

# USDA, Wildlife Services Avian Influenza Surveillance

Avian Influenza Principal Investigators Meeting

Anchorage, AK

February 6, 2008

By David Sinnett

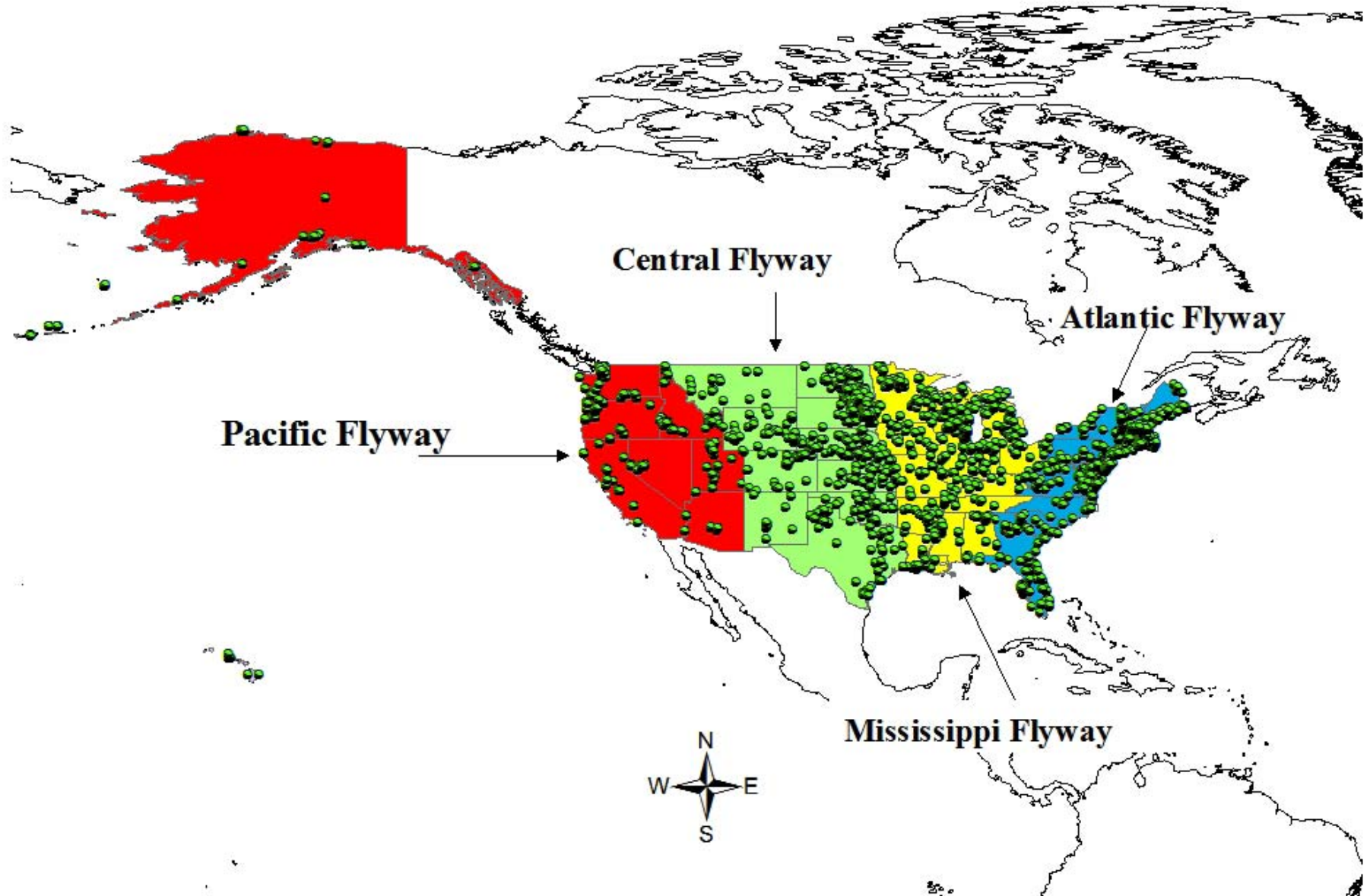
Wildlife Disease Biologist



# USDA Sampling Nation-Wide

- Based on the “biological year” April 1 through March 31
- **2006 Goal:** 75,000 cloacal and 50,000 fecal
  - 85,548 cloacal samples
  - 50,184 fecal samples
  - 135,732 total
- **2007 Goal:** 50,000 wild bird samples and 25,000 fecal samples
  - 59,324 wild bird samples from 50 states & counting
  - 21,799 fecal samples from 31 states & counting
  - 81,123 total so far

