

2011 SC WNV Cases by City/Town

County	City/Town	Number of Positives*
Jasper	Hardeeville	1 mosquito pool
Orangeburg	Orangeburg	1 mosquito pool
Richland	Columbia	8 mosquito pools
TOTAL		10 cases

A “mosquito pool” is defined as a collection of mosquitoes (usually 1 to 50 specimens) that were pooled together for testing purposes and consists of the same mosquito species that were collected from the same location on the same date.

Minimum Infection Rates and Vector Indices for WNV-Infected Mosquitoes

Minimum Infection Rate (MIR) = an estimation of the number of mosquitoes in the environment infected with virus. The MIR is expressed as a number of infected mosquitoes per 1000 mosquitoes or as a percentage.

The MIR assumes that just one mosquito in that pool is actually infected with virus. The relationship of the number of positive pools relative to the number of mosquitoes tested is extrapolated onto the general mosquito population in the environment. Interpretation of MIR Values:

0 = Suggests no viral activity in the area

0.1 to 3.9 = Some viral activity is present, increased vigilance and testing are called for

4.0 or above = High level of viral activity is present; human infections are imminent (if not already present); prompt action is required.

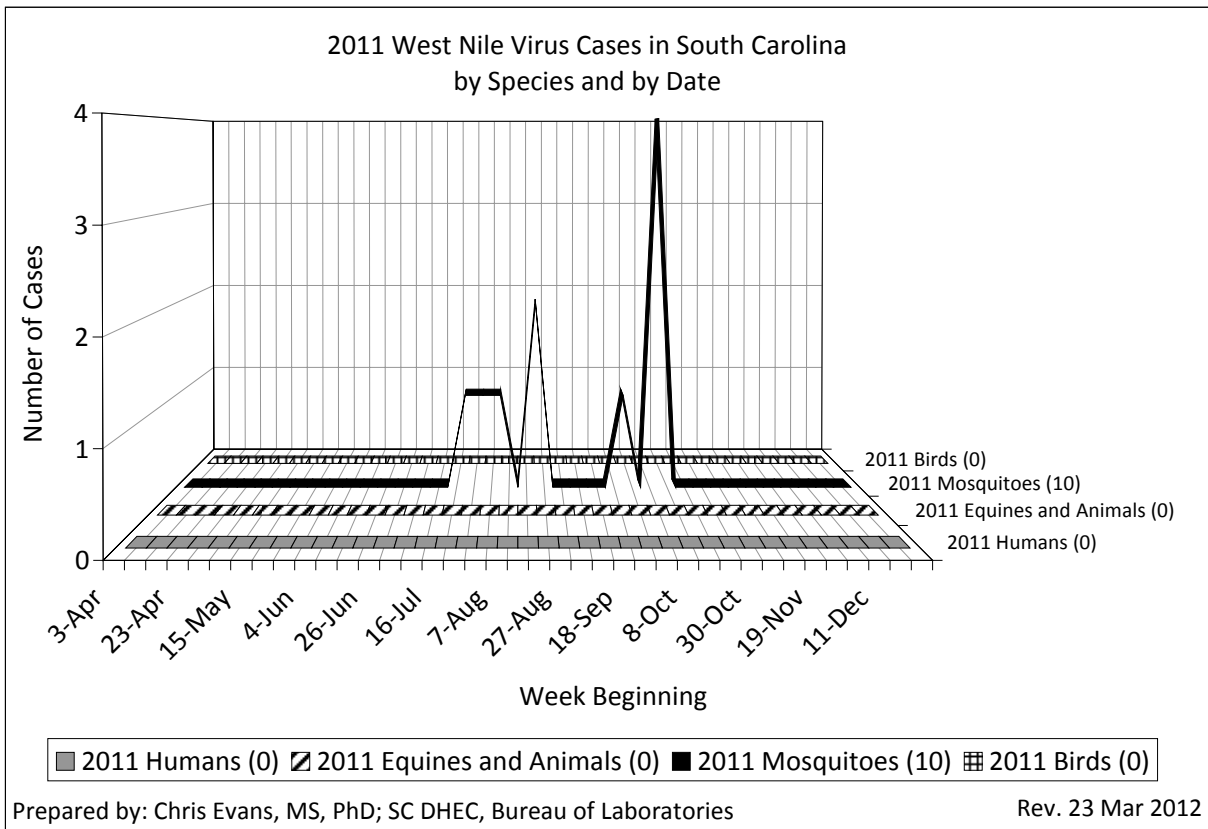
Vector Index (VI) = the estimated average number of infected mosquitoes collected per trap night summed for the key mosquito species in the area. The Vector Index combines vector species presence, vector species density, and vector species infection rate into a single value.

