

Wyoming Wild Sheep Foundation & WGFD 17th Annual BHS Summit
Burgess Junction/Elk View Inn
June 21, 2019

Welcome and Introductions

In attendance; Angi Bruce, Doug Brimeyer, Rick King, Daryl Lutz, Doug McWhirter, Joe Sandrini, Kathy Trainer, Greg Hiatt, Andy Pils, Dan Hinz, Kevin Monteith, Sam Stephens, Dave Cottle, Sara Domek, Julian Royal, Kurt Eisenach, Cole Benton, Zac McDermott, Diane DiJenno, Dean DiJenno, Tony Mong, Dillon Herman, Carson Butler, Aly Courtemanch, Ryan Amundson, Chris Otto, Karen Sullivan

- Teton Sheep and Mountain Goats – Carson Butler, Aly Courtemanch
 - Discussed concerns regarding expanding mountain goats and increasing backcountry skiing. Based on recent trail camera mark-recapture study 100 adults estimated to be in the population, and based on collaring efforts they reside in two distinct sub-populations (north and south).
 - Discussed the new mountain goat Hunt Area 4 Type A licenses.
 - The Grand Teton National Park Mountain Goat Management Plan - going through public comments now, hopefully plan to begin removing goats this coming winter.
 - Expert Panel (same as involved in Whiskey Collaborative) recommendations included continued monitoring of both bighorn sheep and mountain goats, improving confidence in population estimation, removal of mountain goats as soon as possible, maintain as much habitat as possible (from encroaching mountain goats and skiers). The expert panel was divided when asked if the two sub-populations should be intentionally connected (through intra-range translocations).
 - Public engagement process to address winter recreation concerns will be expanded in 2019.
 - Iowa Wild Sheep Foundation has “adopted” the Targhee Herd and has dedicated funding to projects in the Tetons.
 - While trying to maintain habitat is a priority, there are also efforts to improve habitat. NEPA has been completed on the Teton Canyon prescribed burn, which should improve conditions for sheep there and allow for their continued expansion to include more areas outside of Grand Teton National Park.
 - Although there might not be much opportunity to increase numbers in this herd, the goal is to make sure it does not decline and remains above 100 individuals.

- Kouba Canyon/Elk Mountain – Joe Sandrini
 - A total of 12 bighorn sheep were introduced to Inyan Kara Mountain (15 miles south of Sundance) in 1969, and another 2 rams were released in 1971, but the herd did not grow or expand. The current Kouba Canyon/Elk Mountain Herd was started in South Dakota in 2001 with the release of 20 sheep in an intra-state translocation. In the next few years

over 20,000 acres burned in wildfires that benefitted bighorn sheep. Seven more sheep were released in South Dakota in 2005, and by 2006 the population was estimated to be 55 individuals. The first ram to be taken by a hunter was in South Dakota in 2008 when the population was thought to include 70 sheep. By 2009 the herd had grown to 100 and the first hunting season (for 1 ram) was offered in Wyoming. An EHD/bluetongue outbreak in 2012 reduced the population, but it recovered to currently number approximately 175 sheep. A sightability study will be initiated in 2019-2020 to better determine the number of sheep in the herd.

- The 2 rams released in 1969 and the 2 rams released in 1971 all left Inyan Kara and ended up on Oil Creek, the site of repeated removals of bighorn sheep expanding from the Kouba Canyon/Elk Mountain Herd. Currently exploring possibility of allowing bighorn sheep to occupy the Oil Creek area as domestic livestock commingling and disease concerns have been reduced recently.
- Water development and cheatgrass control projects have been implemented to improve conditions for bighorn sheep.
- National Bighorn Sheep Center – Sara Domek
 - The goal has nearly been reached for construction of the addition to the National Bighorn Sheep Center. The Wyoming Game & Fish Commission recently contributed \$100,000 to this cause.
 - Traffic levels are up compared to past years.
 - Education efforts of the Sheep Center reached 9,000 kids in 2018.
 - 2019 will be the first year “Camp Bighorn”, a 5-day kids camp held at the Whiskey Basin Conservation Camp, will be offered. The itinerary is impressive, with an impressive number of volunteers helping to host the event. Scholarships were awarded to kids not able to easily travel to Dubois (some from as far away as Alaska), and a total of 26 kids will attend. Capacity is 90, but initially the focus will be on developing a quality camp for attendees.
 - July 3 will be the 26th birthday of the Sheep Center, and a party will be held that will include Wyoming Chapter founding member Ron Ball’s family.
- Whiskey Mountain Collaborative – Daryl Lutz, Sara Domek, Steve Kilpatrick
 - WGFD and WY-WSF are well aware of the precarious situation regarding this herd and after years of attempts to address this decline it is clear a different approach needs to be considered. This includes enlisting and engaging with everyone interested to capitalize on local knowledge and the expertise of sheep biologist/researchers, increase capacity to conduct needed research and management, and to develop acceptance of known needed work and perhaps new/novel approaches and ideas to address these critical issues.
 - The first part is a public engagement process. The second would focus on information sharing and explore solutions with agency specialists and

