Laurie Rule (ISB # 6863)
Elizabeth Hunter Potter (OSB # 105482), *pro hac vice pending*
ADVOCATES FOR THE WEST
P.O. Box 1612
Boise, Idaho 83701
(208) 342-7024
(208) 342-8286 (fax)
lrule@advocateswest.org
epotter@advocateswest.org

Attorneys for Plaintiffs

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF IDAHO

WESTERN WATERSHEDS PROJECT, and WILDEARTH GUARDIANS,

Plaintiffs,

v.

U.S. FOREST SERVICE,

Defendant.

DECLARATION OF TOM RINKES

I, Tom Rinkes, declare as follows:

1. I have personal knowledge of the facts set forth below and if called as a witness I would and could truthfully testify to these facts.

2. I have been asked by the Plaintiffs in this litigation to provide my expert opinion on the impact domestic sheep grazing on the Snakey Canyon and Kelly Canyon grazing allotments is likely to have on the South Beaverhead bighorn sheep population.

Professional Qualifications and Experience

3. I earned a Bachelor of Science in Wildlife Resources from the University of Idaho in 1977. During the time, I was also a seasonal wildlife technician for the Idaho Department of Fish and Game ("IDFG") in 1975 and 1976. I also worked as a research technician for the U.S. Fish and Wildlife Service ("FWS") in 1976 through 1978.

4. I began working for the Bureau of Land Management ("BLM") in 1978 as a Range Conservationist in Cottonwood, Idaho. I worked in this position until June 1986, when I became a Wildlife Biologist for BLM in Rawlins, Wyoming. I served in that role until 1995, when I transferred to Lander, Wyoming, where I worked as the Wildlife Biologist for the BLM. I then transitioned to working as the Wyoming Sage Grouse Coordinator for the BLM Wyoming State Office in 1999.

5. In 2007, I returned to Idaho where I served as the BLM's Wildlife Program Lead for Idaho, a position I served in until I retired in 2014. In that position, I oversaw policy development for BLM's wildlife program in the state. A large emphasis of my tenure in Idaho was on bighorn sheep populations and habitat conflicts. This issue required me to continually update my knowledge by reading and understanding the past and new published literature on disease and habitat research for bighorn sheep so I could communicate this information to

managers and staff. In this position I prepared interim policy for Idaho BLM concerning bighorn sheep and domestic sheep and goat issues that was approved by the BLM Idaho State Director. I was also responsible for coordinating with BLM district and field offices, IDFG, tribal fish and wildlife agencies, and other groups concerning bighorn sheep issues.

6. Throughout my positions with the BLM, I engaged in work involving bighorn sheep populations, conflicts, and management. I worked with five bighorn herds when I was a Wildlife Biologist in Rawlins, Wyoming. When I was the Wildlife Biologist in Lander, I served on the technical committee for the Francs Peak (south end) bighorn herd on the North Side of the Wind River in Wyoming. During my tenure in Wyoming, I also assisted the BLM Wyoming State Wildlife Program Lead who participated on the Wyoming Bighorn/Domestic Sheep Interaction Working Group that developed a separation strategy of the two species in Wyoming. My specific work involving bighorn sheep was varied but included monitoring and analyzing bighorn sheep habitat, trapping bighorn sheep for transplantations, and funding and coordinating studies regarding habitat issues, including conflicts between bighorn and domestic sheep and the lack of recruitment in bighorn sheep populations. My work coordinating bighorn studies with other agencies was important because at the time, we did not know what was causing depressed recruitment and population issues; we initially thought it was human contact but this work led us to realize that domestic sheep herds are a major cause of bighorn sheep population declines.

7. Upon returning to Idaho, I continued this work with bighorn habitat and populations. In 2007, I was involved in assessing the impact that domestic sheep grazing on BLM public lands was having on bighorn sheep along the Salmon River adjacent to the Payette National Forest for the BLM's Cottonwood Field Office land use plan revision. I was tasked by the BLM State Director to review the domestic sheep and bighorn sheep conflicts and analyze

the extent to which conflicts were occurring on BLM allotments; to do so, I considered how many domestic sheep grazing allotments BLM administered and the proximity of those allotments to known bighorn sheep habitat in addition to reviewing the draft land use plan and Environmental Impact Statement and providing comments to improve the accuracy of the analysis.