Summing the Vector Indices for key vector species incorporates the contribution of more than one species and recognizes the fact that West Nile virus transmission may involve one or more primary vector and several accessory or bridge vectors.

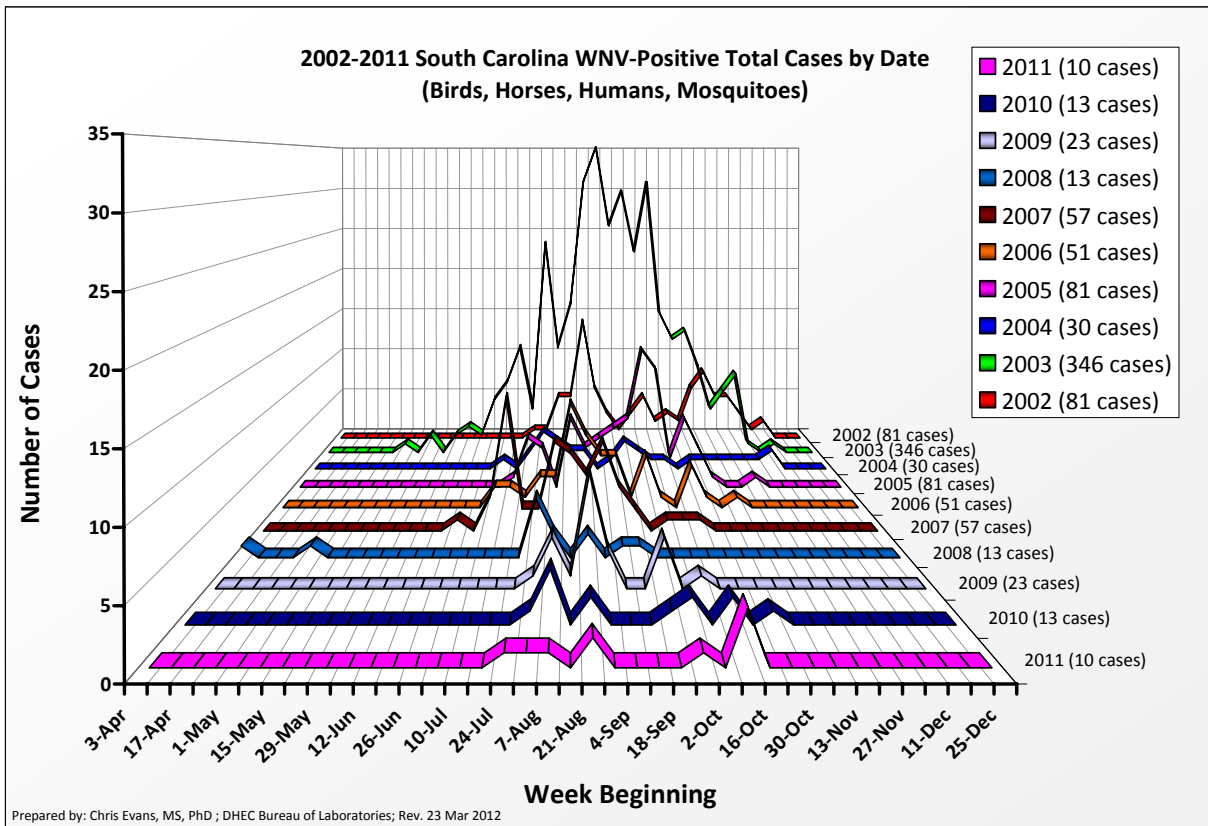
Lower and Upper Limits = the Lower and Upper Limits of a 95% Confidence Interval – If the same number of traps and trap nights were repeated 100 times, you would confidently expect that the value for the Minimum Infection Rate or Vector Index would fall between the Lower and Upper Limits in 95 of 100 trials (that is, 95% of the trials).

