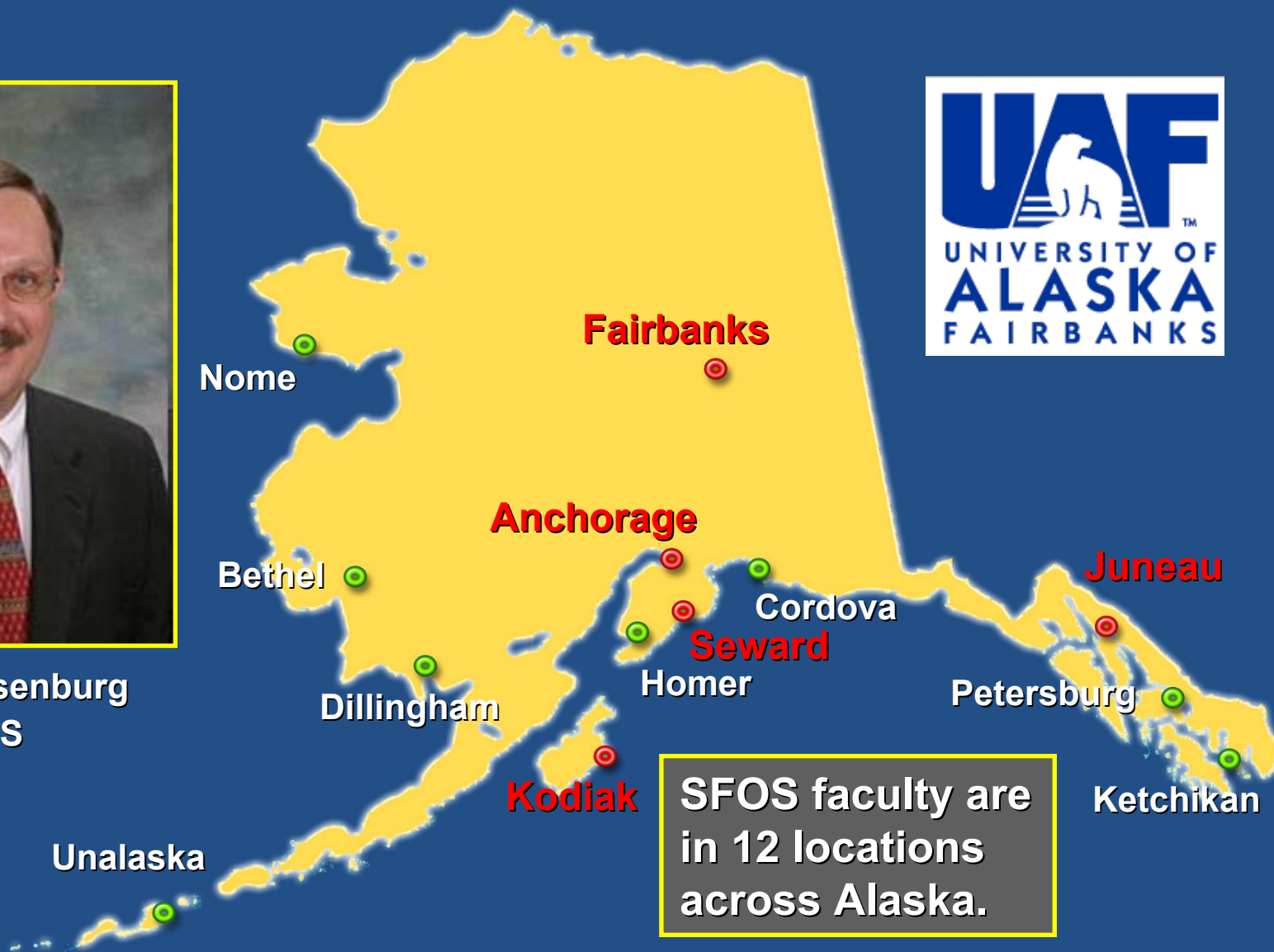


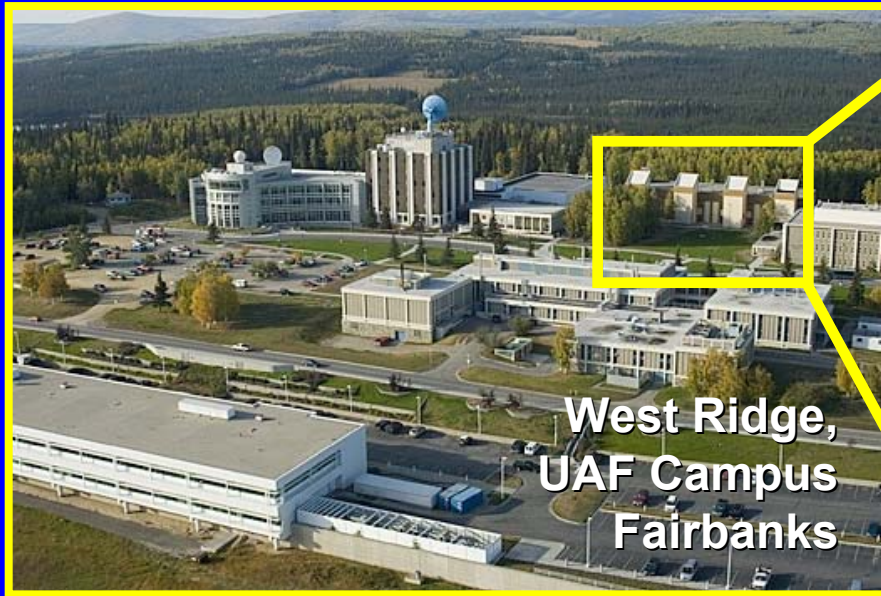
UAF School of Fisheries and Ocean Sciences



Denis Wiesenburg
Dean, SFOS



SFOS Facilities



**Lena Point Facility,
Juneau**



**Building Dedication, Lena Point,
April 2009**



**Alaska SeaLife Center,
Seward**



**R/V Sikuliaq,
Delivery 2013**



UAF School of Fisheries & Ocean Sciences

Headquartered in Fairbanks

**Fisheries
Division**

*Juneau &
Fairbanks*

**Fishery
Industrial
Technology
Center**

Kodiak

**Seward
Marine
Center**

Seward

**Alaska
Sea
Grant**

Fairbanks

**Marine
Advisory
Program**

*Anchorage +
10 coastal
communities*

**Institute
of Marine
Science**

Fairbanks

SFOS Divisions

- **Institute of Marine Science** – oceanographic and marine biological research mainly in the subarctic Pacific and Arctic waters, offers M.S. and Ph.D. degrees
- **Fisheries Division** – fisheries research on freshwater, anadromous and marine species from Southeast Alaska to the Arctic, offers B.A., B.S., M.S., and Ph.D. degrees
- **Fishery Industrial Technology Center** – research and development of harvesting and processing technology, processing seafood quality and safety, marketing, and collaborative ecosystems research

SFOS Divisions

- **Alaska Sea Grant** – part of a national Sea Grant network that funds marine research, provides education and extension services, and distributes information about Alaska's seas and coasts
- **Marine Advisory Program** – provides information, technical assistance and workforce development opportunities linking science with community needs to solve resource questions
- **Seward Marine Center** – experimental facility that supports research vessel operations, shore-based fishery and marine science research and educational resources
- **Global Undersea Research Unit/Kasitsna Bay Lab** –GURU emphasizes seafloor research in marine biology and geology through management of Kasitsna Bay Lab and as a regional center of NOAA's Undersea Research Program

SFOS Research Locations



Arctic



Aleutians



Antarctic



Subarctic



Gulf of Alaska



Bering Sea

SFOS Research Topics: Fisheries and Marine Mammals

- **Freshwater fisheries**

- Ecology, population dynamics and fisheries for whitefishes, lampreys, northern pike, rainbow trout, Arctic char, burbot, etc.

- **Anadromous fisheries**

- Salmon genetics, ecology, diseases, survival, population dynamics (including declines in western Alaska), and fishery management

- **Marine Fisheries**

- Genetics, ecology, population dynamics, fishery oceanography, economics, seafood science, and management of Pacific halibut, rockfishes, sablefish, pollock, cod, herring, crabs, shrimps, octopus, etc.

