

Vector-Borne & Zoonotic Diseases Update - Arizona

- West Nile
- Hantavirus
- Tularemia
- Rabies
- E. coli
- RMSF

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WNV Surveillance in AZ

- Human case F/U
- Mosquito pools
- Dead bird testing
- Equine case F/U
- Sentinel chickens
- Other animals



2005

2004

as of Dec 2005

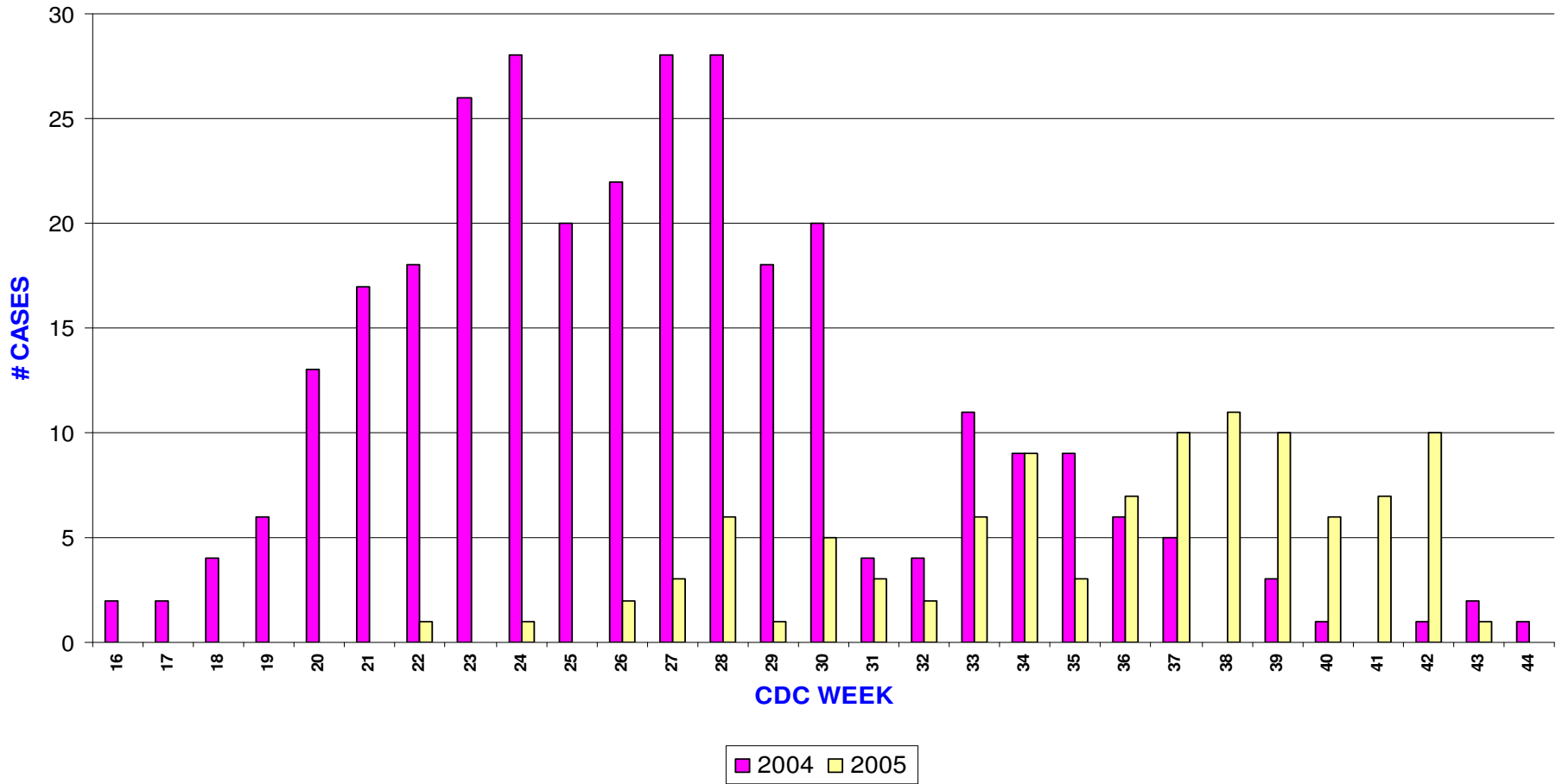
TOTAL NUMBER OF CASES	110	391
FATAL	5	15
AGE RANGE	8 months - 87 years	1 month - 98 years