2007 data as of 2-1-08

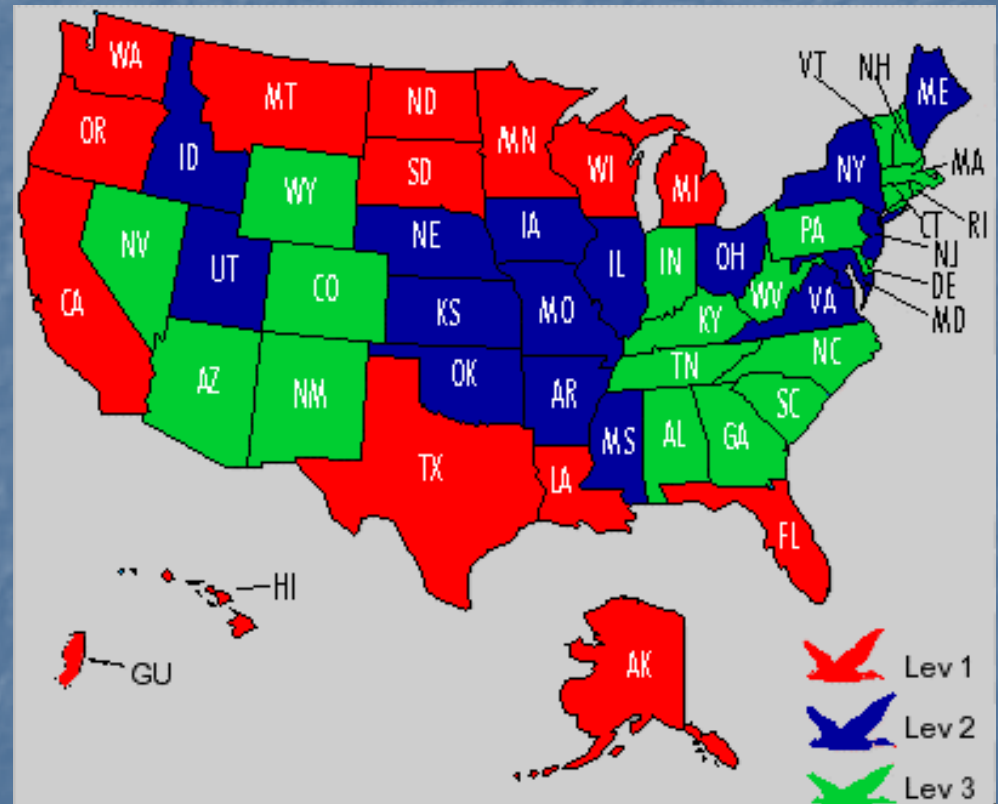




# 2007 Overall US Rating

14 – Level 1, 16 – Level 2, 20 – Level 3

- Level 1: 1,500 wild bird samples
  - Exception AK & TX 2,000
- Level 2: 1,000 wild bird samples
- Level 3: 750 wild bird samples



# Key Changes Implemented in 2007

- For apparently healthy birds, 2 swabs are collected from each bird: 1 oropharyngeal and 1 cloacal swab and placed in the same tube.
- Pooling of samples has been discontinued.
- Decreased number of samples.
- Focused sampling on 20 birds species that were infected with H5 LPAI viruses in 2006.

# Species Testing H5 Positive in 2006

- Mallard
- Northern Shoveler
- Northern Pintail
- Gadwall
- American Green-winged Teal
- Ring-necked Duck
- Domestic Duck
- Canada Goose
- Blue-winged Teal
- American Wigeon
- Tundra Swan
- American Black Duck
- Lesser Snow Goose
- Cackling Goose
- Greater White-fronted Goose
- Ruddy Duck
- Mute Swan
- Muscovy Duck
- Common Goldeneye



# USDA-WS Avian Influenza Sampling Goals for Alaska, 2007


- 200 samples per dabbling duck species common in Alaska (mallard, teal, wigeon, pintail, shoveler, gadwall) for a total of 1000-1200
- 200 samples per functional group (diving ducks, geese/swans, shorebirds, gulls/terns/alcids) for a total of 800
- 1500 fecal samples



# Dabbling Duck Samples USDA-Alaska, 2007

- Mallard - 297
- Northern Pintail - 128
- Northern Shoveler - 54
- American Green-winged Teal - 181
- Eurasian Green-winged Teal - 32
- Baikal Teal - 1
- American Wigeon - 188
- Eurasian Wigeon - 3
- Gadwall - 5

