

<b>TUBERCULOSIS MANAGEMENT</b>	All captive elephants must be periodically tested for tuberculosis and quarantined and/or treated, if appropriate, as a part of adequate veterinary care. [2.40(b)(2), Policy #21]
<b>Testing</b>	<p>All captive elephants must be tested:</p> <ul style="list-style-type: none"><li>• annually. NOTE: Testing should be done the same month of each year.</li><li>• by culture</li><li>• under the direct supervision of a licensed veterinarian</li><li>• using:<ul style="list-style-type: none"><li>➤ the procedures outlined in <i>Guidelines for the Control of Tuberculosis in Elephants - 2003</i>, developed by The National Tuberculosis Working Group for Zoo &amp; Wildlife Species (See <i>Guidelines</i> at end of this section), <b>OR</b></li><li>➤ a comparable testing and monitoring program approved by the appropriate AC Regional Office</li></ul></li></ul> <p><i>Culture Collection</i> Tuberculosis testing must be done by culture because intradermal skin testing is not reliable for screening or diagnosis.</p> <p>Sample for culture should be collected:</p> <ul style="list-style-type: none"><li>• under the direct supervision of a licensed veterinarian</li><li>• from trunk washings</li><li>• using the “triple sample method”</li></ul> <p>See <i>Guidelines</i> - Section 5 (page 5) and Appendix 3 (page 21) for the procedures to follow.</p>
<b>Management Groups</b>	<p>Based on the culture results, all elephants should fall into one of the following management groups:</p> <p><b>Group A</b> elephants have:</p> <ul style="list-style-type: none"><li>• negative cultures, and</li><li>• no exposure to a culture positive animal in the last five years</li></ul>

Group A elephants:

- must be TB tested annually
- do not require any ancillary testing
- do not require any treatment
- have no travel restrictions
- should not be moved into a facility with any untested elephants

**Group B** elephants have:

- negative cultures, and
- exposure to a culture positive animal between one and five years ago

Group B elephants:

- must be TB tested:
  - quarterly for one year, then
  - annually thereafter if all cultures remain negative
- do not require any ancillary testing
- do not require any treatment
- have no travel restrictions
- should not be moved into a facility with any untested elephants

**Group C** elephants have:

- negative cultures, and
- exposure to a culture positive animal within the last 12 months

Group C elephants:

- must be retested as soon as initial culture results are known
- should have ancillary diagnostic tests done but not required
- should be treated using:
  - *Option 1:* Prophylactic Treatment (see page 7 of the *Guidelines*), OR
  - *Option 2:* Monitor by Culture (see page 8 of the

*Guidelines)*

- have travel restriction (see page 8 of the *Guidelines*)
- should not be moved into a facility with any untested elephants

In addition to the above requirements, the veterinarian who conducted the TB test should:

- request antimicrobial susceptibility tests from the culture positive elephant, and
- submit cultures to NVSL, if the original tests were done at a different lab

**Group D** elephants have a positive culture for *Mycobacterium tuberculosis*.

Group D elephants:

- should be separated from the public and previously non-exposed elephants
- should have ancillary diagnostic tests done but not required
- should be treated using the treatment schedules outlined on pages 9 & 10 of the *Guidelines*
- have travel restrictions (see page 10 of the *Guidelines*)
- should be monitored as outlined on page 10 of the *Guidelines*

In addition to the above requirements, the veterinarian who conducted the TB test should:

- request antimicrobial susceptibility tests from the culture positive elephant, and
- submit cultures to NVSL, if the original tests were done at a different lab

**Group E** elephants are untested elephants.

If an elephant cannot be tested, it should **not** be:

- permitted to have

	<ul style="list-style-type: none"> <li>➤ any direct public contact, or</li> <li>➤ contact with any tested elephants, including their enclosures or equipment</li> <li>• moved from their home facility</li> </ul> <p>A tested elephant should only be moved into a facility with an untested elephant, if the tested elephant can be prevented from coming into direct contact with the untested elephant and its enclosure or equipment.</p>
<p><b>Treatment</b></p>	<p>Elephants in Groups C &amp; D must be treated:</p> <ul style="list-style-type: none"> <li>• as recommended in the <i>Guidelines</i>, OR</li> <li>• by a treatment protocol approved by the appropriate AC Regional Office</li> </ul> <p>Drug levels must be monitored to assure proper treatment.</p> <p>Serum samples for anti-TB drug level testing should be collected as follows:</p> <ul style="list-style-type: none"> <li>• First sample - as soon as the elephant is accepting medication reliably, and</li> <li>• Second sample - two weeks later</li> </ul> <p><b>NOTE:</b> Blood samples must be spun immediately and the serum frozen immediately to prevent degradation of the antimicrobial agents.</p> <p>If drug doses need to be adjusted based on the serum drug levels, then serum samples must be collected again as outlined above and tested.</p> <p>See Appendix 4 (page 23) of the <i>Guidelines</i> for the appropriate testing laboratory and collection procedure.</p>
<p><b>Employee Testing</b></p>	<p>All employees in contact with elephants should be TB skin tested yearly.</p> <p>New employees should be tested prior to any contact with the elephants.</p>

	<p>If an employee tests positive, the procedures listed in Section 12 (page 17) of the <i>Guidelines</i> should be followed.</p>
<b>Necropsy</b>	<p>All elephants that die, whether TB positive or not, should be necropsied. See Inspection Guide Section 15.4 - Necropsy Requirements for details.</p>
<b>Records</b>	<p>All elephant test results must be forwarded to the American Association of Zoo Veterinarians (AAZV) for compilation. The “Annual Elephant Tuberculosis Surveillance Report Form” in Appendix 10 (page 38) of the <i>Guidelines</i> should be used.</p> <p>You, the inspector, should review documentation that:</p> <ul style="list-style-type: none"><li>• the elephants are being tested</li><li>• TB positive animals are being treated according to the <i>Guidelines</i> or an AC approved protocol</li><li>• all attendants, handlers, and /or trainees who have direct contact with the elephants are being tested at least annually. NOTE: You should not review actual test results, only documentation that the tests are being conducted.</li><li>• necropsies are being performed</li></ul>