CLINICAL PRESENTATIONS:

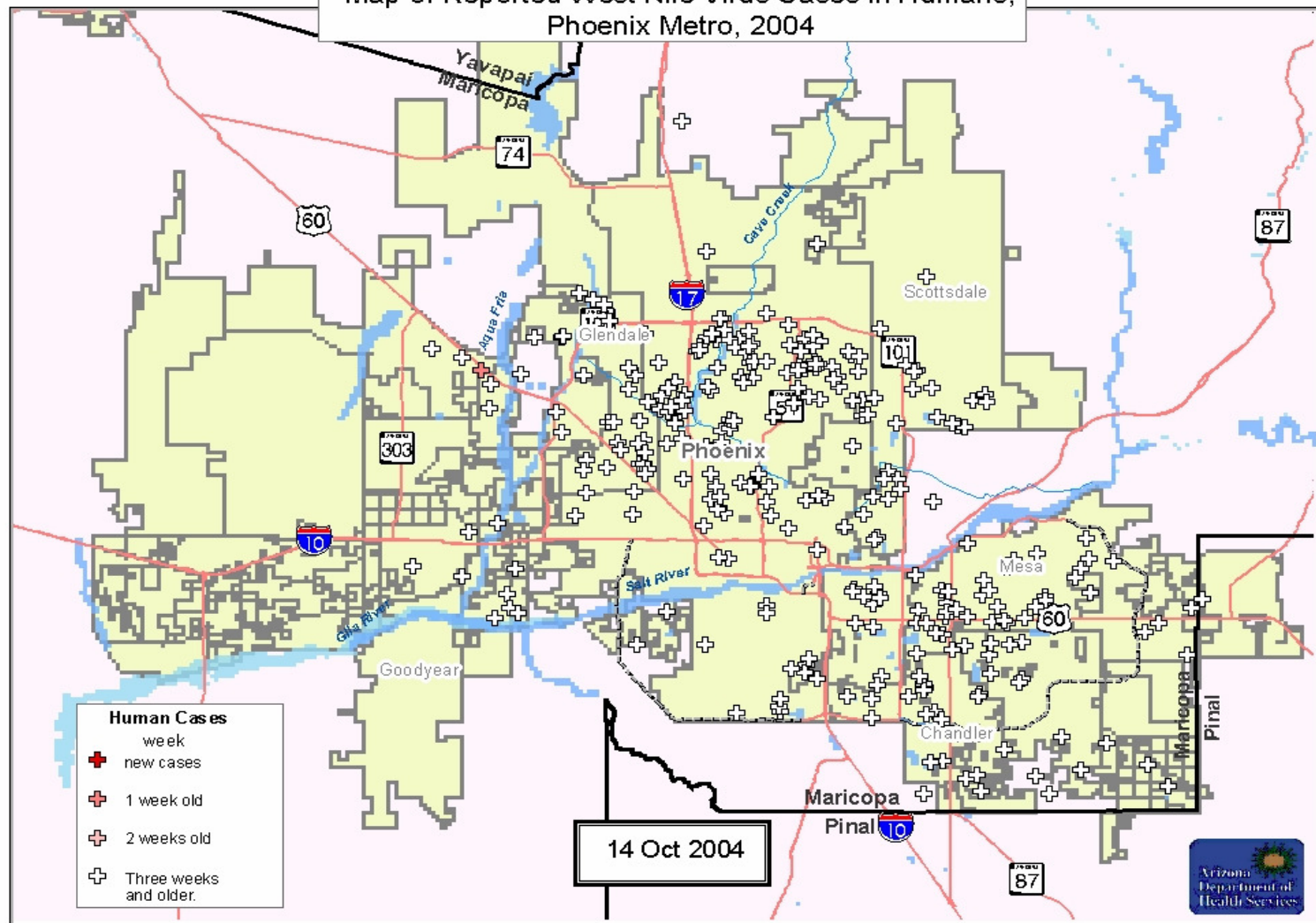
Meningitis	23	105
Encephalitis	21	109
WNV (uncomplicated) Fever	56	160
Acute Flaccid Paralysis	4	2
Neuroinvasive	44	214
Unknown	6	15
Blood Donors	20	36