other scientists. The draft recommendations crafted by WGFD and derived from the collaborative process would be shared with the public to seek feedback before final submission to WGFD leadership and other institutions. The final result would be a collaboratively derived Whiskey Mountain bighorn sheep herd management/action plan.

- Devils Canyon – Sam Stephens
 - Eastern Chapter of the Wild Sheep Foundation has “adopted” the Devils Canyon-Ferris-Seminole sheep herds.
 - A relatively low trend count (144) in July 2018 prompted the cancellation of planned transplants in winter 2018-19. In order to conduct a transplant in the 2019-2020 winter, disease samples must be gathered from the donor herd within 18 months of any transplant, meaning sampling of the Devils Canyon herd would need to take place during the 2018-19 winter. This sampling found no new pathogens, but only 12 of an anticipated 30 sheep were captured and very few sheep and almost no lambs were observed during sampling efforts.
 - Annual lambing surveys in spring 2019 (5/31/2019) yielded 35 ewes, 6 yearling rams, and 19 lambs, for a lamb:ewe ratio of 54:100.
 - Estimate of 150 sheep currently in the Devils Canyon herd.
 - Questions include whether or not sheep numbers are truly down, if they are pioneering new, unknown habitats and remaining unseen. The benefit of conducting surveys at other times rather than mid-summer (perhaps winter) was discussed, but keeping consistency with past survey efforts and monitoring collared sheep was chosen as the preferred course of action.
 - Funding has been acquired to address these questions and will look at both ewes and lambs, additionally determining lamb recruitment of collared groups throughout the summer.

- Shoshone National Forest – Andy Pils
 - The Torrey Rim prescribed burn is moving forward. A project proposed by the Whiskey Basin Technical Committee to open the migration corridor and improve winter range conditions will include chainsaw prep of 110 acres for burning. Difficulty has been the Galcier Addition of the Fitzpatrick Wilderness, although the current status of the Whiskey Mountain herd has helped. Contingency plans to do prep work without chainsaws have been developed in case Wilderness authorization is denied.
 - The Cabin Creek limber pine-juniper removal project is nearly completed. Done in a phased manner with contractors and USFS fire crews, work has been done more cheaply than expected so additional acreage has been added. WGFD Habitat Biologist Jerry Altermatt has been instrumental in this project.
 - The USFS will be conducting a 150 acre burn this fall on the Whiskey Basin Meadows (near Glacier Trailhead).

The Shoshone National Forest adopted the WY-WSF/WGFD/NAPGA recommendations that protect occupied habitats of core-native bighorn sheep populations. Pack goat use will be allowed in unoccupied habitats within core native herd units in three locations (south of the main Fork of Bull Lake Creek, Union Pass, and a portion of the Beartooth Plateau), as well as on the Washakie Ranger District (home of the Temple Peak Cooperative Review Herd). Other conditions include; 1) Implementing a system that would require a permit for all pack goat use. Pack goat users would be informed on required and recommended actions for reducing the risk of contact between pack goats and bighorn sheep when obtaining a permit, 2) Requiring any observed contact between pack goats and bighorn sheep, as well as any lost pack goats, to be reported to the Forest Service as soon as possible, 3) Limiting the number of pack goats per party to 12, 4) Requiring pack goats to be leashed or in direct control by their owners, 5) Requiring pack goats to be high-lined or restrained in campsites, 6) Requiring pack goats to have bells attached to their collars at all times, 7) Requiring each pack goat to be uniquely identified such as by, but not limited to: ear tags, tattoos, collar tags, 8) Requiring veterinary health inspection and disease testing of all pack goats before entering Shoshone National Forest lands, and requiring handlers to be in possession of a health and disease testing certificate for each pack goat, and 9) Limiting pack goat use to May 31 through October 31 of each year.

