



Summer WAFWA Conference, Eugene, Oregon  
Wild Sheep Working Group Report  
July 15, 2018 (8:00 a.m. – 4:30 p.m.)



Chair, Mike Cox, WAFWA/Nevada Department of Wildlife

Attendees: 58 Total (10 of 20 total WSWG members) and 48 guests (representing states, federal agencies, NGOs, and wildlife commissioners)

**Members in Attendance:** Andy Holland (CO), Hollie Miyasaki (ID), Mike Cox (NV), Colin Gillin (OR), Don Whittaker (OR), Froylan Hernandez (TX), Brian Logan (USFS), Jenny Powers (NPS), Clay Brewer, (WSF), Frank Quamen (BLM) and Tony Wasley (Director Sponsor-NV).

1. Welcome, announcements, attendance sheet sent around, and introductions from everyone.
2. Review of Agenda: no additions to the agenda were recommended.
3. Approval of January 2018 Committee Meeting Minutes – no changes
4. **Disease Management Venture** (Steering Committee Members and WSWG reps)
  - Jurisdictional DMV progress reports –
    - Arizona and Anne Justin-Allen submitted detailed written report;
    - Oregon - hunter harvest sampling has detected Movi in some herds;
    - Idaho focused sampling on Owyhee River herd, big statewide effort to collect hunter harvest samples; they detected Movi in Bruneau/Jarbidge herd that was strain typed and identical to same strain first detected in Nevada, continued on working toward Movi-free farm flocks, in Challis areas; considering Test and Cull experiment;
    - Colorado – they continue to have herds with unknown pathogen profiles, consider broader approach, and hope to identify and nominate more candidate herds to DMV;
    - Texas – sampled 5 herds fall 2017 for the first time; all negative; great baseline data;
    - Utah – big effort on hunter harvest sampling and most bighorn herds have been pathogen sampled;
    - Wyoming – worked cooperatively with MSU in GYA on monitoring herds; seems some herds are more resistant;
    - Nevada - detailed presentation on Nevada’s disease surveillance results suggesting a template/format for jurisdictions to follow in sharing their DMV information. The presentation displayed maps of herds sampled and their Movi strain types, spreadsheets of specific pathogen sampled for and detected, and demographic responses (pop estimate and lamb ratio graphs) by herd in relation to pathogen details. Nevada will be contracting with Dr. Kezia Manlove at Utah State University to compile and conduct multi-variate analyses of their pathogen, demographic, collar, spatial, and environmental datasets.
  - Discuss development of a west-wide *Mycoplasma ovipneumoniae* strain map in collaboration with Dr. Tom Besser; no opposition from WSWG members and support from attendees to produce west wide map.
  - Review of existing Wild Sheep Disease Event Database information and what additional attributes to add; no particular comments; will continue to update and maintain the database and consider adding presence/absence of key pathogens for each event. Based on the database, it is estimated that 15,000 bighorn adults west wide died during the documented disease events since 1980. Also using lamb recruitment data from each jurisdiction for herds post disease event, it is estimated

that a minimum of 11,000 lambs had died of pneumonia specific mortality over this same time frame.