Epidemiology Curve 2004-2005

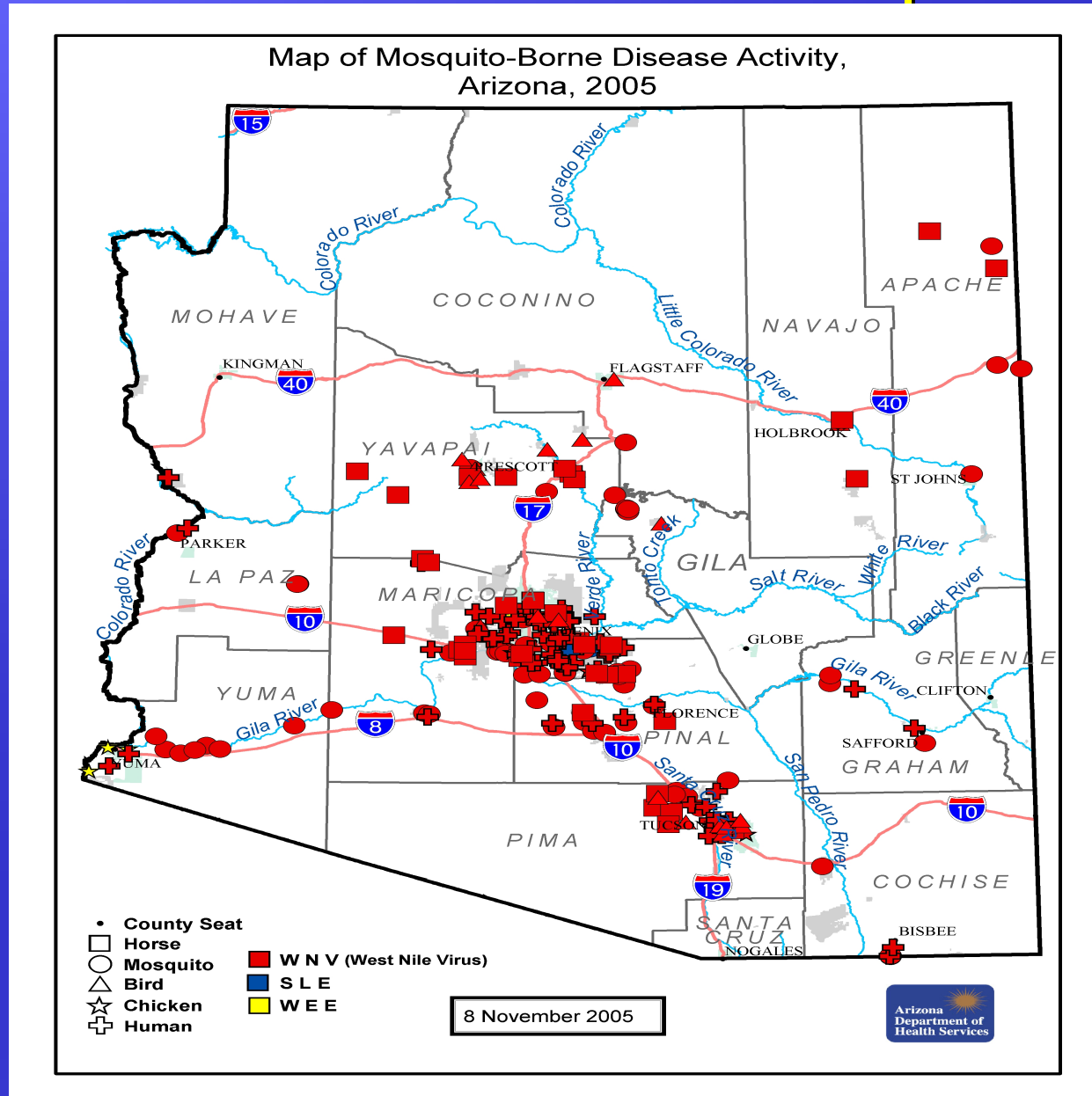
ARIZONA: 2004 VS 2005 WNV+ HUMAN CASES BY CDC WEEK



