

**Wyoming West Nile Virus Surveillance Summary,
January – October 2013**

The West Nile Virus Surveillance Summary, 2013, contains data gathered from multiple sources through both required and volunteer based reporting methods. Data collection for the year 2013 began on January 1, 2013. Human infection data is gathered through mandatory reporting by physicians, and laboratories of infectious diseases on the Reportable Disease and Conditions list (State Statute § 35-4-107). Veterinary data (i.e. equine infections) is gathered through mandatory reporting by veterinary laboratories and veterinarians to the Wyoming State Veterinarian within the Wyoming Livestock Board, who voluntarily passed the information to the Wyoming Public Health Veterinarian. Avian mortality data is gathered through the volunteer reporting by Wyoming Fish and Game, and the Wyoming Office of the U.S. Bureau of Land Management. Data on positive mosquito pools and total pools tested is gathered through the volunteer reporting of local city/county weed and pest management agencies, and local city/county public health environmental services divisions. Census data for the calculation of incidence rates in this document are provided by the U.S. Census Bureau, Population Division, June 2013. The standard population used for calculating age-adjusted incidence, was the U.S. population estimates from the 2010 Census. This summary is divided into two sections: Statewide and County Specific descriptive statistics.

Statewide Descriptive Statistics

Table 1. Demographic characteristics of human West Nile Virus (WNV) cases in Wyoming, 2013 by manifestation: all infections, West Nile Fever (WNF) or West Nile Neuroinvasive Disease (WNND).

	All Human WNV Infections	WNF	WNND
Total Cases (n)	41	25	16
Mean age (years)	46.14634	43	50.875
Median age (years)	50	45	58
Age Range (years)	8 - 79	9 - 79	8 - 79
Female (percent of cases)	19 (46.3%)	13 (52.0%)	6 (37.5%)
Male (percent of cases)	22 (53.7%)	12 (48.0%)	10 (62.5%)
Race/Ethnicity			
White, non-Hispanic (percent of cases)	35 (87.5%)	21 (87.5%)	14 (93.3%)
Hispanic (percent of cases)	1 (2.5%)	0 (0.0%)	1 (6.7%)
American Indian / Alaskan Native (percent of cases)	4 (10.0%)	4 (16.7%)	0 (0.0%)

Table 2. Probable location of exposure to West Nile Virus (WNV) for human cases in Wyoming, 2013 by manifestation: all infections, West Nile Fever (WNF) or West Nile Neuroinvasive Disease (WNND).

	All Human WNV Infections	WNF	WNND
Total Cases (n)	41	25	16
Number of cases with known information	40	24	16
Probable Location of Exposure			
At home			
(percent of cases)	24 (60.0%)	15 (62.5%)	9 (56.3%)
Within County of Residence			
(percent of cases)	9 (22.5%)	7 (29.17%)	2 (12.5%)
Out-of-County of Residence but within Wyoming			
(percent of cases)	3 (7.5%)	1 (4.2%)	2 (12.5%)
Out-of-State			
(percent of cases)	4 (10.0%)	1 (4.2%)	3 (18.8%)

Table 3. Hospitalizations and associated fatality of human West Nile Virus (WNV) cases in Wyoming, 2013 by manifestation: all infections, West Nile Fever (WNF) or West Nile Neuroinvasive Disease (WNND).

	All Human WNV Infections	WNF	WNND
Total Cases (n)	41	25	16
Hospitalized	15 (36.6%)	1 (4.0%)	14 (87.5%)
(percent of cases)			
WNV Associated Fatality	1 (2.4%)	0 (0.0%)	1 (6.3%)
(percent of cases)			

