Since our last newsletter, West Nile virus activity increased significantly in HSR 1 and the state. The Region had some rain but those showers have generally become a fond memory in the northern counties, although the South Plains have enjoyed rain of a more recent vintage. At present, we have recorded 30 cases of West Nile Fever (WF) and 25 cases of West Nile Neurological Disease (WNND) in HSR 1.

In Reporting week 45, we are below the case totals for last year and most likely will record few new cases since the weather has finally turned colder on a more consistent basis. At present our cases per 100,000 populations Incidence Rates (IR) are 3.63 for WF and 3.04 for WNND. Our rates tend to be higher than other Regions that may have a few more cases because we have such a small denominator population base, which is also older and more susceptible to the virus. The state-wide IR for WF is 0.24 and 0.37 for WNND. The Region with the second highest IRs at this time is HSR 9/10 with 0.35 (WF) and 1.88 (WNND).

What has been surprising is the lack of evidence of WNV activity in HSR 7. No cases of human infection have been reported and only two equine cases had been noted until the past few weeks. With the deluge some of those counties received in the past month equine cases have increased and at least one positive mosquito pool was reported in Williamson County. This indicates some human cases may be detected in HSR 7 soon.

HSR 1 reported 18 asymptomatic viremic blood donors. Subsequently, two of those individuals became symptomatic. Thus far, HSR 9/10 had six donors detected while HSRs 2/3 and 6/5S each reported four such infections. While HSR 1 led the state in equine cases for a while, HSRs 2/3, 4/5N and 7 have surpassed us with 11 cases each. The most current statistics for WNV activity statewide may be accessed at:

http://www.dshs.state.tx.us/idcu/disease/arthoviral/

In areas where the temperatures remain conducive to virus transmission, please continue to practice and promote the 4Ds: Dress appropriately, Drain standing water; avoid being out at Dusk and Dawn; and Defend yourself with an effective repellent, proper clothing, and screens on windows if air conditioning isn’t being used, etc.

In October, HSR 1 had three more rabies cases confirmed, making six cases for 2013. There were two bats found in Gray County and another skunk reported from SE Lubbock County. Our 2013 rabies cases now consist of two skunks in Lubbock Co. (Feb and October); one bat in Donley Co. (July); two bats in Gray County (October); and one bat in Randall County (August). We continue to be very blessed with respect to confirmed rabies cases. The approximate state total as of November 13 is 847, with 53% of the cases caused by a skunk variant. Excluding HSR 1, Regional case totals range from 11 (HSR 9/10) to 398 (HSR 7). The year-to-date total of approximately 847 compares to the following totals on November 13 for the noted years: 632 (2012), 952 (2011), and 937 in 2002. There is an anomaly in the data for 2002, which was the year with the most reported cases in Texas (1049) compared to 2011 which had only 1018 cases. By November 30, 2011 there had been more cases accumulated that year than in 2002. But from that point forward, statewide only 66 cases were reported in 2011 while 112 were counted in 2002.

The new animal shelter at Pampa is nearing completion and Dalhart has constructed a very nice facility for their animals. Once the quarantine pens are installed at Dalhart, it will be inspected in order to attain the approved quarantine facility status. The animal shelter at Spur is nearing approved quarantine status as well. The rate of new shelters being built in HSR 1 is encouraging. The new Hereford shelter is nearing its one-year anniversary. If your community is interested in building a new animal shelter, and it is anticipated that rabies quarantine will be performed in it, please be sure to contact us for a plan review before any ground is broken, as required in 169.28 (b) of the Rabies Rules. If you plan to build a shelter without performing rabies quarantine, we would be glad to review your plans and offer input, but that is not required by law. Reviews are beneficial because we can help avoid common errors that may have been seen elsewhere.

The H7N9 influenza virus is still causing a few human cases in China, but at a much slower rate of discovery after a respite of a month (September) with no cases. At the end of August, 134 cases had been detected. The closing of live markets seemed to have helped reduce spread among humans but the virus is still lurking in the shadows somewhere based on four new cases being reported since October 15.