Map of Reported West Nile Virus Cases in Humans, Phoenix Metro, 2004



2005 West Nile Virus- All species



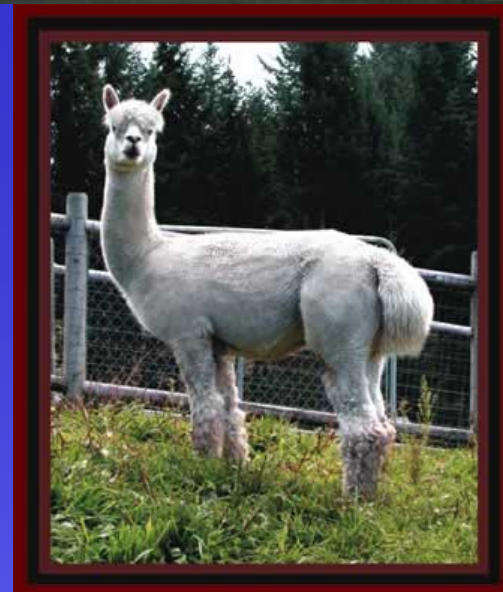
WNV Stats, AZ 2005

	# TESTED	# WNV POS.
Mosquito Pools	7,500+	350
Equines	400+	42
Dead Birds	185	19
Chickens	18 flocks	64
Other Mammals	16	9

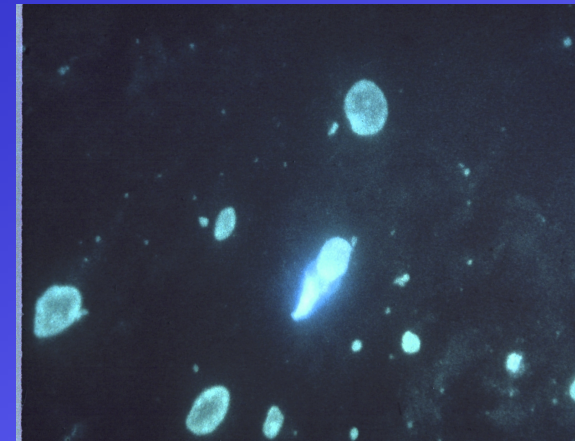
2005 Other Animal Surveillance

- UA-VDL: IHC, PCR

ANIMAL	TOTAL SUBMITTED	TOTAL POSITIVE
ALPACA	2	2
CERVID / NYALA	1	0
CERVID / REINDEER	1	0
HEDGEHOG	1	0
LLAMA	4	1
RABBIT	1	0
SQUIRREL	6	6
TOTAL	16	9