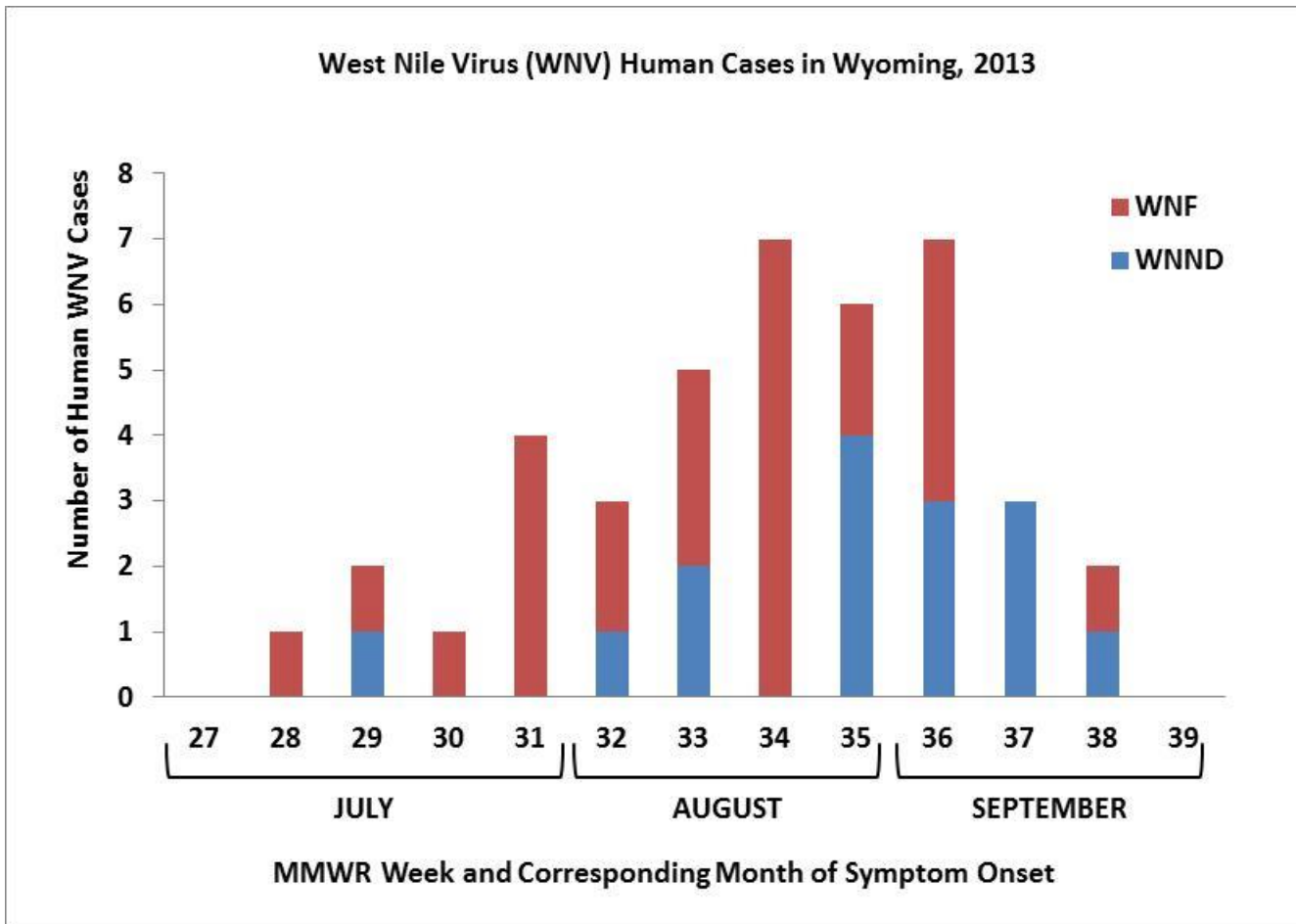


Figure 1. The number of human West Nile Virus (WNV) cases by Centers for Disease Control and Prevention *Morbidity and Mortality Weekly Report (MMWR)* designated weeks and corresponding months symptoms began, and by manifestation: West Nile Fever (WNF) and West Nile Neuroinvasive Disease (WNND).

*County Specific Descriptive Statistics***Table 4.** West Nile Virus (WNV) activity by county in Wyoming, 2013. Presumptive viremic donor (PVD) is a person whom tested positive for West Nile Virus upon blood donor screening. PVDs are usually asymptomatic, are not included in human case counts, and are another indication of virus activity in an area. Counties not listed did not report any West Nile Virus infections or surveillance activities.

County	West Nile	West Nile	Human	Presumptive	Equine	Positive	Mosquito	
	Fever Cases	Neuroinvasive Disease Cases	WNV Case Fatality	Viremic Donors		Mosquito Pools		
Albany	0	0	0	0	1	0	3	109
Big Horn	1	0	0	0	0	0	0	0
Campbell	1	0	0	0	2	5	0	0
Carbon	0	2	0	0	2	0	0	0
Converse	0	0	0	1	0	1	0	0
Crook	0	1	0	0	0	0	0	0
Fremont	16	1	0	0	0	0	29	116
Goshen	1	0	0	0	0	0	16	138
Hot Springs	0	0	0	0	0	0	0	19
Johnson	0	1	0	0	0	0	0	0
Laramie	1	0	0	1	0	1	0	0
Natrona	1	7	0	0	1	2	2	15
Niobrara	0	0	0	0	0	1	0	0
Park	2	1	1	0	0	2	0	0
Platte	1	1	0	0	0	1	0	0
Sheridan	0	1	0	1	0	5	0	0
Sweetwater	0	0	0	0	0	1	0	4
Teton	0	0	0	0	0	0	1	73
Uinta	0	1	0	0	0	0	1	124
Washakie	1	0	0	0	0	0	0	0
TOTAL	25	16	1	3	6	19	52	598

Table 5. Age-adjusted incidence rate (per 100,000 people) of West Nile Neuroinvasive Disease cases by county in Wyoming, 2013. Counties not listed did not report any WNND cases.