- Seminoe-Ferris-Bennett Mountains
 - Population Status – Hiatt
 - Greg gave a history of the Seminoe-Ferris sheep herd, which included the translocation of 166 sheep in 8 separate releases. There were some recent winter losses, but Game Warden Teal Joseph classified 183 sheep with a lamb ratio of 46:100.
 - The average age of rams harvested from Hunt Area 17/26 has been 4.5 since hunting was initiated in 2013. There is more ram hunting opportunity, but it will likely keep the average age below the usually desired mark of 608 years old. Increasing to 5 licenses in 2019.
 - Habitat enhancement work has included 7 recent wild and prescribed fires and installation of 9 guzzlers (5 Seminoe, 4 Ferris).
 - Two wandering yearling ewes were recently removed when encountered in Rawlins.
 - Although the severe winter-spring of 2019 may have stalled the growth of the population, it is currently estimated to contain approximately 260 sheep.
 - BLM Update – Chris Otto
 - Plans to treat 1,000 acres in the Seminoes and 2,000 acres on Ferris Mountain with Plateau to control cheatgrass.

- Preparations for a 1,200 acre burn in the Seminoes are underway for spring 2020. Mechanical treatments will be used where fire cannot safely be used.
 - Other plans for 2020 involve conifer removals to encourage aspen on 500-600 acres and 100-200 acres of shrubland enhancements.
 - The 2011 NEPA for prescribed and managed wildfire needs to be amended to address sage grouse core issues, creating the need for a delicate balance between Wilderness Study Areas (WSA) and sage grouse. Substantial private lands (Pathfinder Ranches) that must be addressed through General Release Agreements and coordination with State Forestry on burying conifers are more challenging aspects. A NEPA decision may be expected in fall 2019, with any burn dates more uncertain. The BLM is committed to prescribed fire on the Ferris Mountains (although cautiously), but will not be doing any mechanical prep work in the WSA.
- Population Objective Evaluation – Kevin Monteith, Daryl Lutz
 - With current distribution of BHS – nearing carrying capacity. Greg Hiatt mentioned that winter severity in 2018-19 could have set back population growth a year or so, there were approximately 260 sheep post season 2018.
 - 25% were “wanderers”, 75% were sedentary (<6km from release site). Based on 111 collars available for analysis.
 - Objective could be increased if it occurred in suitable habitat that is not currently occupied (potential areas within current herd unit – Bennetts, W. End Ferris, Shirleys). Objective is currently 300, but could potentially be increased to 400 with occupation of additional habitats. Oregon routinely moves their non-migratory sheep distances as little as 8 miles to encourage expansion and use of new habitats.
 - This increase may only happen through transplants from within the herd (to desired suitable, unoccupied habitats).
 - Much discussion on where the expansion might take place. Even though modeling showed suitable habitat, Greg Hiatt discouraged translocations into the Haystack Mountains due to lack of public access for hunters and management activities.
 - There was discussion that more rams could be harvested out of the population, but it would likely reduce the average age below the desired 6-8 years. However, rams in this population grow very quickly, with some becoming exceptionally large at 5-6 years of age. Hunters would not be disappointed with these younger rams.

It was noted that a secondary objective of maintaining an average age of 6-8 years old is not mandatory.