Rabies Update, Arizona



RABIES, AZ - 2004-2005

	2004	2005
BATS	75	84
SKUNKS	24	67*
FOXES	17	12
CATS	0	2
BOBCATS	2	2
COYOTES	2	1
RACCOON	0	1
TOTAL	120	169 *

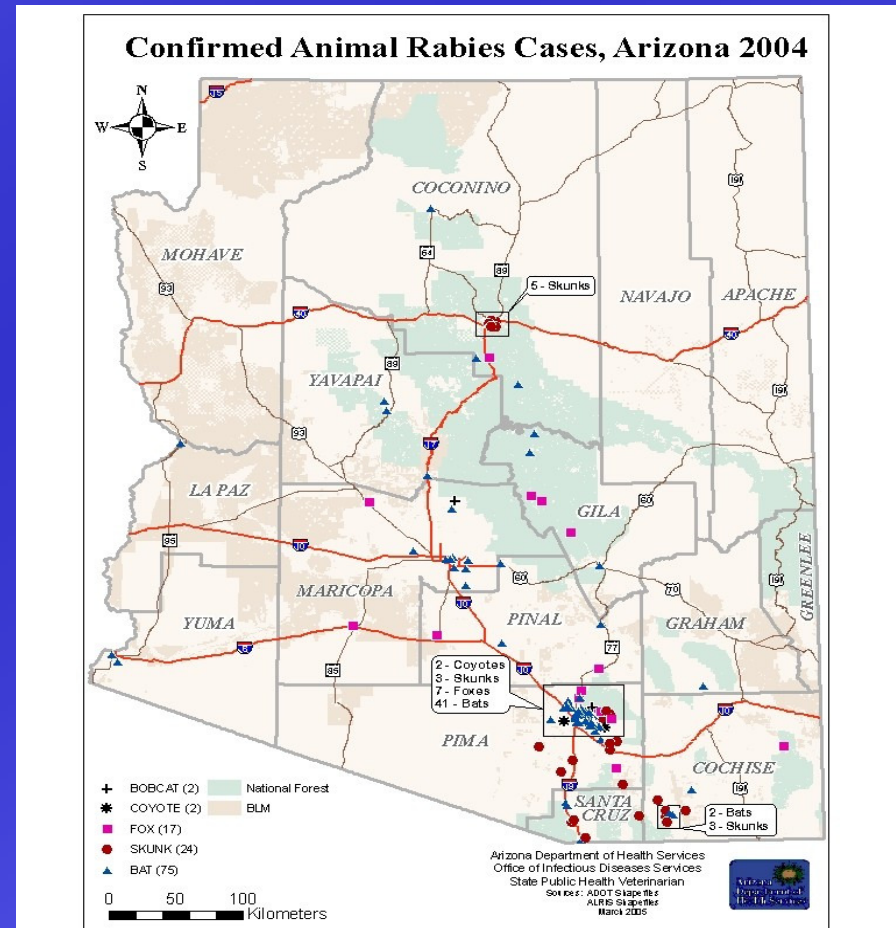
Rabies in Flagstaff

- 2001 – skunk rabies outbreak – 19 cases
- Big Brown Bat variant*
- CDC tested salivary glands – 70+% shedding
- Trap, vaccinate & release (TVR) – 217 skunks vacc.
- No new cases for 3 years!

