

Sheep and Goats near Bighorn Sheep Habitat



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Bighorn Sheep pneumonia: what you need to know

Bighorn sheep were historically widespread in the steep canyons of Western North America. In the past century, people have worked to save these majestic animals from the brink of extinction. Currently, the biggest threat to bighorn sheep is a deadly pneumonia caused by bacteria carried by domestic sheep and goats.

Recent research has identified the bacteria *Mycoplasma ovipneumoniae* (*M. ovi*) as the agent that triggers bighorn sheep pneumonia outbreaks. *M. ovi* is commonly carried by healthy-appearing domestic sheep and goats, but infection of bighorn sheep may kill up to 80% of the herd in the initial outbreak alone. Bighorn ewes that survive an *M. ovi* outbreak are resistant but their lambs remain susceptible, so repeated lamb pneumonia outbreaks may recur for years, sometimes resulting in the loss of the entire bighorn herd.

M. ovi can also cause problems in domestic sheep and goats. Fatal pneumonia, though uncommon, often involves *M. ovi* infection. More commonly, *M. ovi* infects weaned lambs and kids, causing a coughing syndrome and decreased rate of gain. No *M. ovi* vaccine is available for bighorn sheep or for domestic sheep or goats.

The only sure way to prevent a fatal outbreak in bighorns is to ensure separation from their domestic cousins. A wandering bighorn ram may investigate a group of domestic sheep or goats; a stray sheep or goat may enter a bighorn herd. In either case there is risk of pathogen spillover and resultant disease.

A single contact between a bighorn sheep and a



domestic sheep or goat can trigger a devastating pneumonia outbreak. One interaction is all it takes, but you can help!

Rehoming

Because of the danger they pose to bighorn sheep, the surest way to reduce risk in or near bighorn habitat is to remove domestic sheep or goats from the area. If possible, consider selling or rehoming these animals, or raising alternative less-risky animal species. For example, FFA and 4-H members may chose to show pigs or steers instead of sheep or goats.

For high risk situations, financial support may be available for selling or rehoming your animals or transitioning to alternative livestock. See ‘Contacts’ for more information.



Going *M. ovi* free

Your sheep or goat herd may already be *M. ovi*-free, minimizing the risk of transmission to bighorn sheep. *M. ovi* status is tested by swab samples of the nose: Contact your veterinarian, WDFW, or WADDL for more information. If your herd is *M. ovi*-free, avoid letting your animals interact with conspecifics not known to be free of *M. ovi*. WDFW is currently developing a herd of *M. ovi*-free Suffolk sheep, and hopes to expand to program to other breeds in future years.

If your herd is currently *M. ovi*-infected, the best option is to rehome infected animals (i.e., provide to herds further from bighorns). You may also work to eliminate the infection. Chronic *M. ovi*-carriers are typically only a minority of the herd. Testing the herd, and removing *M. ovi*-carriers will greatly reduce the risk they pose to bighorn sheep and the rest of your herd. Second, young stock typically remain *M. ovi*-uninfected for at least 2 months after birth, so lambs and kids weaned and separated from carrier adults by 2 months of age will also be *M. ovi*-free.

Fencing

Because goats or sheep that range freely or that escape from fences can be a risk to bighorn sheep, secure fencing is very important. In addition, it can be helpful to have a barn or internal pen where animals can be secured at night, or when the owner is away, or when a bighorn sheep is seen in the vicinity.

Likewise, installing double-fencing around sheep or goat herds can prevent animals from touching noses with bighorn sheep. For high risk areas, financial assistance and labor may be available for improving fencing. See ‘Contacts’ for more information.



Reporting

The final step you can take to help protect bighorn sheep is to call a WDFW wildlife biologist whenever you see a bighorn sheep in a new location where it risks contacting sheep or goats. You can also ask to be added to a contact list, in case bighorn sheep wander into your area. Quick action can prevent a deadly outbreak of pneumonia.

All these choices are voluntary. However, bighorn sheep are a historic asset to our state and sheep and goat owners play a key role in helping protect and preserve these amazing animals.

Contacts

If you see a Bighorn Sheep near your animals:

Bios?

To learn more and get help: