



## Comparison of Historic Brucellosis Affected Herd Procedures, Results, and Methods to Current

Subject	Historic (prior to 2010)	Current
State Brucellosis Class Status	More than one herd detection within a 24-month period resulted in a loss of State Brucellosis Class Free status. All Sexually intact cattle and domestic bison 18 months of age and older anywhere in the State required a test to for export.	States with a wildlife reservoir of <i>Brucella abortus</i> must have a Brucellosis Management Plan (BMP) approved by APHIS. With a BMP, the discovery of multiple positive herds, if managed properly, does not affect brucellosis Class Free Status.  Montana has maintained Brucellosis Class Free status despite an average of 1 affected herd per year since 2010.
Size of the Brucellosis Program	Nationwide surveillance program. First point testing of sexually intact cattle and domestic bison 18 months of age and older at all livestock markets in the U.S. and slaughter plants.	Federally mandated program in States with a wildlife vector of <i>B. abortus</i> (Montana, Idaho, and Wyoming), now run by the State, and reviewed by USDA. Montana gained Class Free Status for the first time in 1985, lost Class Free Status in 2008 and regained it in 2009 utilizing a 7 County brucellosis surveillance program called the Brucellosis Action Plan (BAP). The BAP was the precursor to the Designated Surveillance Area (DSA).
Designated Surveillance Area (DSA)	Initial DSA regulations mandated that all sexually intact cattle or domestic bison 12 months of age or older within the DSA were brucellosis tested every year.	In 2011, the regulations were changed to today's language (ARM 32.3.435) removing the annual test requirement. Today, more and more DSA producers are voluntarily testing their herd annually to: <ul style="list-style-type: none"> <li>• Find infected animals early before the disease can be transmitted to herd mates.</li> <li>• Sample animals when they are already being handled.</li> <li>• Minimize the extent of an epidemiological investigation.</li> </ul>
Herd Depopulation	Required of the first and the second herd detected.	Not required if quarantine can be maintained.
Cause of Quarantine	Quarantined as an affected herd due to discovery of a reactor animals (serologic positive), without positive culture results, was not uncommon.	A herd is not considered affected and placed under quarantine unless field strain <i>B. abortus</i> is cultured.
Affected Herd Quarantine Testing Protocol	Herd either depopulated or in some cases, quarantined with test and removal. With test and removal, there was little flexibility with the 3 negative herd test protocol:	Able to maintain viability of the affected operation through flexibility in testing: <ul style="list-style-type: none"> <li>• The initial test (when the reactor was discovered) may be considered the 1<sup>st</sup> negative test.</li> <li>• Number of subsequent tests may depend on the class or pregnancy status of the</li> </ul>

	<ul style="list-style-type: none"> <li>• 1<sup>st</sup> test 30-60 days after removal of the reactor</li> <li>• 2<sup>nd</sup> test 180-210 days</li> <li>• 3<sup>rd</sup> test (release) 365 days or more</li> <li>• Assurance test 6-12 months after release</li> </ul> <p>Discovery of any additional non-negative, started the process over.</p>	<p>positive animal. For example, a single positive bull or pregnant female reduces the likelihood the disease was spread within the herd which may reduce the number of tests necessary.</p> <ul style="list-style-type: none"> <li>• Tests cannot be completed less than 30 days apart and testing can occur at the time of other handling events (e.g. at the time a Scour vaccination is given).</li> <li>• If the affected animal potentially aborted in the herd, more tests are recommended to afford a level of comfort that no additional positive animals will be discovered.</li> <li>• Final/releasing test near calving.</li> </ul>
Quarantine Release	Depopulation or strict test and removal (see "Affected Herd Quarantine Testing Protocol" above)	<p>Quarantine release is accomplished within 60 days of calving with a negative whole herd test.</p> <p>USDA/MDOL have allowed the release of DSA herds with a less stringent testing protocol because,</p> <ul style="list-style-type: none"> <li>• science and epidemiology of the disease supports it.</li> <li>• Upon release, the herd continues to meet DSA requirements (movement/change of ownership) for surveillance.</li> </ul>
Adjacent herds	<p>Adjacent and affected herd sample collection was performed only by State or Federal personnel.</p> <ul style="list-style-type: none"> <li>• An Adjacent herd: Any cattle or domestic bison that exchanged with, comingled with, or were within 1 mile of the affected herd at any time in the last 3-5 years (length of time was determined by the USDA epidemiologist).</li> <li>• Placed under quarantine for a herd test and retested in 6-12 months.</li> </ul>	<p>Since 2014, some adjacent herd sample collection (if necessary) can be performed by [private practice] accredited veterinarians. Assurance testing of the affected herd can also be completed by an accredited veterinarian.</p> <ul style="list-style-type: none"> <li>• An adjacent herd: Cattle or domestic bison that may have comingled with, exchanged animals with, or had fence line ( a 1-mile distance is no longer the standard) contact with the affected herd since the last negative herd test or since the positive animal was last tested as negative. <ul style="list-style-type: none"> <li>○ In some cases, with good records and past surveillance, an adjacent herd may be narrowed down to only those animals that shared a fence line with the positive animal(s) since its last negative test.</li> </ul> </li> <li>• Adjacent herds are placed under quarantine (6 months of age and older) until tested negative. With an initial negative herd test, quarantine is released. <ul style="list-style-type: none"> <li>○ In most cases in Montana's DSA, adjacent herds test in the fall at the same time as pregnancy check.</li> </ul> </li> <li>• An assurance test is performed 6-12 months later. Most often at 12 months at the time of pregnancy check.</li> </ul>