- Review “Close Encounter” data from Washington and Rich Harris; review the “Lack of Separation” dataset from Nevada; discussed west wide dataset and agreed the need to document jurisdictions’ efforts to be responsible in attempting to maintain separation involving wandering wild sheep but at the same time depicting the unfortunate story of killing bighorn sheep that naturally foray but in a direction that places bighorn herds at risk.
    - Discussed but no agreement on the need for land management agencies to alert state wildlife agencies when they are aware of stray domestic sheep or goats where the risk of association with wild sheep is high and action is needed to prevent contact. The USFS folks and Utah biologists were concerned and not wanting to document stray domestic sheep that are on USFS lands but not within a authorized grazing allotment and/or beyond the date of permitted use.
    - Hollie provided brief overview of IDFG continued effort to work with 5 domestic flock owners in the Challis area to attempt to make their flocks Movi free. Good discussion ensued. Use of Baytril antibiotic to control Movi? IDFG does not pay flock owner if they must remove animals; they encourage the owners to keep lambs vs. selling them to build up their flock. Nez Perce Tribe is working with landowner with domestics that has flock near the Black Butte herd in Washington. Concerns for contamination from introducing new animals into flock.
  - Thanked all the jurisdictions that found funding to support their disease surveillance and the overall goals of the DMV over the last few years.
  - We shared brief update for non-WSWG members on Rich Harris’ with Washington Dept. of Fish and Wildlife continued efforts to secure a Movi-free domestic sheep flock managed by the Washington State Penitentiary.
5. Presentation by Mike Cox and Dr. Clint Epps from Oregon State University on bringing together geneticists working to describe and study wild sheep genomics across the west to benefit managers and wild sheep management decisions. Genomics group was first initiated in early 2018 involving both geneticists and wild sheep managers. The group held a special wild sheep genomics session at the May 2018 Northern Wild Sheep and Goat Symposium that was very informative. From that session spawned a wild sheep genomics FAQ document that will be completed this year that benefits wild sheep managers and encourages west wide collaboration on 5 main topics: Taxonomy (i.e., California vs. Rocky Mountain “subspecies”), Genetic Population Structure, Adaptive wild sheep genomics, Genetic Markers associated with Disease, and Genetic Diversity/Local Adaptation influencing Population Performance. It was agreed to have the Wild Sheep Genomics Group seek funding and develop west wide guidelines for wild sheep genomics sampling and mapping and work on the 5 main topics that will greatly benefit and inform wild sheep management decisions
- Don asked that the Geneticists put their FAQ document in layman’s “English”.
  - Clay give briefing of the Texas Tech University’s Natural Science Research Laboratory and their Genetics Resources Collection for archiving DNA tissues. It is sitting there just waiting for all of us to begin using it free of charge and with a great deposit and controlled retrieval/sharing protocol with permission only granted by the sample owner to share tissues with others.
6. – 10. Informative updates from NPS, USFS, BLM, Wild Sheep Foundation and WSWG Jurisdictions:
- NPS - Jenny Powers:
    - 35 Park Units have bighorn sheep
    - Badlands National Park started a bighorn research project in 2017 in concert with M.S. student under Dr. Jon Jenks at South Dakota State Univ. with support from NPS staff; 35 GPS collars deployed along with VITs;; 4 domestic sheep/goat flocks near park has everyone

