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## Summary of 2005 West Nile Virus Surveillance in Alaska and What's New for 2006

### Introduction

Almost 3,000 human cases of West Nile virus (WNV) were reported in the United States in 2005.<sup>1</sup> Since 1999, when WNV was first detected in New York, the epicenter of disease has shifted ever westward in the United States during each subsequent season. Alaska and Hawaii remain the only two states in the nation that have not recorded local WNV infection in birds, mosquitoes, or humans.

### WNV Testing in Alaska

In 2003, the Alaska State Virology Laboratory (ASVL) developed WNV laboratory capacity for both human and avian specimens. Human sera and cerebrospinal fluid can be evaluated for IgM antibodies using IgM antibody capture ELISA, and avian brain tissue can be evaluated for WNV RNA using real time polymerase chain reaction (PCR) methods.

### Human Testing Results

In 2005, ASVL evaluated one serum sample from a suspect case of human WNV infection. The patient, a 22-month-old infant hospitalized with meningoencephalitis, tested negative for WNV IgM antibodies. Of 25,929 units of blood donated through the Blood Bank of Alaska, WNV was detected in none by nucleic acid amplification tests. To date, no cases of WNV infection acquired in Alaska have been identified.

### Avian Testing Results

Of the 34 dead birds collected in 2005 and tested at ASVL (Table 1), none were positive for WNV by PCR.

**Table 1. Dead Birds Tested for WNV by ASVL, 2005**

Species of bird	Location in Alaska (# of birds tested)
Crow, Northwestern	Anchor Point Skagway Soldotna
Eagle, Bald	King Salmon
Goshawk, Northern	Fairbanks
Hawk, Red-Tailed	Minto Village
Hawk, Rough-legged	Fairbanks
Jay, Steller's	Juneau
Kestrel, American	Fairbanks (2)
Magpie, Black-billed	Anchorage
Merlin	North Pole Kenai
Owl, Boreal	Fairbanks (2)
Owl, Great Gray	Fairbanks
Owl, Great-Horned	Salcha Fairbanks (2) Galena
Owl, Northern Hawk	Fairbanks
Owl, Not specified	Fairbanks (2)
Owl, Short-Eared	Richardson Hwy
Raven, Common	Elliot Hwy Fairbanks (7) North Pole Kotzebue

### WNV Testing for Humans

Healthcare providers who suspect cases of WNV should contact the Section of Epidemiology at 907-269-8000 (8AM-5PM) or 800-478-0084 (after hours) for consultation regarding the diagnosis and for information regarding the transport of diagnostic specimens to ASVL.

Specimens are indicated for WNV testing for patients hospitalized with clinical diagnoses indicative of neuroinvasive WNV infection, such as:

- Viral encephalitis
- Viral meningoencephalitis
- Guillain-Barré Syndrome
- Acute flaccid paralysis

A minimum of 0.5 ml of serum is needed for testing; serum should be collected  $\geq$  8 days after illness onset. Specimens must be kept cool (4°C) prior to and during shipment.

### Reporting Dead Birds

**To report dead or sick birds with no obvious cause, call the Alaska Interagency Bird Reporting hotline at 1-866-5-BRDFLU (1-866-527-3358). Do not handle birds found sick or dead!**

### Testing for WNV

Reports of clusters of ill or dead birds will be reviewed by wildlife authorities and investigations will be performed, if warranted. For single dead birds, as in previous years, only certain species will be evaluated for WNV. These include common ravens, northwestern or American crows, black-billed magpies, Steller's or gray jays, and any species of owl, hawk, eagle or falcon.

Carcasses must be fresh to detect virus by PCR. Therefore, dead birds will only be tested if they are free of maggots and foul odors, their bodies are intact and not scavenged, and they are thought to have been dead less than 24 hours.

### Method of Carcass Disposal

Once you have reported a dead bird to the Hotline and a wildlife authority has determined it will not be tested, use disposable gloves or put your hand inside of a plastic bag to handle the carcass if it needs to be moved. Double bag the carcass and dispose of it in the garbage; then wash your hands thoroughly with soap and water.

### Acknowledgments

The Section of Epidemiology would like to thank the Alaska WNV working group and all persons who assisted with collecting and testing dead birds.

### Reference

<sup>1</sup> CDC West Nile Virus Statistics, Surveillance, and Control. Available at: [http://www.cdc.gov/ncidod/dvbid/westnile/surv&controlCaseCount05\\_detailed.htm](http://www.cdc.gov/ncidod/dvbid/westnile/surv&controlCaseCount05_detailed.htm). Accessed on May 11, 2006.