County	Number of West Nile Neuroinvasive Disease Cases	Age-Adjusted Incidence Rate (per 100,000 people)
Carbon	2	10.39
Crook	1	9.91
Fremont	1	2.10
Johnson	1	7.20
Natrona	7	8.68
Park	1	2.32
Platte	1	16.01
Sheridan	1	3.75
Uinta	1	3.90
WYOMING	16	2.65

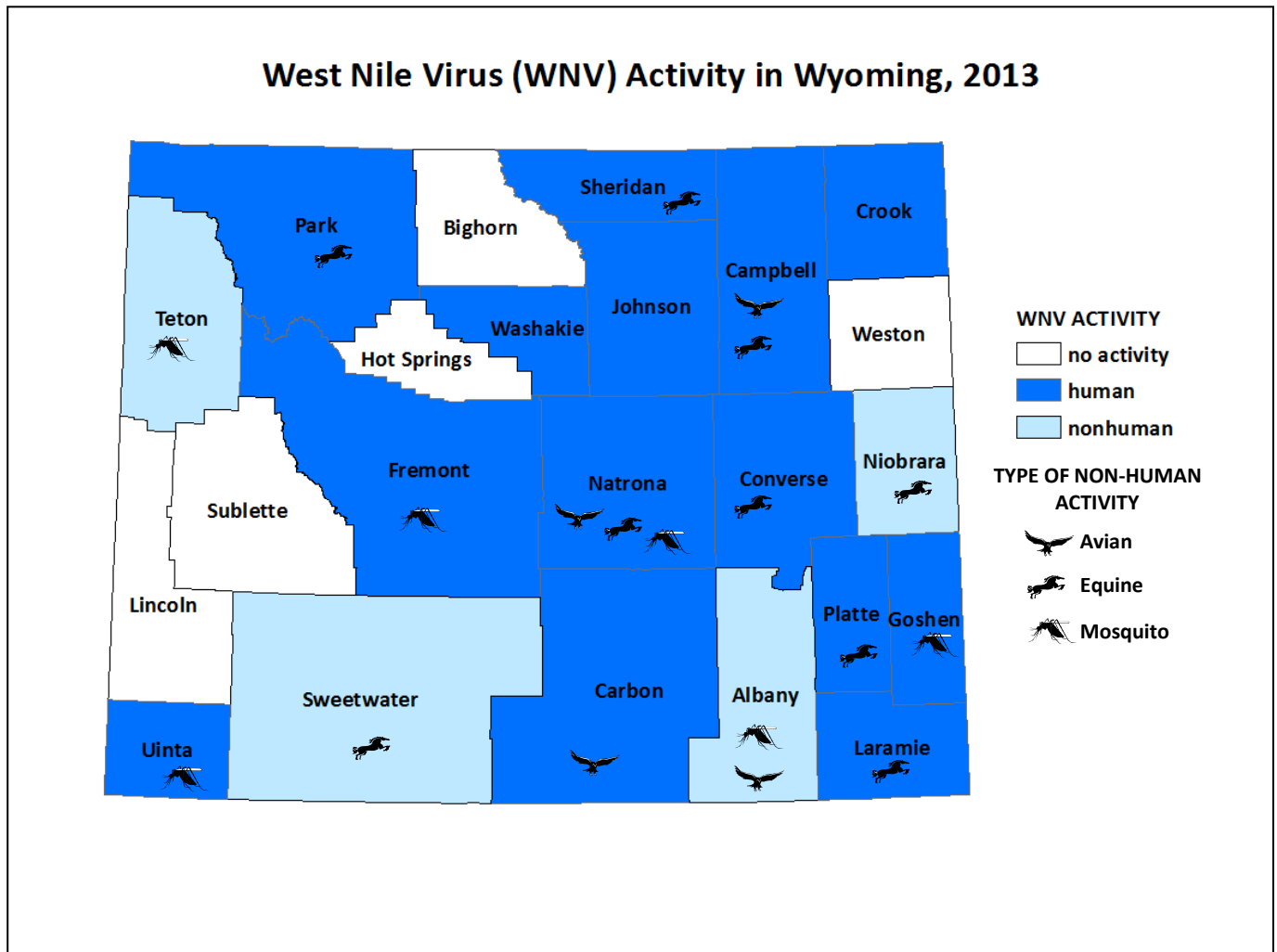


Figure 2. West Nile Virus (WNV) activity by type and county in Wyoming, 2013. Symbols used for non-human activity types do not represent the number of animals or positive mosquito pools reported in corresponding counties.