- concerned; during the initial capture they detected 50% Movi prevalence by ELISA; early 1990s this herd experienced a dieoff attributed to Epizootic Hemorrhagic Disease and in 1960s a dieoff likely caused by pneumonia.
- Mojave National Preserve water plan; prior to Congressional Desert Preservation Act establishing preserve there were 7 guzzlers built primarily for bighorn sheep and mule deer. They are now within the wilderness area of the preserve. Currently there are 6 guzzlers maintained and operable inside the preserve; the plan is to evaluate and determine which ones could be removed and with a guzzler built nearby but outside of wilderness and still support the existing bighorn herd. Plans are for installing 5 guzzlers outside of wilderness, evaluate their use and potentially phase out guzzlers inside the wilderness; Kevin Hurley asked pointed questions about the plan and its implementation. WSF has drafted a review and comments to the plan authored by Vern Bleich with long history of the guzzlers and bighorn management. NPS wants to work with the Society for the Conservation of Bighorn Sheep, WSF, and CDFW to come to a compromise.
  - Colorado - Andy Holland – not much to report on; the Colorado Bighorn Working Group has met 4 times. Jacqueline Buchanan with Region 2 USFS who has been part of group since onset reminded us it took 5 meetings in Wyoming before their group was productive. The CO group is at the point of “what can we agree on?”
  - Nebraska – Alicia Hardin – Nebraska is collaborating with Dr. Jon Jenks and SDSU to continue to monitor the impacts and changes in the Pine Ridge herds following Movi exposure, document impacts to lambs and attempt various management actions to help lambs survive. Also Laura McHale is collaborating with Dr. Jon Jenks on an upcoming domestic sheep/wild sheep outreach program with local 4-H groups with good support from local USDA offices;
  - Utah – Covy Jones and Bill Bates - rewriting statewide bighorn management plan
    - Mineral Mountains bighorn restoration plan (approved by Utah Wildlife Board May 2018); the mountain is partially private land where cattle grazing occurs but no domestic sheep currently graze. Coordination with local ranchers leading up to the Board approval was positive with no threat to cattle ranchers with the transplanted bighorn. But outside groups and individuals through misinformation are attempting to persuade landowners to change their mind claiming that cattle grazing would be impacted by the bighorn transplant.
    - Manti-LaSal Mountains mountain goat translocation was challenged by various groups who sued the USFS for allowing the mountain goats to populate on USFS lands
  - Wyoming - Doug Primeyer – conducted bighorn transplant into Devil’s Canyon this past winter; explored Infrared (IR) flight to detect bighorn, detection was very poor; Dr. Kevin Montieth’s initiating research on Whiskey Basin bighorn herd that continues to struggle, and NPS plans to remove nonnative mountain goats from Grand Teton National Park; Wyoming has not yet publically endorsed the NPS mountain goat removal plan.
  - Wild Sheep Foundation – Kevin Hurley – reporting on WSF and thin horn management activities
    - Yukon and British Columbia in thinhorn sheep range are attempting to restrict domestic sheep from crown lands;
    - BC and Helen are really stepping up efforts on Stone Sheep pathogen surveillance
    - NWT guides are collecting samples (not sure what kind) from harvested Dall sheep rams
    - Alaska’s detection of Movi in other species (Moose, caribou, bison, white-tailed deer besides) Caprinae species (sheep and goats); 13 of 136 harvested Dall sheep rams tested by Maggie Highland with USDA-ARS were found to be positive for Movi (her testing methods are not published); Kenali NWR USFWS sampled 39 mtn goats and 5 were tested positive for Movi by Highland; WSF Alaska Chapter is trying to work with AFGD staff to broaden their

- sampling and testing efforts. WSF stance is that it is possible but not probable that these samples are Movi positive.
- Brought up by Kevin that planning has begun for restoring bighorn to the depopulation Tendency Range in Montana, possibly using Wyoming source stock (maybe Devil's Canyon herd)
  - Clay put together a funding summary by jurisdiction of funds raised for wild sheep at the WSF convention
  - WSF is still paying and providing horn plugs for harvested rams to all jurisdictions
  - WSF is represented by Vern Bleich in collaboration with Washington State Univ. in the search Tom Besser's replacement and the new Rocky Crater Chair position that he held.
  - USFS – Brian Logan and BLM – Frank Quamen
    - USFS's Species of Conservation Concern status
    - There are 20 Forests in the west that have occupied wild sheep habitat
    - continued support from USFS and BLM for GIS mapping of bighorn occupied habitat and domestic sheep allotments west wide; they have been speaking with Eric Sproles the WAFWA CHAT coordinator and want to use WAFWA' CHAT server to house this Bighorn and Domestic Sheep GIS polygon data; this was discussed and generally agreed upon for Brian Logan and Frank Quamen to work with Eric to set up folders and procedures for this to happen
    - Lucretia Smith is back on contract with the USFS to help support the updating of bighorn and domestic sheep GIS files
    - Discussion on past USFS Full Curl Program position and letter from WSF requesting it be refilled and other requests of USFS in bighorn sheep management
    - USFS lawsuit and settlement to close the USDA-ARS domestic sheep experiment station in the Caribou-Targhee National Forest and conduct an environmental analysis (EIS level?);
    - Lengthy discussion on wilderness and bighorn sheep management activities west wide; appreciated Chris Worth (Asst. Dir. Over Wildlife, Fish, Rare Plants, & Watershed) and Susan Spear (head of Wilderness Program) with national USFS for their candid and positive input; discussed the Arizona proposal for landings in the Tonto NF wilderness and the Rio Grand planning process; Chris stated well that the USFS has "aspirations" of having consistency among all their forests and staff in interpreting and implementing wildlife management as stated in the wilderness act and management guidelines.
    - Frank Quamen (BLM national wildlife lead) encouraged states to contact him if they have concerns over proposals to conduct wildlife management in wilderness to ensure timely processing; (ex., he may be able to free up a wilderness specialist in another state to help).
    - update by Frank Quamen, BLM Asst. Dir. over Resources and Planning, Kristin Bail, and USFS staff on status of west wide wild horses and burros and recent BLM management plan options submitted to Congress; 46,000 horses over Appropriate Management Level (AML) on the range, roughly 46,000+ horses in short- and long-term captive holding facilities and that it costs \$46,000 to feed and care for 1 horse over its lifetime. 10,000 horses are scheduled to be gathered off range this year. Need to get more aggressive with sterilization but admits many HMAs are too remote for it to be effective. Keith Norris – said the BLM plan presented in April 2018 sends out mixed messages. No real feedback yet from Congress on the plan. BLM National Wild Horse Advisory Board has been taken off line and no word if it will meet again. Robert Trujillo with USFS explained the special status Equines on USFS lands in the Salt River area of Arizona.
    - WSF reported on documentary film being produced on impacts of wild horses on wildlife and wildlife habitat

