

# West Nile Virus Activity & Response in the Sacramento Valley

Jamesina J. Scott, Ph.D.

Vector Ecologist

Placer MAD

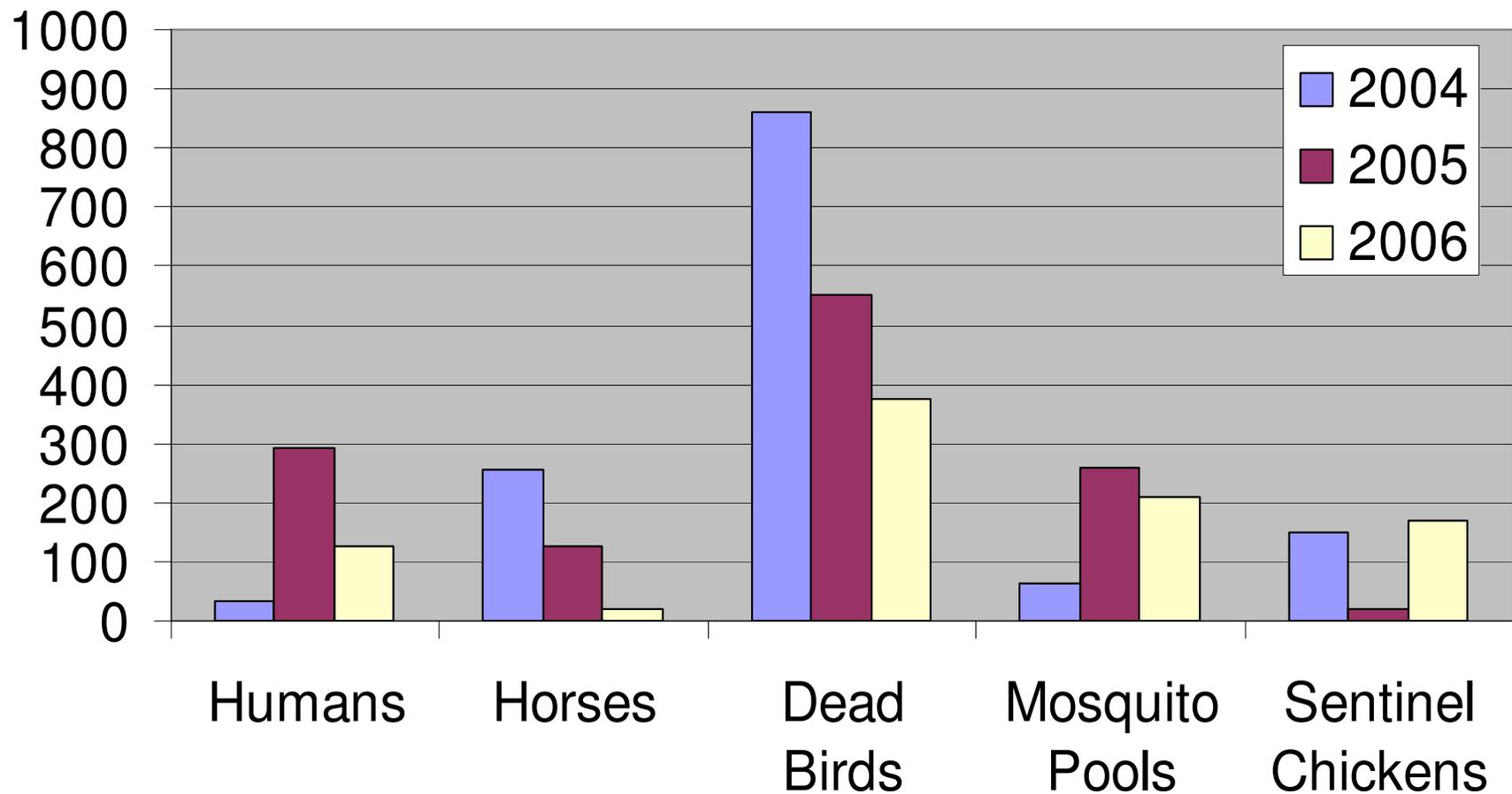
# Sacramento Valley Region

- Composed of cities & communities surrounded by large rural areas
- Largest sources of mosquitoes are agricultural lands and wetlands
- Pre-WNV, most Districts treated mosquitoes wherever they occurred – budgets permitting – but large proportion of resources addressed mosquitoes that developed in rural areas

# Sacramento Valley WNV Activity 2004-2006

	2004	2005	2006
Human	33	294	125
Equine	257	126	21
Dead Birds	859	550	377
Mosquito Pools	62	258	208
Chickens	150	19	169

# WNV Activity in the Sacramento Valley



# So I asked around....

- How has WNV changed your District's activities?
- Has WNV changed your control strategies?
- Has WNV changed surveillance and public outreach?
- What worked well? What didn't?
- If you could travel back to 2003 (pre-WNV in our region), what advice would you give yourself?
- Are you better prepared for the next arbovirus?