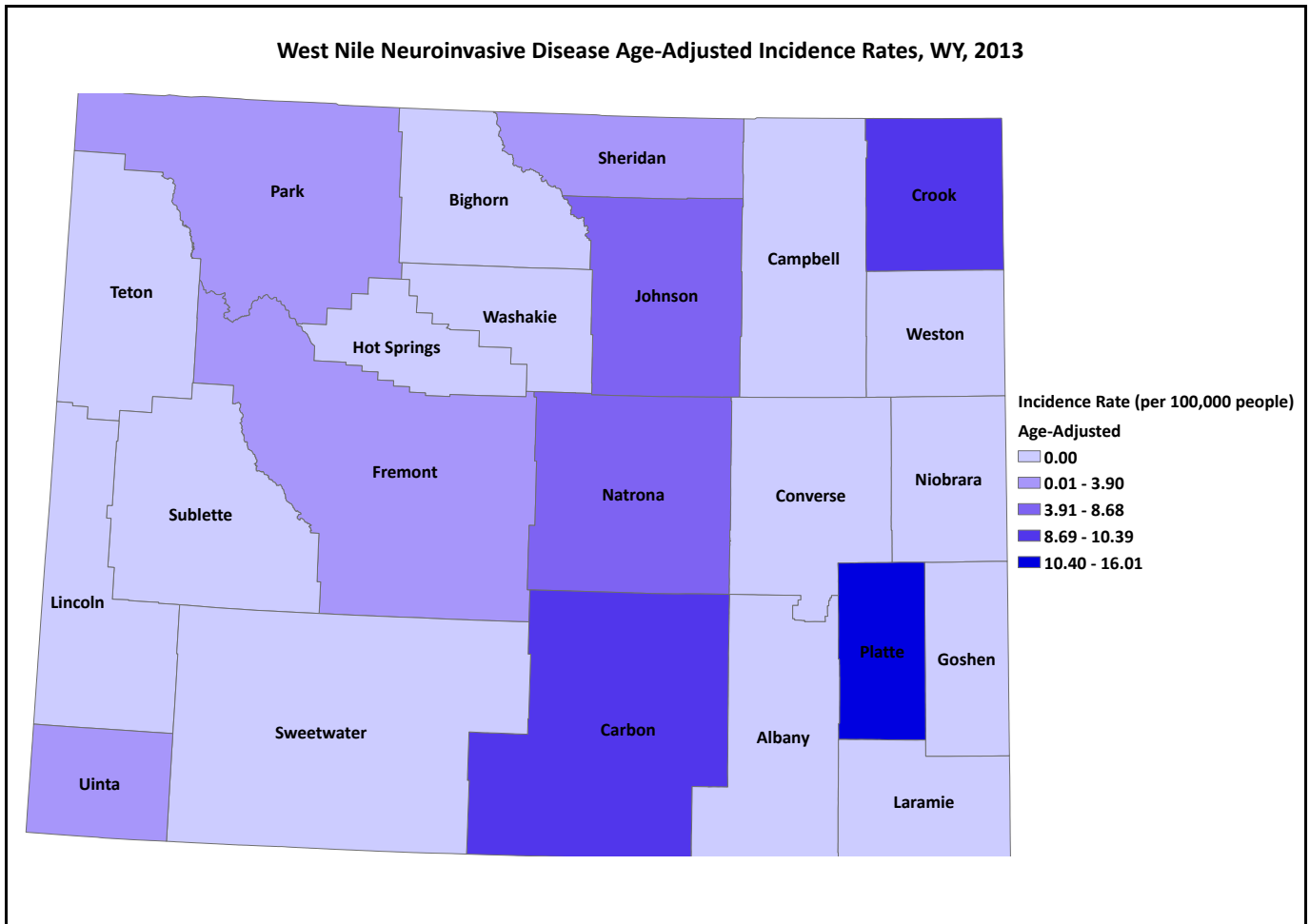


Figure 3. Age-adjusted incidence rate of West Nile Neuroinvasive Disease by county in Wyoming, 2013.

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For questions, comments or to report West Nile Virus activity, please contact Emily Thorp, Surveillance Epidemiologist (307) 777-8634 or Emily.Thorp@wyo.gov.