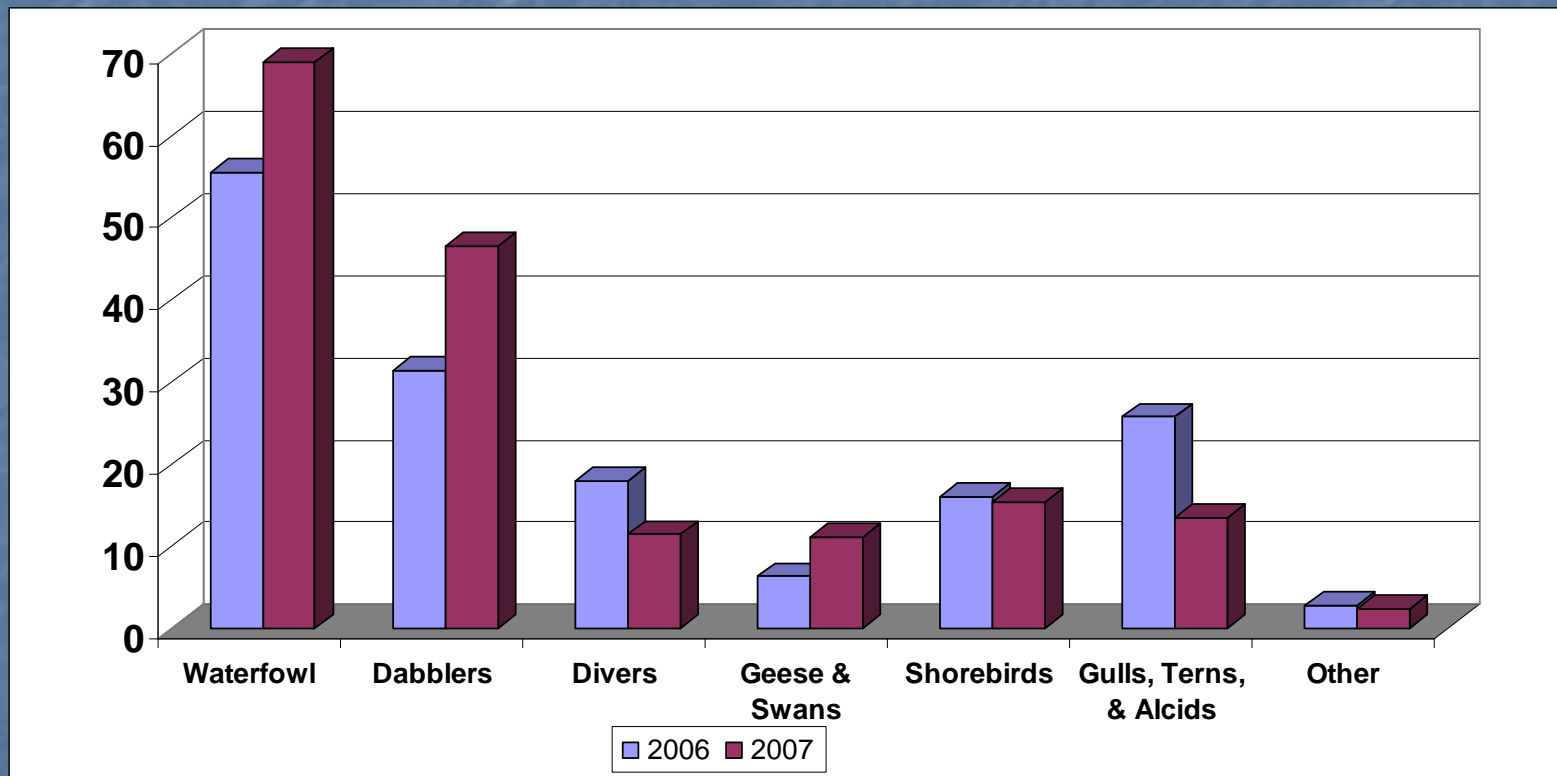




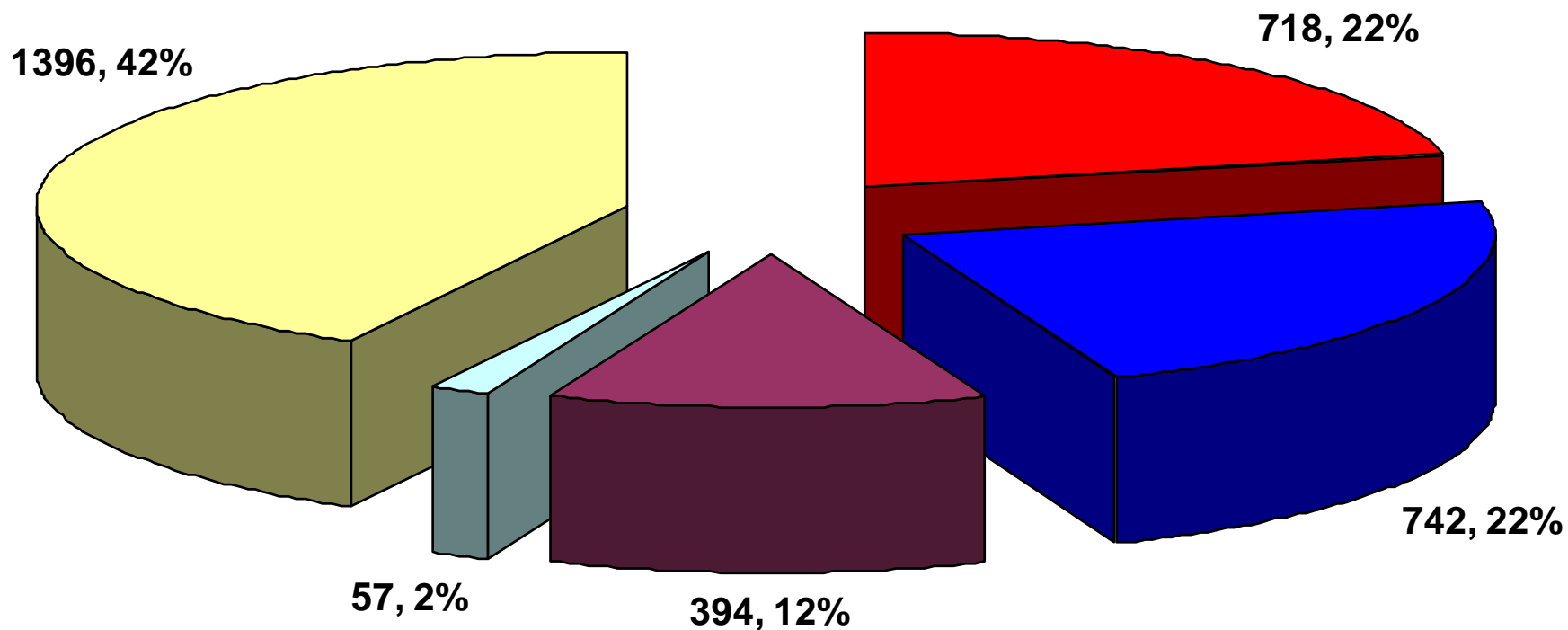
# Number of Samples per Functional Group in 2007

- Dabbling Ducks - 889
- Diving Ducks – 218
- Geese/Swans – 212
- Gulls/Terns – 256
- Shorebirds – 292
- Other - 44