- **Marine Mammals**

- Physiology, behavior, movements, ecology, contaminants and diseases, population trends, reproductive success, and fisheries interactions of sea lions, seals, whales, seabirds

Ecology of Juvenile Salmon in the Mat-Su Region



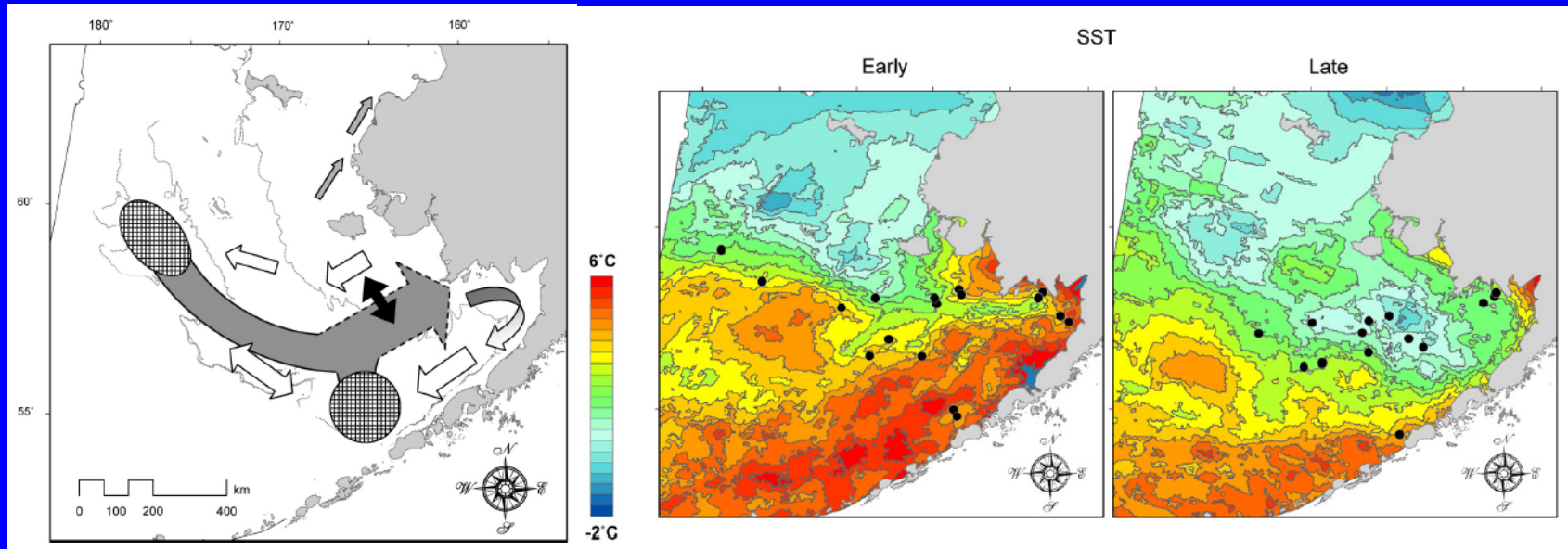
Matanuska-Susitna Basin
Salmon Habitat Partnership



Salmon
habitat
restoration
and
conservation
in Mat-Su
Basin

- Amanda Rosenberger, Kevin Foley (M.S. student), Jon Gherkin, and Doug McBride (USFWS)
- Funded by USFWS
- Informing conservation and restoration practices with strategic research
- Part of ***Mat-Su Basin Salmon Habitat Partnership*** with 40 members representing businesses, governments, landowners, Native Alaskans and the non-profit community

Migration and Spawning Timing of Pacific Herring



- Gordon Kruse and M.S. student, Naoki Tojo
- Funded by NPRB and Alaska Sea Grant
- Cooperative project with ADF&G
- Part I: Identify annual migration route from bycatch in groundfish trawls
- Part II: Predict spawning timing in northern Bristol Bay to improve fishery management and economics

Preventing Whale Entanglements in Alaskan Net Fisheries

- Alaska Sea Grant Marine Advisory Program (Kate Wynne, Sunny Rice, Briana Witteveen)
- Funded by NPRB
- Part I:
 - Preliminary research to find effective acoustic or other deterrents
 - Field work with Petersburg gillnet and Kodiak seine fleets, 2009
- Part II:
 - Acoustic research, 2010
- Part of a larger collaborative outreach and education effort to address entanglements