# How has WNV changed your District's Activities?

- Increased emphasis on urban sources of *Culex* spp.
  - "Backyard" sources
  - Catch basins, storm drains
- Extended season, esp. early season control
  - Larviciding of urban sources
  - Adulticiding much earlier than before
- State Funding allowed for
  - Increased larviciding & adulticiding
  - Aerial treatments (both rural and urban)

# How has WNV changed your District's Activities?

- Expanded Districts' service areas
  - Annexations
  - MOUs
  - Personal service agreements
  - Contracts
- Changes in trapping & surveillance strategies to emphasize urban *Culex* spp.
- Increased outreach and educational programs

# Has WNV changed your control strategies?

- Yes!
- More treatment of urban & suburban sources
  - Catch basins, storm drains, retention basins
  - Backyard sources
- More adulticiding, especially in the early season
  - Both aerial & ground-based
  - Both rural & urban areas
  - Where there are WNV indicators
  - Storm drains and underground drainage systems
- State funding key for much of the added adulticiding

# Has WNV changed surveillance and public outreach?

- Mosquito surveillance
  - Started or increased mosquito testing
  - More gravid trapping, specifically for urban *Culex* spp.
- Dead bird surveillance
  - Decreased dead bird participation from 2004 levels
  - Rely more on dead bird reports
  - More in-house testing of corvids
- Outreach & Media
  - Much more media contact than before
  - More outreach, both public & schools
  - Updated & improved district websites
- Mosquito fish requests increased

# What worked well?

- All in all, most Agencies reported that things went pretty well
- Early season control of *Culex* spp.
- Outreach was important
  - Televised presentations to city councils & county boards of supervisors
  - Local “hot lines” for current info
  - Paid ads in print media
  - Cooperation with County for outreach to provide unified message
  - Emphasized WNV indicators & precautions rather than District mosquito control practices

# What worked well?

- **County-level WNV Task Force**
  - Improved relationship with County Public Health and other County agencies
  - WNV Task Force produced consistent media messages
- **Dead bird surveillance**
  - Monitor dead corvid reports to indicate earliest activity
  - Use of VecTest for in-house testing of corvids

# What didn't work?

- Dead bird surveillance
  - Collecting & shipping dead birds was very time consuming
- Problems getting addresses from Public Health
- Sentinel chickens
  - Didn't provide useful or timely info for WNV in our region, but still useful for WEE
- Adulticiding didn't help once mosquito numbers were at/near seasonal peak

# If you could travel back to 2003 (pre-WNV in our region), what advice would you give yourself?

- Let someone else go to the public forums!
- An ounce of prevention is worth a pound of cure
- Be proactive!
  - Educate the public about the role of vector control in protecting public health
  - Prepare public for use of adulticides
  - Improve (electronic) documentation of sources, esp. urban/ suburban sources
  - Increase surveillance & research into urban infrastructure, esp. stormwater runoff systems
  - Initiate early-season control to reduce human infections

# If you could travel back to 2003 (pre-WNV in our region), what advice would you give yourself?

- Increase funding for control
  - Establish a plan to fund surveillance & emergency control measures
  - Have a plan for how to use supplemental funds if they become available
- Increase staffing for dead bird collections & phone calls
- Identify employees who are experienced in dealing with horses & horse owners & veterinarians

# Are you better prepared for the next arbovirus?

- Yes!
- Thanks to State Funds, new equipment for adulticiding
- Improved surveillance
- Improved relationship with county agencies
- Expanded service areas to protect more residents
- Learned that “conventional wisdom” may not apply to a new situation
- There was one “no” – a very small agency without adequate funding

# Bottom line....

- For WNV...
  - Early season treatments
  - Target urban *Culex*
- For WNV and any emerging vector-borne disease...
  - Have a plan in place
  - Be proactive in public & media outreach
  - Cultivate good relationships with other public health agencies in your district
  - Remember that “conventional wisdom” may not apply to a new situation