Site Identification Number	40-03-08-08-2011	40-03-08-22-2011	40-03-09-26-2011	40-03-10-10-2011	40-03-10-10-2011
Mosquito Species	Cx. pipiens complex	Cx. pipiens complex	Cx. pipiens complex	Cx. pipiens complex	Cx. restuans
Location	Columbia, SC	Columbia, SC	Columbia, SC	Columbia, SC	Columbia, SC
Start Date	8-Aug-2011	22-Aug-2011	26-Sep-2011	10-Oct-2011	10-Oct-2011
End Date	11-Aug-2011	25-Aug-2011	29-Sep-2011	13-Oct-2011	13-Oct-2011
Modified Date	10-Aug-2011	24-Aug-2011	28-Sep-2011	12-Oct-2011	12-Oct-2011
Number Pools Tested	2	8	3	6	3
Number Positive Pools	1	2	1	2	1
Number Individuals	28	157	21	111	38
Trap Nights	16	16	16	16	16
Minimum Infection Rate per 1,000	21.20	14.93	44.12	20.30	26.56
Lower Limit MIR	2.62	2.64	3.10	3.84	1.67
Upper Limit MIR	421.20	53.89	243.65	72.26	126.56
Minimum Infection Rate Percentage	2.12%	1.49%	4.41%	2.03%	2.66%
Lower Limit MIR Percentage	0.26%	0.26%	0.31%	0.38%	0.17%
Upper Limit MIR Percentage	42.12%	5.39%	24.36%	7.23%	12.66%
Vector Index	0.04	0.15	0.06	0.14	0.06
Vector Index Lower Limit	0.00	0.03	0.00	0.03	0.00
Vector Index Upper Limit	0.74	0.53	0.32	0.50	0.30

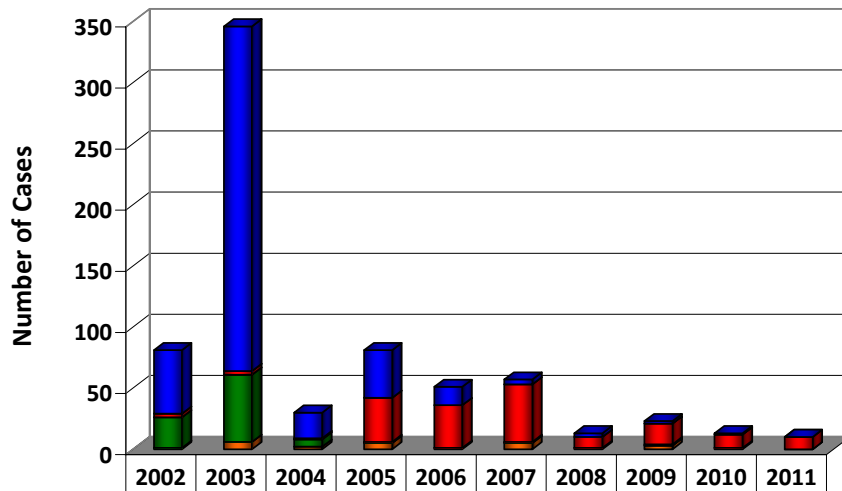
2011 WNV Cases



2002 - 2011 Combined WNV Cases



2002-2011 West Nile Virus Cases in South Carolina by Year



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Birds (419)	52	282	21	39	15	4	3	2	1	0
Mosquito Pools (172)	3	3	1	36	35	47	9	17	11	10
Animals (89)	25	55	6	1	0	1	0	1	0	0
Humans (25)	1	6	2	5	1	5	1	3	1	0

