MEMORANDUM


FROM: Connie Austin, D.V.M., M.P.H., Ph.D.
State Public Health Veterinarian

DATE: April 4, 2011

SUBJECT: Animal Rabies Surveillance for 2010

In 2010, a total of 5,302 animals were submitted for rabies testing to the Illinois Department of Agriculture (IDOA) and the Illinois Department of Public Health (IDPH) diagnostic laboratories. There were 104 animal brains not suitable for testing. Of the total number of animals tested, 117 were fluorescent antibody-positive for rabies. All that were antibody-positive were bats. Animals testing positive for rabies from 2001 to 2010 are listed in Table 1. In 2010, the most frequently tested animals were bats (2,076), dogs (1,553), cats (872), skunks (260) and raccoons (188).

Table 1. Rabies test positive animals by species and year in Illinois

<table>
<thead>
<tr>
<th>Species</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bat</td>
<td>24</td>
<td>31</td>
<td>24</td>
<td>50</td>
<td>43</td>
<td>46</td>
<td>113</td>
<td>103</td>
<td>83</td>
<td>117</td>
</tr>
<tr>
<td>Cat</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>Cattle</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tr>
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<td>0</td>
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</tr>
<tr>
<td>Fox</td>
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<td>0</td>
<td>0</td>
<td>1</td>
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</tr>
<tr>
<td>Skunk</td>
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<tr>
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<td>0</td>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
<td>31</td>
<td>24</td>
<td>51</td>
<td>51</td>
<td>46</td>
<td>113</td>
<td>103</td>
<td>83</td>
<td>117</td>
</tr>
</tbody>
</table>
BATS

In 2010, bats were the only species identified with rabies in Illinois. In this year, 2,036 bats were tested for rabies. Of those tested, 1,919 were determined negative for the virus and 117 were confirmed positive. An additional 86 bats were submitted for testing but specimens were unsatisfactory. The percent of bats tested which were positive for rabies in 2010 was 5.7 percent (See Table 2).

Table 2. Bat rabies testing results in Illinois for 2010.

<table>
<thead>
<tr>
<th>Negative</th>
<th>Positive</th>
<th>Total Tested</th>
<th>% Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,919</td>
<td>117</td>
<td>2,036</td>
<td>5.7</td>
</tr>
</tbody>
</table>

Geographic location of mammals testing positive for rabies is shown in Figure 1. The majority, 1,533 (75 percent) of testing occurred from May to September when bats are very active and likely to come in contact with humans or pets, as demonstrated in Figure 2.

Figure 1. Animal Rabies Cases by County, 2010
Figure 2. Number of all bats and positive bats tested in Illinois by month for 2010

SPECIMEN SUBMISSION

- Animal brains should be submitted for rabies testing under the following conditions:
- A mammal that has bitten a domestic animal or a person and is not eligible for a confinement period. (Note: rabbits and small rodents are not recommended for rabies testing due to their low risk of rabies).
- When an animal exhibits signs suggestive of rabies.
- Routine submission of skunks for rabies surveillance.

- All brain or head specimens should be submitted immediately for testing and not batched with other specimens. If someone has been exposed to a possibly rabid animal, the animal should be sent immediately for testing. If the animal should test positive, the person would need to be started immediately on rabies treatment. A delay in obtaining results could result in a delay in starting needed treatment and result in a poor outcome for the exposed individual.

SKUNKS AND OTHER TERRESTRIAL MAMMALS

In 2010, no skunks tested positive for rabies. Of the 5,198 animals tested, only 260 (5 percent) were skunks. The following counties submitted skunks for rabies testing DuPage (82 skunks), McHenry (38), Will (37), Cook (29), Lake (19), Kane (eight), Peoria (eight), Sangamon (six), McLean (five), Clinton (three), Crawford (three), Jackson (three), Madison (three), Marion (three), Williamson (two), Knox (two) and one each in Champaign (one), Christian (one), Edwards (one), Effingham (one), Fulton (one), Grundy (one), Kankakee (one), Livingston (one) and Washington (one). Seventy-one percent of the skunks were submitted from four counties in northern Illinois: DuPage, McHenry, Will and Cook.

To maintain adequate surveillance in the state, testing of the skunk must be maintained, since it is the main terrestrial animal reservoir for the rabies virus in Illinois. Negative testing of wild mammals, especially skunks, in counties is one factor used to determine whether rabies post-exposure treatment is
recommended for persons bitten by dog and cats that cannot be observed for the 10 day period.

**County animal control officers are encouraged to submit skunks for testing if:**

- they have exposed a person or a domestic animal or
- they have signs suggestive of rabies, including
  - lack of fear of humans
  - aggressive behavior
  - salivation
  - sighted during the day
  - staggering
  - paralysis and muscle tremors
  - found in places unusual for a skunk

**Local animal control and local public health agencies are also asked to submit skunks which have not exposed persons or animals for surveillance purposes.** This is especially important if limited numbers of skunks have been tested for rabies in their jurisdiction. This will help in determining the extent of circulation of this strain of the virus in this area of the state. Local agencies are encouraged to contact nuisance wildlife trappers, police officers, streets and sanitation personnel and others in their jurisdictions who may have freshly killed skunks that could be tested and arrange for transportation and testing by one of the IDOA or IDPH laboratories. Please check with the IDOA laboratory about testing fees for skunk testing. The IDOA laboratories typically charge a fee for rabies testing. All rabies testing is free at the IDPH laboratories. Please share with your animal control partners.