8. I also became BLM's National Bighorn Sheep Program Coordinator from 2011 to 2014 at the request of BLM's Washington Office. My duties as BLM's National Bighorn Sheep Program coordinator included drafting national BLM policy manual 1730 – Management of Domestic Sheep and Goats to Sustain Wild Sheep – with two other BLM team members. The policy provides guidance to coordinate and manage domestic sheep and goats to sustain wild sheep on BLM managed lands. The policy discusses the issue of the interaction between the species and the potential for disease transmission. The policy applies to grazing authorizations and other non-permittees activities. In my capacity as the Bighorn Sheep Coordinator, I participated on an interagency committee representing the BLM for the Western States Fish and Wildlife Agencies Wild Sheep Working Group. The purpose of this group was to identify management issues and to collaboratively develop solutions to management issues between states and federal agencies and wild sheep advocates. Topics addressed during my tenure on this working group included wild and domestic sheep issues, mapping of federal domestic sheep and goat grazing allotments, wilderness management, wild sheep transplants among states and provinces, and communication issues between states and federal agencies.

9. As part of this group, I was a co-author on the 2012 version of Recommendations for Domestic Sheep and Goat Management in Wild Sheep Habitat that recommended separation between the species and other practices that may promote separation. That report summarized

the science behind disease issues, including transmission and its effects on wild sheep populations and made management recommendations for domestic sheep and goat grazing to promote separation for state and federal agencies, wild sheep conservation organizations, and private landowners.

10. I also served as one of six scientists on the U.S. Forest Service and BLM Bighorn Sheep Working Group, which contributed to the joint-agency Bighorn Sheep Risk of Contact ("ROC") tool that was published in March 2015. This geospatial tool calculates rates of contact between bighorn sheep and active domestic sheep allotments. The tool is designed for agency field units to evaluate consistently the risk of contact between wild and domestic sheep and goats. This group also provided several training webinars to federal and state agency personnel on the use of the ROC model.

11. I also served on the Hells Canyon Bighorn Sheep Restoration Committee from 2007 to 2014. The committee is a state, federal, and private partnership to restore bighorn sheep and coordinate management in Hells Canyon in Oregon, Idaho, and Washington. I was the state level representative for BLM on the committee representing BLM for Idaho, Oregon, and Washington. The emphasis of the committee was managing disease in bighorn sheep by minimizing exposure to pathogens associated with pneumonia.

Bighorn Sheep Population and Habitat in South Beaverhead Mountains

12. I am personally familiar with the South Beaverhead mountain range and the bighorn sheep population in the area. I first had contact with the South Beaverhead Mountain bighorn sheep population in 1976, which was the first year the sheep were reintroduced into this part of Idaho. I was still in college and working for a professor at the University of Idaho on a contract to inventory rare plants in the South Beaverhead and Lemhi mountain ranges. We

conducted vegetation inventories on Scott Peak and Italian Peak immediately north of the Snakey Canyon and Kelly Canyon allotments. During this inventory in August, I discovered that bighorn sheep were using this area as summer habitat following a recent transplant by IDFG earlier that year.

13. I also became familiar with bighorn habitat and livestock grazing in the area through my field inspections of BLM livestock grazing allotments that are adjacent to the Snakey Canyon and Kelly Canyon allotments. I have also reviewed bighorn sheep data for the area from IDFG and BLM records.

14. I began working with the BLM Idaho Falls/Upper Snake River Field Office, the Forest Service, and IDFG in 2010 on a bighorn sheep project in the nearby Lost River and Lemhi mountain ranges to understand habitats and areas that bighorn sheep were using in these mountain ranges. In the second year of this project, the study expanded to cover the South Beaverhead Mountains where three to four individual bighorn sheep ewes were fixed with radio telemetry collars. During the week of May 28, 2012, at least two of the three or four bighorn sheep ewes with radio transmitters were located within a couple of miles from the Kelley Canyon Allotment.

