2008 – A Successful Contingency Containment Rabies Year

For the Oral Rabies Vaccination Program (ORVP), the 2008 year has been significant. The program was extremely concerned as to whether or not its' 2007 contingency actions had worked. The ORVP efforts to control rabies in gray fox in West-Central Texas had encountered several "first time" challenges in 2007. For the first time since the ORVP was initiated in this portion of the state (1996), rabies cases were diagnosed outside of the original epizootic zone. Also, for the first time, very incriminating evidence was documented that seems to show that the fox variant of rabies is being propagated coyote to coyote. This had been suspected once before, but no scientific evidence was obtained. The number of fox variant rabies cases, which has been in a decline for the past five years, jumped from 8 cases in 2005 to 45 in 2006; to 62 fox variant rabies cases in 2007. It appeared that the rabies cases spread up the Pecos River from the vaccinated zone and then made a radial spread reflective of the travel of wildlife within their home range. Of concern was the fact that cases were occurring in habitat not conducive to gray fox. These cases were in coyotes. Salivary glands from several of these coyotes were submitted to the Centers for Disease Control and Prevention (CDC) for rabies virus isolation. It was discovered that there was sufficient rabies virus present in the salivary glands to postulate that coyote-to-coyote transmission is occurring.

Routine rabies surveillance efforts noted several instances of hot spots (increased number of cases and/or concentration of cases) along rivers during 2006, including the Pecos River, Llano River, and San Saba River. These cases were primarily in gray fox and bobcats and affected the east side of the epizootic rabies zone as well as the west. Just as the 2007 ORVP January campaign was ending, two rabid animals were diagnosed that indicated the rabies exposure probably originated outside of the "vaccinated zone." To try and define the extent of the break in the vaccinated zone – how far away from the zone did the rabies cases extend – an enhanced active surveillance effort was initiated. Department of State Health Services and Texas Wildlife Services staff collected specimens from the enhanced zone. In addition, veterinarians, animal control officers, game wardens, road maintenance crews, wildlife biologists, etc. from the affected area were solicited to participate in the identification and submission of "strange-acting or road-kill" specimens. This enhanced surveillance has continued in 2008, with 1637 active surveillance specimens collected. Contingency response actions in 2007 utilized 8,000+ doses of bait/vaccine donated by the State of Massachusetts ORVP program, which was used in February to place a 10-mile vaccinated zone around the city of Rankin. These bait/vaccine units were distributed using a Texas Wildlife Services helicopter. Then in March, the United States Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services National Rabies Program, donated approximately 350,000 bait/vaccine units and monies to pay for distribution via fixed-wing aircraft to cover the remainder of the breakthrough area. These contingency zones were reinforced during the 2008 annual oral rabies vaccination campaign. A vaccination distribution zone was placed to ensure every identified rabid case had a 30 mile barrier between it and the rabies free areas of the state. Resources in 2008 were sufficient to blanket the epizootic zone with oral rabies vaccine. Vaccine/bait units were distributed at 64 baits/mi² in coyote habitat and 91 baits/mi² in gray fox habitat areas.

The contingency response and follow-up actions appear to have contained the break through and resulted in a significant reduction in 2008 rabies cases due to the Texas Fox rabies variant. Eleven Texas Fox rabies variant cases were confirmed in 2008, with 10 of those occurring in Reeves County in the first six months of the year. One additional case was confirmed in Val Verde County early in the year. If additional cases are not observed in 2009, a considerable reduction in the epizootic zone that requires oral rabies vaccine can be made in 2010.