Whale Entanglement Wheelhouse Guide for Commercial Fishermen

Alaska Marine
Mammal Stranding
Network
24-hour hotline

(888)
774-7325

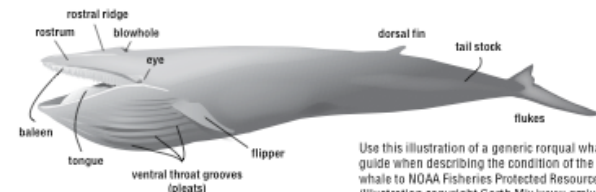
If you encounter a whale while fishing:

Avoid entanglement. See tips on reverse to prevent whales from becoming entangled in your fishing gear.

If a whale is entangled, assess the situation. First, determine if your situation is unsafe because the whale is too close. Maintain a safe distance. If your vessel is attached to the animal (e.g., seine or drift net fishing), determine if it is possible to safely help the whale free itself.

Free your vessel. Remember that entangled animals can be dangerous and unpredictable. Stay at least 25-50 feet away (one whale-body length). If you must free your vessel from the animal, and it is safe to do so, cut your fishing gear to leave 25-50 feet attached to the whale. Put a large buoy bag on the gear attached to the whale. This will make it easier for NOAA Fisheries to track the animal and possibly disentangle it later.

Call NOAA Fisheries Protected Resources at (907) 586-7235 (weekdays) or by using the Alaska Marine Mammal Stranding Network hotline above (nights and weekends) if you are unable to free the animal. Provide information on your exact location; sea conditions; species, size, and condition of the animal and its ability to surface to breathe; and type of gear and how the animal is entangled. This will help the agency determine whether or how to assist in disentanglement. Take pictures, if you have time and can do so safely, to help disentangle later.

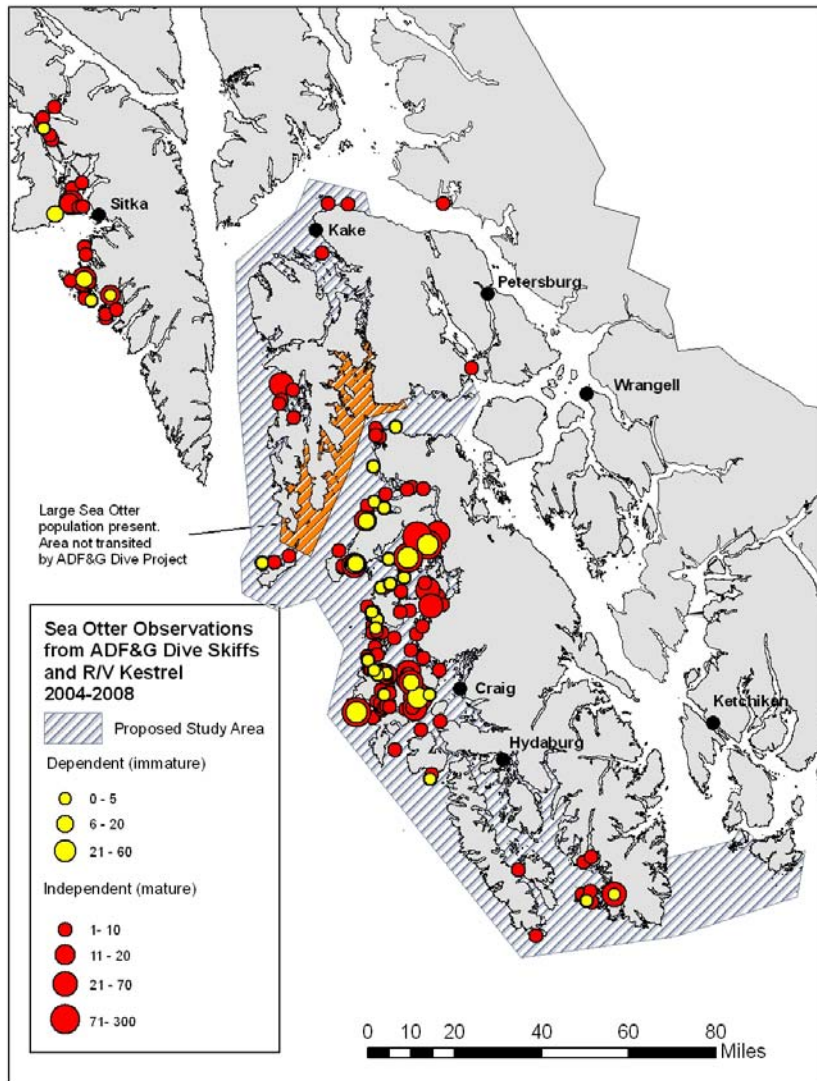


Use this illustration of a generic orca whale as a guide when describing the condition of the entangled whale to NOAA Fisheries Protected Resources. (Illustration copyright Garth Mix/www.gmixdesigns.com)