15. As part of this project, I went with the local BLM biologist to visit the BLM grazing allotments adjacent to the Snakey Canyon and Kelly Canyon allotments. During this field review, I also entered the Snakey Canyon and Kelly Canyon allotments along their eastern boundary with BLM lands. Prior to this and other visits to BLM allotments in this area, I recall seeing past observational data of bighorn sheep showing the animals within or immediately adjacent to the Snakey Canyon and Kelly Canyon allotments. This data indicated that there were bighorn sheep observations in Snakey Canyon and Kelly Canyon and in Reno Canyon

immediately southwest of Snakey Canyon on BLM lands. Those were the only bighorn sheep observations that I could locate in the IDFG's geospatial data set that we had at the time. I decided the BLM needed to participate in the project with the Forest Service and IDFG. Based on my field observations of this area, the bighorn locations were in habitat that I would expect bighorn sheep to use throughout the fall, winter, and spring periods.

16. The Snakey Canyon and Kelly Canyon allotments and adjacent areas provide good habitat for bighorn sheep because bighorn sheep may move freely through much of the area and have access to adequate vegetation resources for feed and escape terrain from predators. The topography of that part of the Southern Beaverhead Mountains ranges from moderate slopes to steep slopes with intermittent escape terrain. The area is good for bighorn sheep because it has generally open and continuous habitat with only intermittent breaks on north and northeast facing slopes where stands of Douglas firs are present. Sagebrush, grass, and juniper woodlands with curl leaf mountain mahogany are also interspersed throughout the area. The intermittent juxtaposition of these habitats allows bighorn sheep to move freely throughout the Southern Beaverhead Mountains. The south slopes of the allotments are particularly favorable habitat for bighorn sheep that allows them to move easily into areas where domestic sheep are grazed. I have visited areas nearby in the winter and believe the allotments and surrounding areas also provide acceptable winter habitat for bighorn sheep, which would more likely be used if the bighorn population was larger.

17. I reviewed IDFG's 2010 Bighorn Sheep Management Plan to review potential population objectives and discovered that no formal population inventories had been conducted since the population had been reestablished in 1976. The highest number of bighorn sheep observed in the South Beaverhead Management Unit was approximately 60 bighorn sheep in

about 1995 but the area has the potential to support approximately 275 bighorn sheep. Low numbers of lambs were observed in the few years where bighorn sheep surveys were conducted. The plan also indicated that disease transmission between bighorn sheep and domestic sheep may be a cause for low numbers of bighorn sheep in the area.

18. Data collected during the first five months of the 2012 bighorn sheep study from the three to four radio-collared bighorn sheep showed bighorn sheep winter in habitat in the Blue Dome area, which is only about four miles west of the Snakey Canyon and Kelly Canyon allotments. Spring observations were about two miles from these allotments. This data coincided with general observations by IDFG and local Forest Service and BLM employees. I have also reviewed a map developed by J. Rydatch (April 2016) that depicts the locations of a bighorn sheep ram #14668 fitted with a radio telemetry collar in 2015. This ram appears to have left its primary habitat areas and forayed into the Snakey Canyon and Kelly Canyon allotments during the latter part of November 2015 during the bighorn sheep breeding season.

19. Overall, the South Beaverhead bighorn population appears to have suffered from low reproductive rates for many years. Based on my review of the population data and proximity of domestic sheep grazing allotments and known bighorn habitat, I believe that this population has likely been exposed to diseases from domestic sheep that has caused and continues to cause depressed recruitment.

Risk of Contact Between Domestic Sheep on the Allotments and Bighorn Sheep

20. Based on my personal observations and my review of relevant population data and maps, I believe there is a high risk of contact between domestic sheep that are grazed on the Snakey Canyon and Kelly Canyon allotments and bighorn sheep in the South Beaverhead

Mountains population. The species are related and gregarious, so they are attracted to each other and will likely make contact if they are in the same vicinity.