# Percentage of Functional Groups Sampled in 2006 & 2007



# Number of Samples per Collection Strategy Alaska-2007



■ Agency Harvest ■ Hunter Harvest ■ Live Wild Bird ■ Morbidity/Mortality ■ Environmental



# Species Sampled and Number

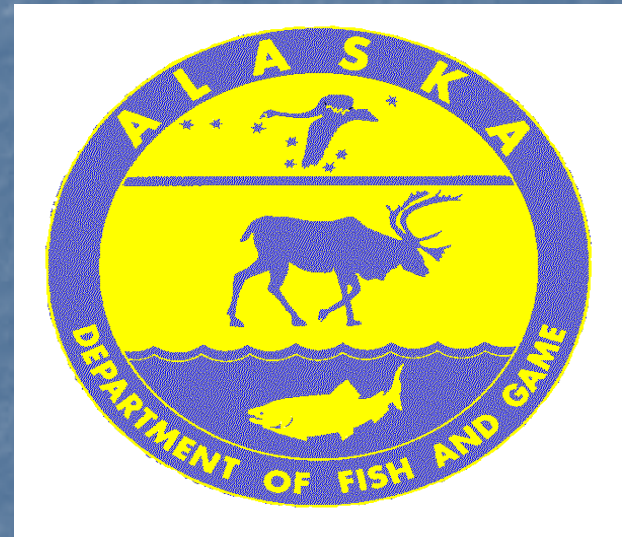
(only USDA, Alaska)