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HSN1 influenza, aka the bird flu, is still active at low levels in poultry and humans in Cambodia and five other Asian countries. In Cambodia, since the virus first appeared in 2004, 69% (31/45) of the cases have died, but this year the case fatality percentage is only 54% (13/24). It is noted that predominantly children are the affected group in that country.

The MERS coronavirus originating in the Eastern Mediterranean (Saudi Arabia has the majority of cases) is also still active. The rate of case detection had slowed but in recent weeks more new cases are being reported, including the first case in Kuwait, reported in mid-November. There is a possibility the attending physician may have been infected by the patient. A MERS-CoV-like virus has been detected in the pet camel of one patient in Saudi Arabia. Testing is being conducted to see if it matches the strain that infected the patient. Until a match is proven, camels remain a suspected vector of the disease from the suspected reservoir, bats. Science is marching on, but the rate of discovery and confirmation is not as fast as desired.

Please be sure to provide extra food, water, shelter, bedding, etc. for outdoor pets as temperatures drop. If you have an antifreeze leak, or change the antifreeze in a car, truck, irrigation pump, tractor, etc. be sure to avoid leaving any accumulation of it where pets or small children can consume it. The ethylene glycol based versions (yellow or green color) are highly toxic and have a sweet taste, making it attractive to small mammals of any species. If it is ingested, call for medical guidance immediately.

We hope the upcoming winter moths are safe for everyone.
Controlling Pests in Animal Shelters

Janet Hurley and Beverlee E. Nix*

Food preparation areas in animal shelters have all the essential elements for pest infestations—food, water, and harborage. You can keep these areas pest free by eliminating food sources, removing clutter that provides harborage, and repairing leaks that supply pests with water. Proper shelving in food preparation and storage areas can play an important role in pest prevention.

Wire racks are ideal for preventing pests. Solid wood, metal or plastic shelves collect crumbs and other food debris; wire racks allow spills to fall to the floor where they can be swept up during regular cleaning. Any shelving units should be on lockable wheels so they can move easily for cleaning and inspection.

Pests travel along the seams where walls meet floors; set shelving perpendicular to the wall to keep that area visible and easier to clean.

Set the lowest rack at least 12 inches off the floor. A shelter worker needs to be able to see under and behind racks at least 12 to 18 inches. This clearance will expose insects, rodent droppings, or spilled food.

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Do not store food in shipping boxes. Set food items on the shelves and immediately move the shipping boxes to recycling containers outside the building.

Cardboard containers are the primary vehicles that transport pests into the building. They are also a favorite hiding place for many pests, including mice and cockroaches. The more cardboard you have, the harder it is to inspect.

Racks designed specifically for canned food can be loaded front to back so older cans move to the front and be used first. These racks are safer for workers because there is no need to lift heavy boxes of cans onto shelves.

Carefully inspect all dry food bags for tears, rips, etc. Food can spill onto the floor and attract pests. Mice, roaches and other pests can also find their way into torn food bags and contaminate the contents. Avoid moist environments for bagged food—store it in dry, well ventilated areas. Keep bags at least 12 inches off the floor so that any spills can be cleaned up easily.

**Inside:**
- Store all food products on industrial grade, stainless steel wire shelving.
- Do not store foods in office areas unless they are in resealable containers such as hermetic plastic ware, metal tins, etc.
- Seal all cracks and crevices around windows, doors, bathroom fixtures, moldings, water fountains, conduit lines, and bulletin boards.
- Keep clutter in custodial closets to a minimum.
- Clean and disinfect all areas where animal food is mixed or prepared daily; mop the floors and clean floor drains on a regular basis.

