Langdon Pollock
- Other data providers
  - Alaska Department of Fish and Game, Alaska Department of Community and Economic Development, Commercial Fisheries Entry Commission, NMFS RAM Division, US Census Bureau, Southwest Alaska Municipal Conference
- Community Members from many many Alaska and West Coast Communities



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