Report the incident to the NOAA Fisheries Marine Mammal Authorization Program. You can get the appropriate form from local enforcement or from the NOAA Fisheries website at <http://alaskafisheries.noaa.gov/protectedresources/observers/mmamform.pdf>. Your Marine Mammal Authorization allows for the legal "incidental take" of marine mammals in the course of commercial fishing. You must, however, report any incidental injuries or mortalities to marine mammals within 48 hours of the end of your fishing trip.

! Do not get in the water with the whale or approach a free-swimming entangled animal.

Addressing Sea Otter/Shellfish Fisheries Conflicts in SE Alaska



- Ginny Eckert and Sunny Rice (with PhD student and ADF&G biologist, Zac Hoyt)
- Funded by Alaska Sea Grant
- Assess sea otter population size in central SE AK
- Estimate consumption of commercially important prey species
- In collaboration with SARDFA, PVOA, Petersburg Marine Mammal Center, USFWS

School of Fisheries and Ocean Sciences

A Few Facts

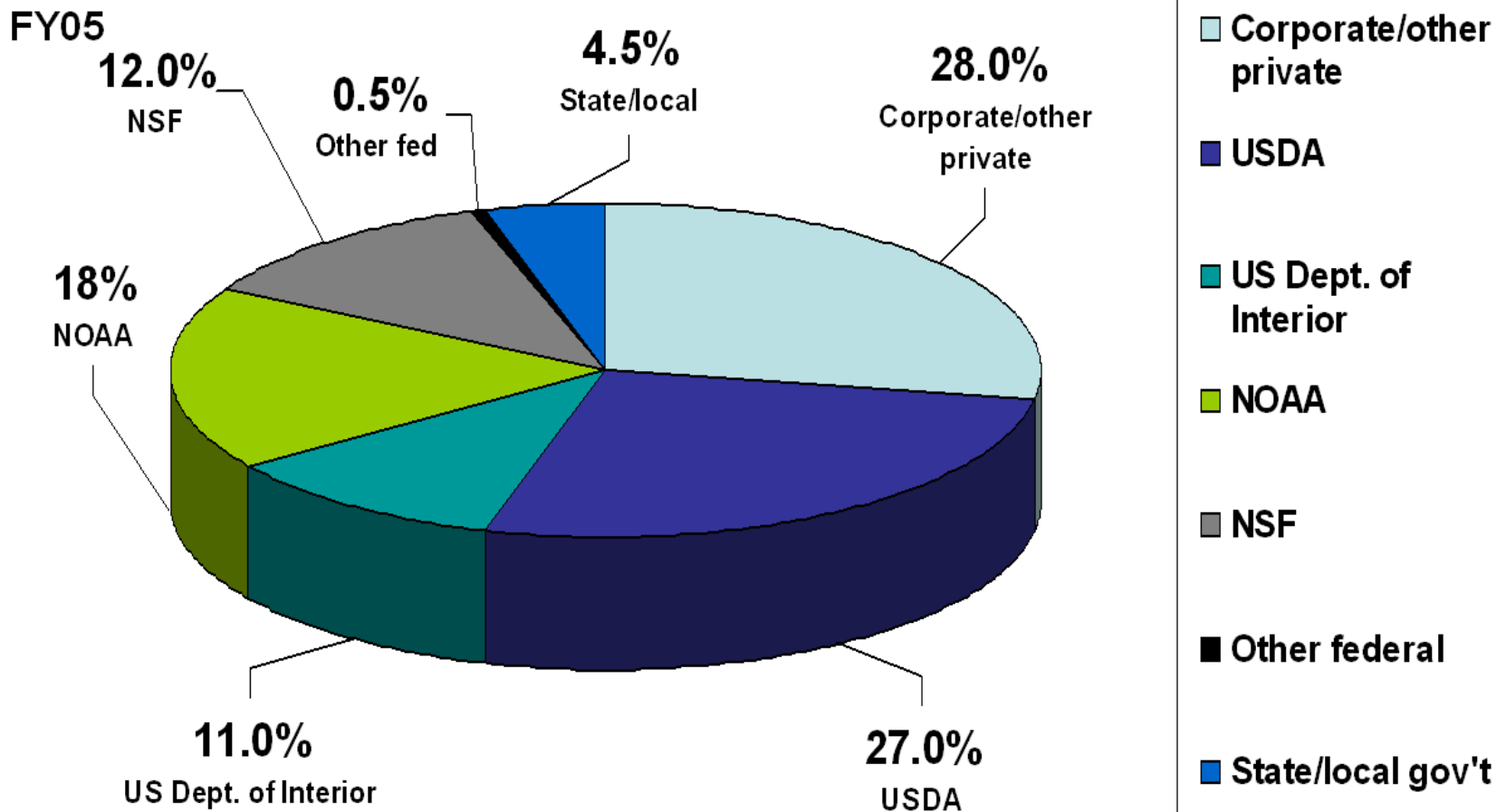
- 270 employees
- 65 faculty
- Marine Advisory Program agents in 12 coastal communities
- 126 graduate students
- 55 fisheries undergraduates
- \$10,000,000 State budget
- About \$15,000,000 in research per year last four years