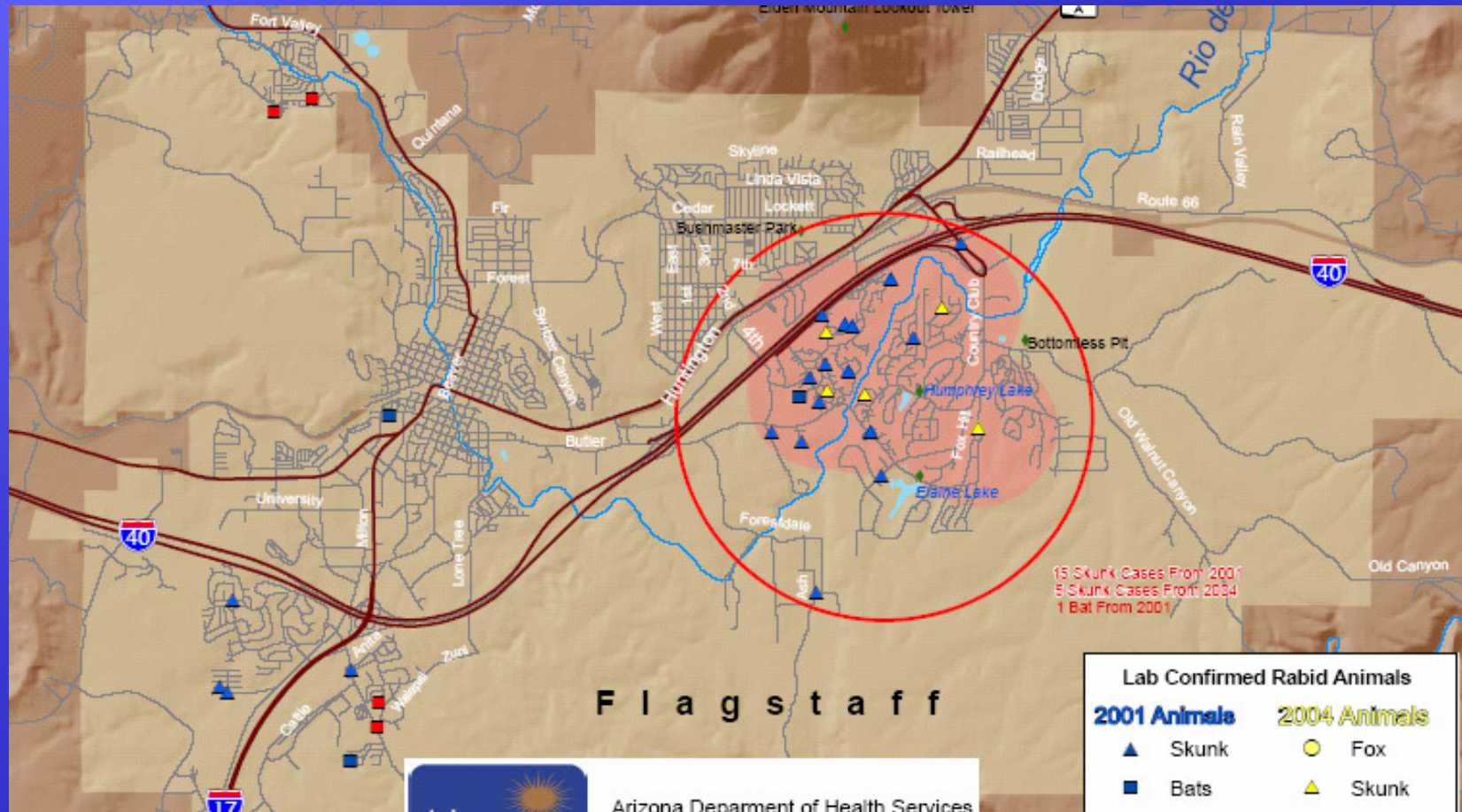


Rabies in Flagstaff

- 2004 - 5 rabid skunks
- 2005 - 1 skunk
 - 1 cat
 - 1 fox
- Big brown bat variant



Rabies in Flagstaff



Rabies in Flagstaff

- USDA, County, City, G & F, & ADHS
- 1st ORV trial - skunks
- Vaccinia-rabies glycoprotein recomb. Fish meal sachets
- April 2005 – 1,700 sachets dist. 22 sq. km (75 baits/sq. km)
- USDA –F/U inconclusive