21. One of the biggest risks of contact arises when bighorn sheep go out on forays. Studies and general observations have found that both sexes of bighorn sheep will travel outside their normal home ranges. The frequency and distances vary by sex of the bighorn sheep. The bighorn sheep rams generally make the longest forays, with a greater frequency than female bighorn sheep. Forays can be very short, approximately one mile, and last a day or two, or they can cover very large distances for long periods of time. Many of these forays occur across habitat that is not considered to be bighorn sheep habitat such as agricultural fields, dense timber, and flat terrain with no escape terrain nearby. An example of one of the longest forays with the greatest duration is currently occurring in Idaho, Oregon, and Washington and is being monitored by the wildlife agencies of those states. This foraying ram has traveled well over 100 miles during a period of more than a year, moving from its initial home range in northeastern Oregon into north central Idaho and was most recently observed in southeastern Washington.

22. While such forays can occur any time of year, this behavior is most common in the late fall and early winter during the rut when rams travel in search of females, called ewes, to breed. Data collected in Idaho, Oregon, and Washington reveals that approximately fourteen percent of bighorn rams are known to go on forays each year. Bighorn sheep return from their forays to their home herd, so if they have come into contact with a domestic sheep and been exposed to disease, they can carry that disease back to the rest of the population.

23. Bighorn sheep in the South Beaverhead population are known to foray away from their primary habitat area and possibly outside their normal home range. In the South Beaverhead herd area, a bighorn sheep ram was reported ranging onto sagebrush and riparian

habitats at a Nature Conservancy ranch just northeast of the Snakey Canyon and Kelly Canyon allotments along Crooked Creek. In November 2015, a bighorn ram was documented just west and south of, and even within, the Snakey Canyon and Kelly Canyon allotments for a several day period.

24. For the South Beaverhead Mountain population, bighorn rams would not need to travel very far from their primary habitat within their core home range to encounter the domestic ewes that the Sheep Station is authorized to graze on the Snakey Canyon and Kelly Canyon allotments; these allotments are located only about four to five miles from the known winter habitat for this population and within their core home range according to the Forest Service. Bighorn sheep could easily travel across the spine of the Beaverhead Mountains and drop down into the Snakey Canyon and Kelly Canyon allotments on a foray, as shown by the movements of a ram in November 2015. Thus, the short distance between the Snakey Canyon and Kelly Canyon allotments and the known wintering habitat for the South Beaverhead population poses a significant risk of contact between the species.

25. Another major risk of contact arises from the high likelihood that domestic sheep will stray beyond the boundaries of the Snakey Canyon and Kelly Canyon allotments or stay on the allotments outside of their normal use periods. In my opinion, this risk is particularly acute on the Snakey Canyon and Kelly Canyon allotments due to the U.S. Department of Agriculture Sheep Experimental Station's ("Sheep Station") history of poor domestic sheep management, which was one of the factors that led the BLM to revoke the Sheep Station's authorization to graze domestic sheep on a nearby allotment.

26. In 2011 and 2012, at the request of the local field office, I became involved in BLM's management of the Sheep Station's domestic sheep grazing on the Bernice Allotment, which is

located eighteen miles from the Snakey Canyon and Kelly Canyon allotments. Lemhi/Beaverhead bighorn sheep study technicians recorded instances of stray domestic sheep from the Bernice Allotment from 2009 to 2011 in a project progress report that I received. Then in 2011, the Sheep Station lost approximately forty-four domestic sheep at the end of the grazing season in January 2011. Steep, rugged terrain required multiple and extensive searches for the lost sheep and prevented the Sheep Station's herder from locating all lost sheep until three months after the end of the grazing season, when the Sheep Station killed the final five domestic sheep. During this three-month period, domestic sheep were observed in bighorn sheep habitat on the BLM Bernice Allotment and on adjacent Forest Service lands outside the allotment.