Cindy Tribuzio,
PhD Candidate

Research Funding Sources

SFOS researchers receive ~\$15 million per year in research funding.



Funding from ADF&G

- **\$230,000 in FY 09 (was \$300,000 in FY 07)**
- **1.64% of a \$14 M research budget in FY 09**
- **Typical funding mechanisms:**
 - **Reimbursable services agreement (RSA)**
 - e.g., Interactions of state-managed fisheries on Steller sea lions (M.S. student, Nathan Soboleff)
 - **ADF&G Graduate Studies Program**
 - e.g., Stock assessment modeling of northern shrimp off Kodiak Island (M.S. student, Aaren Ellsworth)
 - **Funding for student stipend and tuition through the Alaska Cooperative Fish and Wildlife Unit**
 - e.g., Alternative escapement goals for Unuk River Chinook salmon (M.S. student, Christie Hendrich)

Alaska Cooperative Fish and Wildlife Unit

- **Part of a nation-wide cooperative program to promote research and graduate student training in the ecology and management of fish, wildlife and their habitats**
- **2 of 8 staff reside in SFOS (Fisheries)**
- **Cooperative with ADF&G, USFWS, USGS, UAF**
- **FY 08 base funding (~\$1 M):**
 - **~\$90 K from ADF&G**
 - **~\$200 K from University (Fund 1)**
 - **~\$750 K from Federal sources**
- **FY 08 grants: ~\$3.2 M from other sources**

Alternative Funding Mechanism

- **ADF&G offers technical & logistical assistance, but no direct funding**
- **UAF faculty prepare proposals for external grants to fund work in support of ADF&G**
 - **Examples**
 - **Environmental cues for Pacific herring spawning in northern Bristol Bay (M.S. student, Naoki Tojo) – funded by Alaska Sea Grant & NPRB**
 - **Abundance, recruitment, and environmental forcing of Kodiak red king crab (Ph.D. student, Bill Bechtol) – funded by Alaska Sea Grant & NPRB**