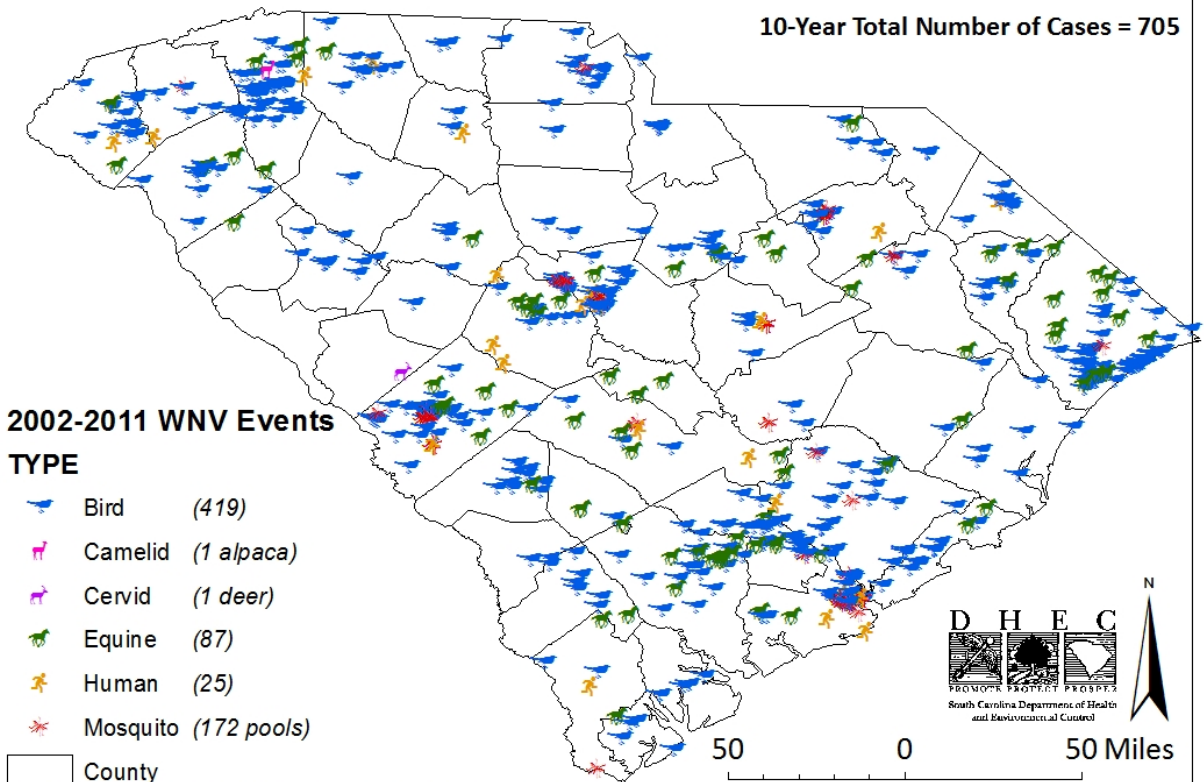
Year

Prepared by: Chris Evans, MS, PhD; SC DHEC, Bureau of Laboratories

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2002-2011 West Nile Virus Cases in South Carolina


10-Year Total Number of Cases = 705



2002-2011 WNV Events

TYPE

-  Bird (419)
-  Camelid (1 alpaca)
-  Cervid (1 deer)
-  Equine (87)
-  Human (25)
-  Mosquito (172 pools)

 County

Map prepared by: SC DHEC Bureau of Laboratories; Chris Evans, MS, PhD



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