27. Based on the Sheep Station's problems associated with stray domestic sheep and recent radio telemetry locations of bighorn sheep occurring in the allotment, I recommended to the field manager of the BLM office in charge of the Bernice Allotment that the agency close the allotment to domestic sheep grazing. The BLM field manager sent a letter in June 2012 to the Sheep Station and cancelled the Memorandum of Understanding that authorized the agency to graze the Bernice Allotment.

28. Based on my observations and experience, I believe the Sheep Station will have similar problems managing domestic sheep on the Snakey Canyon and Kelly Canyon allotments as it had on the BLM's Bernice Allotment. These allotments are similar because they all provide good winter habitat for bighorn sheep and have similar, rugged terrain with fairly flat base areas and steep, rugged surrounding slopes; these conditions make it easy for herders to lose domestic sheep within the area. It does not take long for a domestic ewe or two to escape and roam up onto the steep slopes and disappear in the rugged terrain.

29. The Sheep Station's problems with strays are common in domestic sheep management because there are no known best management practices ("BMPs") that can prevent domestic sheep from straying in steep, rugged terrain like that found on the Snakey Canyon and Kelly Canyon allotments. I know of no scientific research that shows BMPs are effective at preventing domestic sheep and bighorn sheep from making contact in this type of habitat on the Snakey Canyon and Kelly Canyon allotments. Exhibit 1 is an article written by Tim Schommer for the Payette and Nez Perce National Forests, which best summarizes the evidence that BMPs are ineffective at preventing contact between domestic and bighorn sheep.

30. The Forest Service's decision to rely on BMPs to manage grazing on the Snakey Canyon and Kelly Canyon allotments is irrational because such BMPs are insufficient to prevent new contacts between domestic and bighorn sheep. Thus, the Forest Service's decision to authorize domestic sheep grazing on the Snakey Canyon and Kelly Canyon allotments creates a high risk of new contacts between domestic and bighorn sheep, which would have disastrous results for the South Beaverhead bighorn sheep population.

Contact Between Domestic and Bighorn Sheep Is Likely to Cause Irreparable Harm

31. Contact between domestic sheep on the Snakey Canyon and Kelly Canyon allotments and bighorn sheep creates a risk of an all-age die-off and further reduction of the reproductive ability of bighorn sheep on the Southern Beaverhead Mountains due to disease. Given the low population numbers currently exhibited for this population, additional disease outbreaks could result in the extirpation of this population.

32. In my opinion, bighorn populations cannot sustain more than one to two contacts with domestic sheep that result in disease transmission over a fifty-year period without facing major persistency problems. Even if a bighorn population has been exposed to a disease

pathogen from a domestic herd in the past, the population may not be protected from future contacts if it is subjected to different strains of the same pneumonia-causing pathogen. Thus, multiple contacts with domestic sheep that result in disease transmission over time is a very significant risk due to the initial all-age die-off followed by recruitment suppression for many years. My opinion is supported by Exhibits 2 and 3. Exhibit 2 is a 2015 article written by Dr. Tom Besser, a Professor of Veterinary Microbiology at Washington State University's College of Veterinary Medicine and entitled "CSI: Bighorn Sheep Pneumonia (or How DNA Testing Can Aid Disease Investigations) Part II: Tracking the source of the pathogen that causes the pneumonia outbreak." Exhibit 3 is a scientific research article written by Frances Cassirer from IDFG and other leading sciences and entitled "Evidence for Strain-Specific Immunity to Pneumonia in Bighorn Sheep" that was published in the Journal of Wildlife Management in 2017.

33. In sum, to maintain and recover bighorn sheep populations to viable levels in the South Beaverhead Mountains, I believe that domestic sheep grazing on the Snakey Canyon and Kelly Canyon allotments must cease.

Pursuant to 28 U.S.C. 1746, I declare under penalty of perjury that the foregoing is true and correct.

Dated this 16th day of October 2017 in Clarkston, Washington.

Tom Rinkes