SFOS Degree Programs

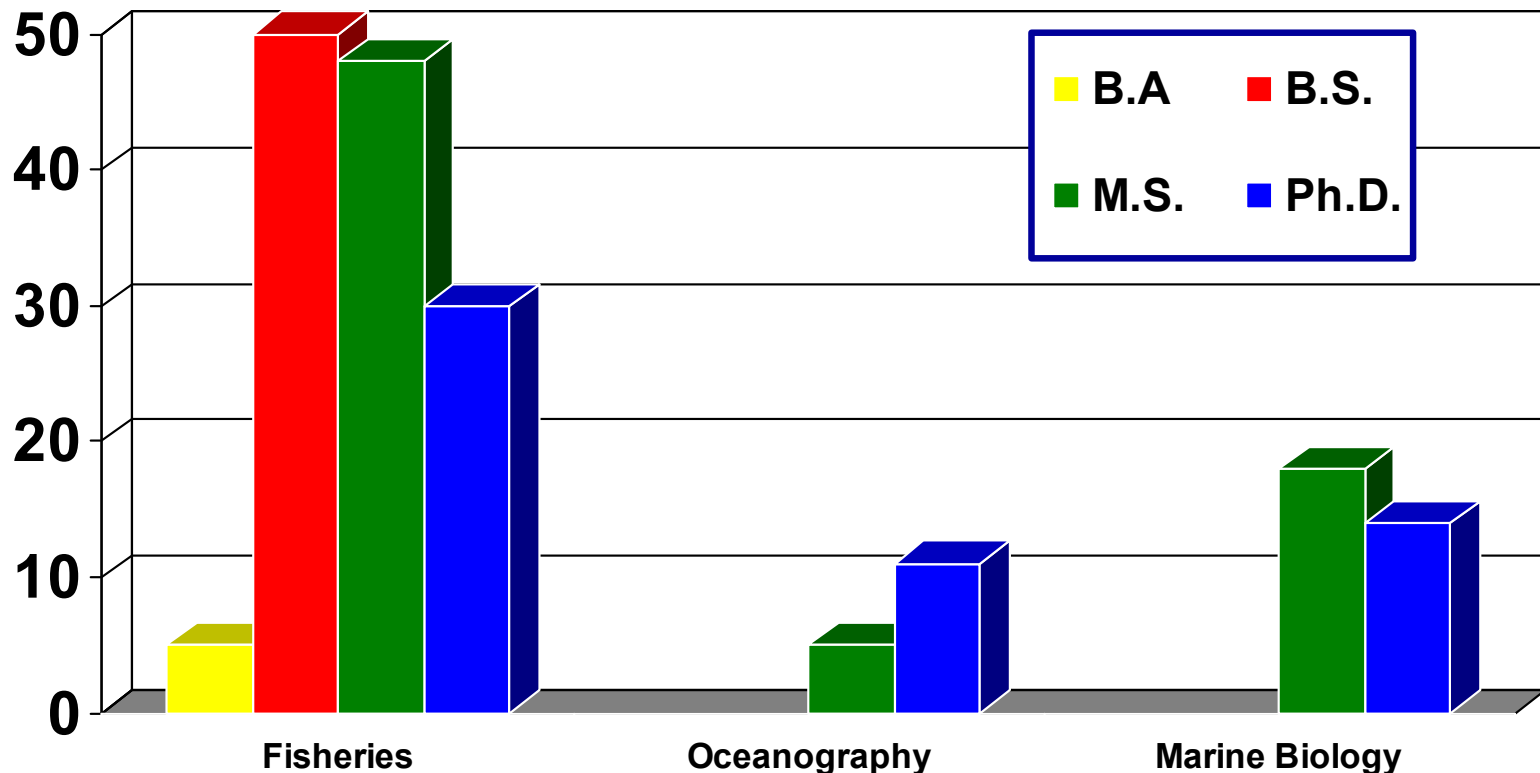
- Fisheries – B.A., B.S., M.S., Ph.D.
- Marine Biology – M.S., Ph.D.
- Oceanography – M.S., Ph.D.
- Seafood Science & Nutrition – M.S., Ph.D.
- Interdisciplinary – M.S., Ph.D.



SFOS Students

FY: 2009-2010: 126 graduate and 55 fisheries undergraduates

Students by Degree and Discipline



SFOS Student Fun Facts

- Undergraduate fisheries enrollment grew from 17 in 2004 to 55 in spring 2010
- 22% of undergraduate fisheries students are Alaska Natives
- 8 undergrads were named to Dean's, Chancellors' or President's lists for fall 2009 (GPA \geq 3.5)
- Now 26 applicants for undergraduate fisheries program for fall 2010 (16 AK, 10 out-of-state)
 - 17 are first-time freshmen, 9 are transfers
 - 12 first-time freshmen are AK residents
 - 5 are of the 12 are UA Scholars