- Discussion of whether to maintain a postseason objective (modeled estimate), or switch to a mid-winter trend count. No decision was made.
- The Ferris-Seminole objective review will go before the Commission in July 2020. All of these details (expansion via translocation, average age objectives, trend count vs estimate based objective) will be part of the proposal at that time.
- Bridger-Teton National Forest – Dave Cottle
 - Important to understand differences between forage reserves and vacant allotments. Forage reserves can be grazed under a temporary permit, while vacant allotments (if waived back to USFS without preference) are opened to be grazed upon completion of NEPA to determine if continued grazing is appropriate.
 - Black Canyon and Cabin Creek are currently being reviewed to determine the suitability to graze. This includes collection vegetation monitoring information. The Thoman allotments (or portions thereof) are being reviewed to determine suitability for a shift to cattle grazing.
 - Conditions must be met in order for grazing to occur on forage reserves. Recently WY-WSF has helped fund this monitoring and the Sublette County Conservation District has helped collect monitoring data.
 - Ecological Site Descriptions (ESDs) are characteristics that describe the desired condition of specific vegetation communities. A tall forb ESD is needed for the Wyoming and Salt Ranges, as one does not currently exist. There seems to be general support for developing a tall forb ESD, with Sublette, Lincoln, and Sublette Counties all participating, with other entities interested in providing funding. The current threshold (based on the best available science in the mid-late 1980s) is 80% ground cover. Some question this current threshold and support development of the more rigorous ESDs to provide future guidance.
- Statewide BHS-DS Interactive Working Group Plan
 - Recently, concerns over the current function of the Interaction Working Group and the need for developing better communication among interests have been expressed. Examples include the recent Bridger-Teton National Forest Vacant Allotment Working Group and the lack of involvement of bighorn sheep interests in that group. Other examples include the Cheney amendment to the Farm Bill and the removal of bighorn sheep and moose from Secretary Zinke's Secretarial Order on big game migration corridors and winter ranges. There is a feeling that such issues could be addressed in a much more collaborative manner and result in mutual support. The comment was made that due to its very inclusive nature and wide open participation, the Interaction Working

Group is not nimble, nor does it meet frequently enough, to address such rapidly evolving issues.

- WY-WSF will be scheduling a meeting in the near future with Representative Cheney and Senator Barasso to discuss such matters.
ACTION ITEM – A small core group of the Interaction Working Group (WY-WSF, WSGA, WWGA, WSLB, WDA, WGFD) should be convened to work on these issues
- Statewide Disease Surveillance Final Report
 - Summary of disease surveillance efforts and findings.
 - Also include summary of movement information gleaned from GPS deployed as part of the statewide effort, as well as survival and pregnancy summaries.
 - In an effort to capture past information, include herd histories as in the “Herd Unit Reviews” completed by the Bighorn Sheep Working Group in 1997.
 - Blake Lowrey will be working on the movement and survival components to provide consistency between this statewide summary and those completed for the GYA Mountain Ungulate Project. WGBGLC funding is available to cover this component.
- Kerry Sondgeroth
 - Hank’s lab does not have the tools that the Sondgeroth lab does.
 - Determination of strain types/genotypes. Usually do this with only a few genes, Dr. Sondgeroth would do whole genome sequencing (and document everything that’s there)
 - Pasteurellas first, then M. ovi hopefully in the future.
 - Will use Caine lab samples (includes pre-Whiskey die-off samples).
 - Would be good to link with Monteiths project and identifying pathogenic strains.
 - To date, 63 Mannheimia isolates have been identified and gene sequencing has been initiated.
- Summer Nutrition/Lamb Survival update – Kevin Monteith
 - A total of 16 lambs have been captured so far this spring, out of a total of 42 ewes that were fitted with vaginal implant transmitters (VITs) last winter (Whiskey – 12 lambs/24 VITs, Jackson 4 lambs/18 VITs).
 - Only 2 lambs have been “missed” when transmitter technology worked as intended.
 - No abandonment of lambs has been documented.
 - The study will also entail collecting fecal samples (for diet composition and trace minerals) and vegetation information (productivity, nitrogen content, forage digestibility) from sites ewes frequented from 1 week prior to birth to birth (identified from GPS collars). A similar lack of abandonment was seen by researchers on the Whiskey Expert Panel.

- Genetic Research – Holly Ernest, Sierra Love-Stowell
 - A total of 244 Wyoming samples were complimented by another 109 samples from Oregon, Montana, and Idaho where Wyoming has received bighorn sheep.
 - Five genetic clusters were identified that generally align with current management units (Absarokas, Whiskey Mountain (which includes Darby Mountain, Laramie Peak, Douglas Creek, Encampment River), Jackson, Devils Canyon/Seminole-Ferris, and Kouba Canyon (Elk Mountain).
 - The Targhee herd was closely associated with the Jackson Herd, but sample sizes there were very small.
 - Genetic variation was high and within the range of other bighorn sheep herds. Absaroka was the highest, and Kouba Canyon was the lowest.
 - Effective population sizes were low, with Absaroka, Whiskey, and Jackson being the highest and Kouba Canyon, Ferris-Seminole and Dubois Badlands being the lowest. Important consideration is weighing the benefit of increased gene flow with increased disease risk.
 - Holly’s lab will continue to assist with the identification of wandering bighorn sheep lethally removed outside of occupied habitats or in comingling situations.