Hantavirus Pulmonary Syndrome

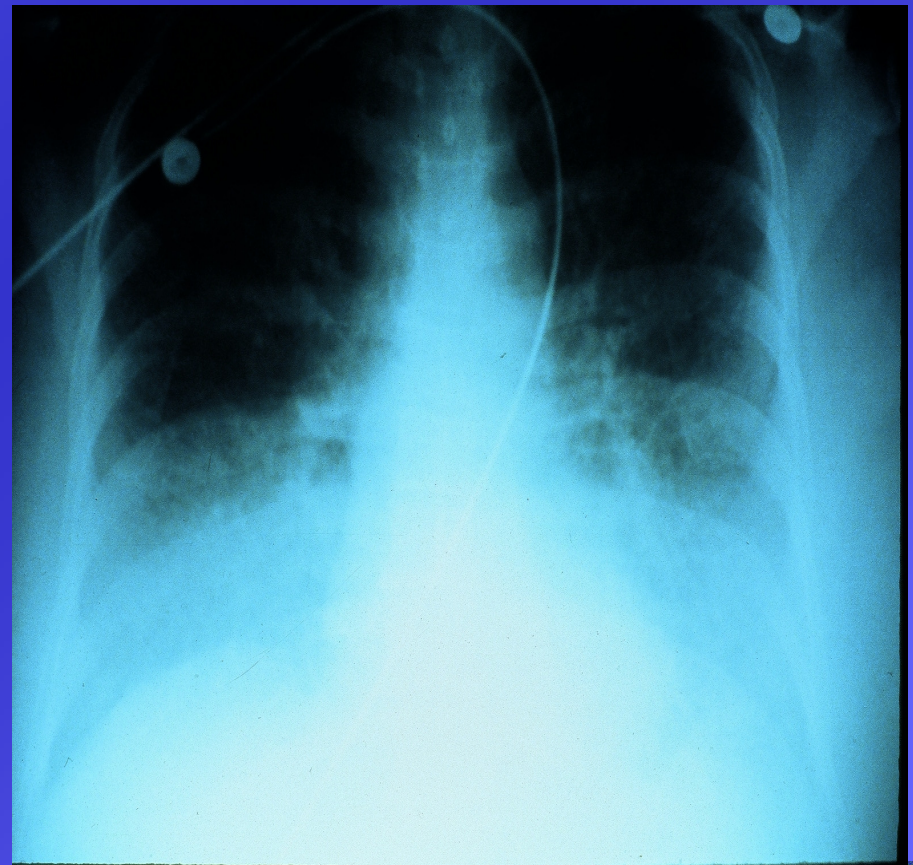


Vector-Borne & Zoonotic Disease Program



HPS Cases, Arizona

- 2004- 2 cases, Apache
 - 2005-5 cases (3 fatal)
 - Apache Co. – 4
 - Maricopa Co. - 1
 - 2006- 2 cases (2 fatal)
Navajo Co. - 1 Maricopa
Co. – 1
-
- TOTAL – 46 cases (14 fatal) 1992-2006 (to date)



Plague Update, AZ – 2005

1-plague + cat, Flagstaff, Coconino Co.



Vector-Borne & Zoonotic Disease Program

Tularemia Update, AZ 2005

- Two cases of tularemia, Coconino Co., northern AZ
- Mother & son
- Rabbit skinning exp.
- Ulceroglandular – 1
- Pharyngeal – 1
- 1- tularemia+ cat – Yavapai Co.



E. coli 0157:H7 – Petting Zoo

- July 2005–*E. coli* 0157:H7 reported in 7 y.o. child hospitalized enterohemorrhagic sx
- 2nd case – 3 y.o.
- Same PFGE pattern
- Both children had visited same zoo three days prior to onset



E. coli 0157:H7 – Petting Zoo

- ADHS staff collected fecal samples & rectal swabs from animals
- USDA-testing/results showed 15/25 (60%) animals pos.
- 12 goats, 2 pigs, 1 cow
- PFGE pattern matched



E. coli Decontamination

- Zoo closed petting zoo & adjacent water play area
- Decontaminated area by “baking” soil under black tarp
- Post-bake soil samples tested negative



Acknowledgments / Thanks!

- Arizona Dept. Health
 - State Health Lab
 - Other Epi staff
 - Bioterrorism staff
 - Vector/Zoonotic staff
- County Health Depts
- Indian Health Service
- Indian Tribes
- CDC – Ft. Collins
- Yuma Co. Pest Abate. Dist.
- UA Vet. Diag. Lab
- Aquatic Consulting
- US Army – CHPPM
- Air Force
- Blood Systems
- Univ. of Arizona
- Chinle Veterinary Clinic



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