71% of Graduates Work in Alaska

Alaska Dept. of Fish and Game

AK

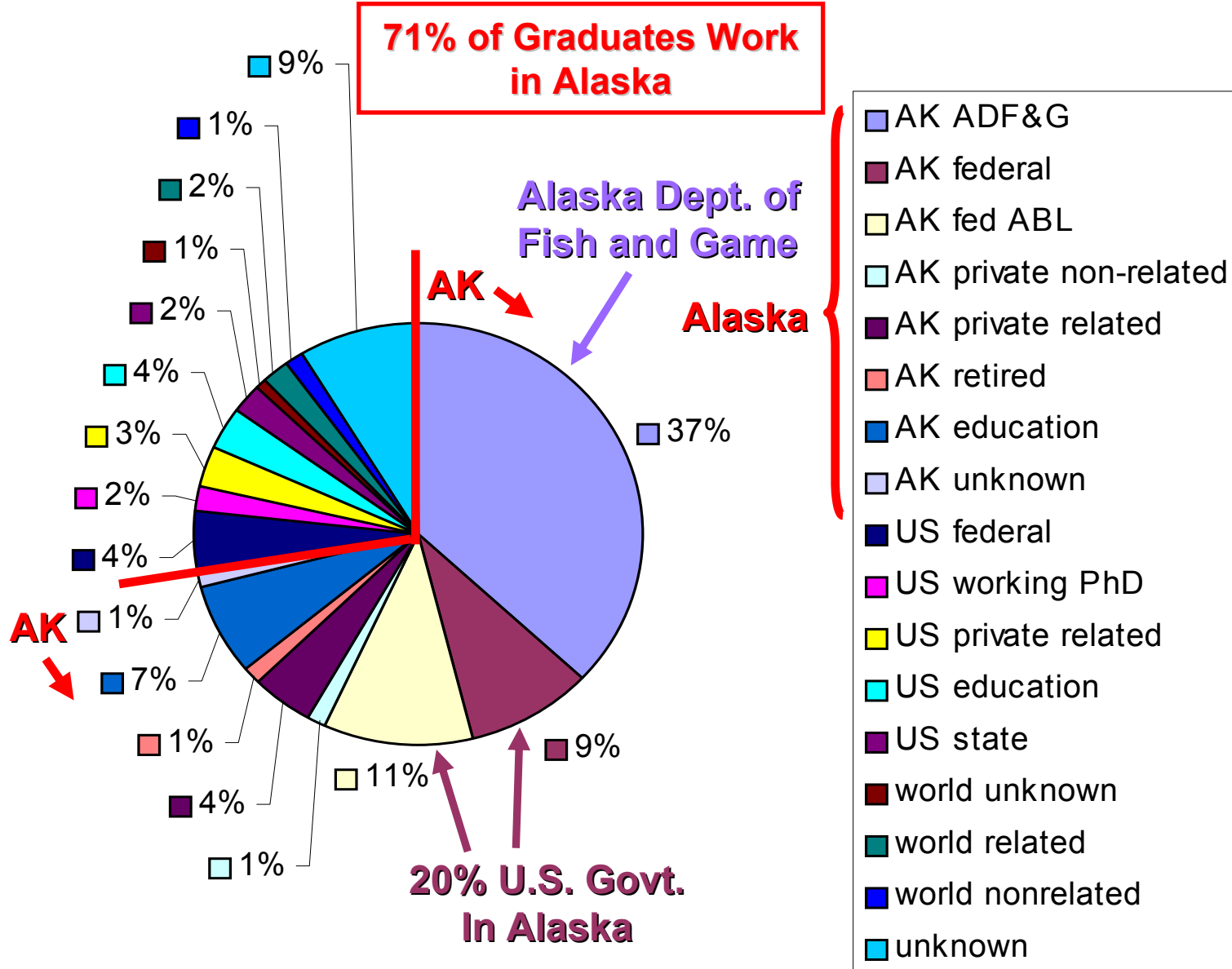
Alaska

AK

20% U.S. Govt. In Alaska

Legend:

- AK ADF&G
- AK federal
- AK fed ABL
- AK private non-related
- AK private related
- AK retired
- AK education
- AK unknown
- US federal
- US working PhD
- US private related
- US education
- US state
- world unknown
- world related
- world nonrelated
- unknown



SFOS Fisheries Students in Action