- Implications from the Supreme Court Decision Herrera v. Wyoming – Tribal rights to hunt “unoccupied lands”
 - Rick King gave an update on the Herrera case. Main points were that treaty rights were not abandoned upon statehood. The issue of the meaning of “unoccupied lands” was remanded back to the lower courts to work through.
 - This decision has not prompted any changes on the ground right now.
 - The Governor’s Office and the Attorney General are working on next steps and will defend the case vigorously.

- Funded Projects – WGBGLC and WY-WSF GIA’s
 - A total of \$416,000 was funded by WGBGLC and WY-WSF this year. These can be viewed on the WY-WSF web-site.
 - **ACTION ITEM** – Steve Kilpatrick will distribute project spreadsheet.

- Long Range Planning for Wyoming Bighorn Sheep (5-10 Year)
 - Disease – Disease work should decrease (only performed with translocations or if significant population declines or other reasons exist to obtain samples). Even though the desire is to reduce bighorn sheep disease sampling workloads, existing/planned obligations will require sampling in Kouba Canyon, Targhee, Whiskey, Jackson, Absaroka, Devils Canyon, Ferris-Seminole so this workload will likely continue, but hopefully not at levels required during statewide disease surveillance efforts. Hank was very supportive of continuing Dr. Sondergroth’s work. Hank Edwards will be developing a 10-year disease-related “wish-list” that includes possible research at Sybille.

- Conservation easements?
- Habitat projects wherever possible. This could include supporting managed wildfires. Important points are that the ability to use managed wildfire must be in NEPA, and that managed wildfires are as expensive as full suppressed fires. The BTNF has modeled wildfire risk and where managed wildfires could be allowed to burn. Perhaps this could be expanded? Perhaps funding NEPA work for fire could help land management agencies? Definitely important to identify specific areas in Forest Plans if possible.
- Allotment negotiations?
- Genetics – where to go next, if anywhere?
- Diet composition project using fecal DNA techniques. Relative importance of species in different areas and in relation to habitat improvements.
- Sinus tumor work, especially in the Absarokas, where sampling to date has shown a 30% prevalence. Perhaps Tony M and Karen Fox collaborate?
- Population estimation techniques – fecal Mark-Recapture, camera techniques. These techniques could prove especially valuable in small, and/or difficult to survey populations like the Targhee, Darby Mountain, Kouba Canyon, Devils Canyon, Laramie Peak.
- Lamb survival (using drones not collars), to look at timing of lamb losses.
- Impact of removing ewes (non productive or symptomatically ill?).
- Ram movements. Like most species we focus on females because they are the drivers of population dynamics, but it is the ram component where we focus harvest management and hunter opportunity.
- Lambing areas delineation (using existing and/or future collar data) to inform Forest Plan revisions, etc.
- Experimentally address the micronutrient/selenium hypothesis. Perhaps even to include establishment of micronutrient needs/ranges of bighorn sheep (at Sybille?) to avoid having to use domestic sheep thresholds as a comparison. The range of selenium in Wyoming bighorn sheep is huge, with nothing toxic discovered to date.
- Within range transplants of Temple Peak sheep (no outside translocations of “new” sheep, even from Whiskey).
- Interactions between Devils Canyon and Pryor Mountain sheep in Montana (ram movements, Montana collaring efforts).
- Re-sampling of Dubois-Badlands sheep at Fish’s Meadows.
- Identification of other suitable but unoccupied habitats in Wyoming (through modeling).
- This list could potentially be an Appendix of the Wyoming Plan.
- This effort should include coverage of existing objectives and current status for each herd (similar to the 1997 Bighorn Sheep Working Group “Herd Unit Review”).

ACTION ITEM – Take the above list, refine it and distribute to statewide bighorn sheep managers for input.

Upcoming Meetings & Dates

- WY-WSF Winter Meeting, December 6-7, 2019, Sheridan
- 2020 WSF Convention in Reno (Reno-Sparks Convention Center & Peppermill Resort & Casino, Jan 16-18, 2020)
- 2020 WY-WSF Convention in Casper (June 5-6, 2020)
- 2020 WGFD/WY-WSF BHS Summit at Burgess Junction – June 24-25, 2020

- Rampage Deadline – September 25 (need project updates, send to Dean). Videos are valuable for the web-site.
- WY-WSF Fall GIA Deadline – November 1

Adjourn 3:00pm