11. First Nation and Mexican States updates

- Neil Thagard – Nez Perce Tribe - there was a 2-permit increase in ram permits in the Salmon River area for Nez Perce Tribal members
- Larry Jacobs – the Umatilla and Warm River Tribes set bighorn hunt tag quotas.
- Hollie Miyasaki – due to lack of communication with tribes there is no clue of how many rams are killed by tribal members.
- Clay Brewer – held major meeting of Mexican Landowners who have bighorn herds as part of a Mexican Council for sustainability for desert bighorn. Meeting went well and more willingness for wild herds vs. fenced herds. He has a Sonoran landowner willing to remove his fences. They are promoting baseline health assessments be conducted on Mexican bighorn herds.

12. Pack goat use decision on Shoshone National Forest and upcoming meeting with National Pack Goat Association on August 27 and 28 in Spokane, WA with WSF and other keys folks to work on BMPs that all can agree with; letter from Llama Producer concerned over restrictions on use on public lands.

13. Update on the various datasets WSWG maintains: Wild Sheep Occupied Habitat GIS Layer and need to enhance the attribute table to make it more useful; License/Tags, Hunter Demand, Harvest, and Population Estimates dataset; and the wild sheep translocations database. 2016 west wide population estimates are: Dall/Stone Thinhorn – 100,000 (stable trend), Rocky Mtn/California Bighorn – 50,000 (slight declining trend), Desert Bighorn in U.S. - 25,000 (20% increase since 2010) and Mexico – 12,000.

14. GPS Collar Failures west wide and Strategy to Encourage Collar Companies to Improve Product Performance and Reliability: jurisdictions shared their frustrations and failure rates on particular GPS collar systems:

- Hollie – Idaho had 44 VITs out of 50 that burned through their battery before the ewes gave birth; ewe collars also were not uploading enough data during the lambing season to allow the VIT to be found even if the VITs were functional. They must accept low bid regardless of specifications or history of failures.
- Froylan – what about getting all the collar vendors together at WSF convention?
- It seems that every time there is a new platform that comes out, higher failure rates occur
- Covy with UDWR – ATS has been great to work with and we've had great success with their collars.
- the group agreed we need to develop and send a letter to all the GPS collar companies to alert them of our concerns over high collar failure rates and the impacts it has on productivity, added capture costs, animal stress, graduate student research, and ultimately wild sheep management decision making; agreed to work with Mule Deer Working Group develop a survey of all jurisdictions on collar failure rates and craft a correspondence/communication and encourage collar industry to improve their products.

15. – 16.) Upcoming WSWG and Wild Sheep Related Events:

- Next Wildlife Professionals Meeting held at the WSF convention will be Feb. 6, 2019 (no topic has yet been selected for the meeting)
- next winter Wild Sheep Working Group scheduled Feb. 5-6, 2019 in Reno;
- Biennial Desert Bighorn Council Symposium will be April 16 – 19, 2019;
- 7<sup>th</sup> World Mountain Ungulate Symposium to be held in Bozeman, MT hosted by the Wild Sheep Foundation, Sept 10 – 13, 2019.

16. Meeting adjourned at 4:30 pm