**Outside:**
- Seal any openings in walls or doors that are larger than ¼ inch. Maintain and repair door sweeps, kick plates, and doorsills to keep rodents out.
- Seal all openings around pipes and soffits with a durable sealant.
- Seal cracks in walls and foundations.
- Keep all exterior doors closed; do not use them for added ventilation.
- Keep garbage cans and dumpsters at least 10 to 50 feet from the entryways.
- Trim shrubs and trees so they are not in contact with exterior walls or rooflines. Maintain at least 1 foot of separation from buildings.
- Use non-attractant exterior lighting. Replace halogen bulbs with low-pressure sodium vapor lights over entry areas. This keeps crickets away, as well as the spiders that follow them.
- Seal all cracks and crevices around doors, windows, and walls with an appropriate sealant.
- Keep all metal overhangs and roof edges tight and sealed to exclude wasps, hornets, other stinging insects, bats, and/or birds.
Got Mice? Seal, Trap, and Clean Up to Control Rodents

It is getting colder outside – rodents may enter your home for food or shelter! Seal up holes or gaps in your home, trap any existing rodents, and clean up any sources of food or water and items that might provide shelter for them.

Mice and rats are pesky critters that can enter your home through small holes or gaps. Mice can squeeze through a hole the size of a nickel, and rats can squeeze through a hole the size of half of a quarter!

Worldwide, rats and mice are the cause of over 35 diseases! In the United States, rodents can spread diseases like hantavirus pulmonary syndrome, rat-bite fever, leptospirosis, and lymphocytic choriomeningitis virus, a virus that poses a particular risk for pregnant women. If rodents invade your home this fall or winter, here are a few steps to protect yourself and your family.

Rats! What To Do about Rodents!

If you find signs of rodents or their droppings in your home, take precautions to clean up the area safely.
- Seal up holes or gaps in your home to prevent rodents from returning. Learn more about sealing gaps...
- Trap rodents in and around your home using an appropriate snap trap. Learn more about trapping...
- Clean up any sources of food or water, and items that might provide shelter for rodents. Learn more about cleaning up...

A Study of Mice and Men

CDC continues to work with partners nationally to study rodents and the germs they carry. In Montana, scientists have been conducting a multi-year study of deer mice, the rodent known to transmit the virus that causes hantavirus pulmonary syndrome. By observing the deer mouse in its natural environment, scientists are able to better understand how the rodent can transmit diseases to people. This information can assist in developing recommendations and education towards preventing the disease.
Those who have access to the internet can order DSHS publications online. The Zoonosis Control Branch has pamphlets on a variety of topics, such as mosquito control, rabies, animal bites, plague, encephalitis, Rocky Mountain spotted fever, and tick borne diseases. You can search for publications by title, subject, keyword, language, format or publications number, and pamphlets will be shipped to you at no cost. To order pamphlets online, visit the website: http://webds.dshs.state.tx.us/mamd/litcat/default.asp

If you have any questions, please call Tonya at (806) 655-7151 ext. 1104.

2014 Rabies Awareness & Prevention Poster Contest Information:

Rabies is endemic in Texas; bats and skunks are the most commonly affected species. Private residences and school grounds are the most common locations in Texas for exposure to rabid bats. Bat bites are not always noticeable and many people are unaware that exposure to bats poses a risk - most of these rabies exposures are preventable through education. Involving kids in a poster contest is a great way to instill the importance of vaccinating pets against rabies and avoiding contact with high-risk animals. The Department of State Health Services Zoonosis Control Branch will be conducting the 6th annual statewide “Rabies Awareness & Prevention Poster Contest” for Pre-K through 8th grade. The deadline for poster submissions is April 14, 2014. Prizes will be provided by the Zach Jones Memorial Fund (http://www.zachjonesmemorial.org/). You can download contest documents and view past winners’ posters by visiting our website: http://www.dshs.state.tx.us/idcu/disease/rabies/information/contest/

Please forward this information to schools in your area and encourage them to involve their students. This would be a perfect activity for schools participating in C-Scope as an informational text or procedural text assignment or as an excellent extra-credit project for an art or science class. Please contact me if you have any questions or suggestions. Thank you in advance!

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