- 2006
  - 111 species
  - 3,624 wild bird samples
  - 1,089 environmental samples
  - 4,713 total samples
- 2007
  - 88 species (In 40 species there were only 1-3 samples collected)
  - 1,911 wild bird samples
  - 1,396 environmental samples
  - 3,307 total samples



# ADF&G Contract

- Contracted to collect 750 cloacal samples
- Collected 760 cloacal samples
- Locations
  - Minto Flats SGR
  - Susitna Flats SGR





# 2007 Sampling Locations





# Where All the Samples Went

- 1,481 samples delivered to the DEC Alaska Environmental Health Laboratory
- 430 samples shipped to the Washington Animal Disease Diagnostic Laboratory
- 1,396 fecal samples shipped to USDA's National Wildlife Research Center (NWRC)



# 2006 Alaska Results

- 228 samples that were from positive matrix RT-PCR pools
- Four tested positive for LP H5, all were negative for N1
  - 1 fecal sample from Deadhorse
  - 3 cloacal samples from hunter-killed birds
    - 1 King Salmon
    - 2 Juneau MWSGR





# 2007 Alaska Results

- 90 positive RT-PCR matrix samples
- 12 positive RT-PCR matrix pools for fecal samples. Five samples per pool.
- No H5 or H7 detected





# Capture Methods

- Mist Nets
- Net Guns
- Cannon Nets
- Noose Poles
- Q Net
- Dip Nets
- Cage Traps
- Hand Caught









































# 2008 Plans

- Tentatively AK & TX  
Same numbers as 2007
- Field test PDA's with  
electronic data sheet
- Don't know budget yet.



# Wrangel Island

- 2 USDA biologists going with 4 Russian biologists
- 2 weeks on Wrangel
- Objective 200+ lesser snow geese
- May also collect AI samples from other birds
- Samples will stay in Russia
- Biological samples may be collected from lemmings, fox, reindeer.



PGC Photo/Hal Korber

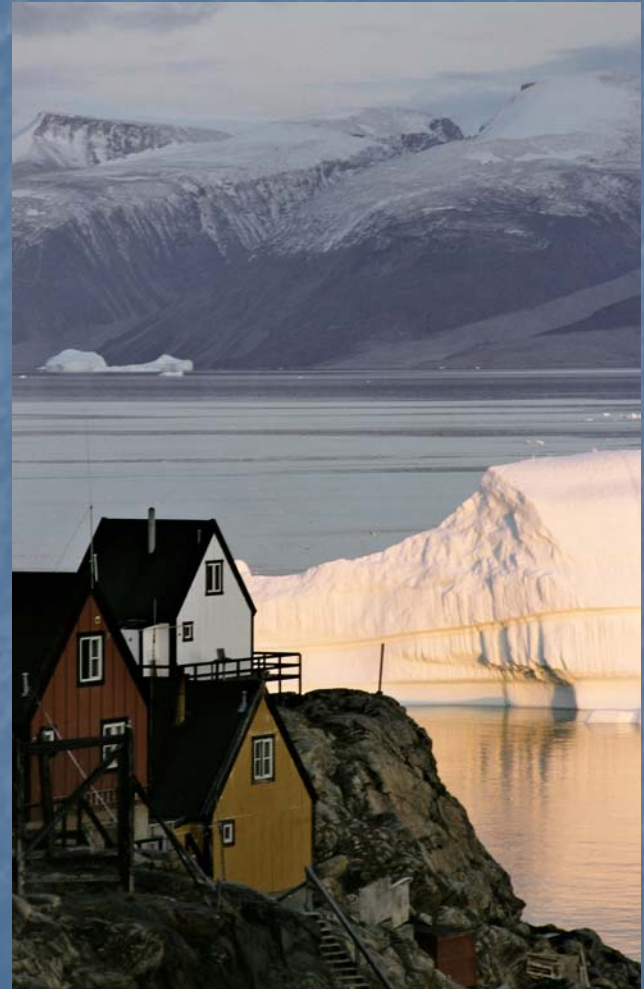






# Greenland

- 4 USDA biologists
- Duration: 2 weeks
- Location: 45 miles NW of Thule AFB
- 200+ greater snow geese
- Will bring samples back to U.S.



David Sinnett

[David.R.Sinnett@aphis.usda.gov](mailto:David.R.Sinnett@aphis.usda.gov)

907-745-0871





# ADF&G 2007 AI Data

Species	Live Bird	Hunter Harvest
NOPI	366	15
MALL	314	6
AGWT	41	0
AMWI	0	3
NSHO	4	2
GADW	0	1
GRSC	7	0
TRUS	1	0
<b>Total</b>	<b>733</b>	<b>27</b>