

Wolf Advisory Group

MEETING SUMMARY¹, JANUARY 6-7, 2022

WAG members present: Samee Charriere, Tom Davis (Day 1 pre-meeting only), Diane Gallegos, Todd Holmdahl, Jess Kayser, Jessica Kelley, Bill Kemp, Nick Martinez, Lynn Okita, Dan Paul, Rick Perleberg, Caitlin Scarano, Lisa Stone, and Paula Swedeen

Washington Department of Fish & Wildlife (WDFW) staff members present: Brian Kerston (Day 1 only), Andrew Kolb, Staci Lehman (Tuesday), Ben Maletzke, Donny Martorello, Joey McCanna, Scott McCorquodale, Steve Pozzanghera, Annemarie Prince, Kevin Robinette, Trent Roussin, Julia Smith, Erin Souza, and Jeff Wade.

WDFW Commissioners present: Lorna Smith (participant) and Jim Anderson (observer)

Facilitation team: Susan Hayman and Tristan Marquez

Meeting Action Items

Responsible Party	Action Item	Target Date
Facilitation team	Synthesize issues identified with implementing the SFA pilot/current protocol to frame a potential WAG one-hour meeting topic regarding problem-solving/conflict mitigation (action item carried over from original January due date)	June WAG Meeting
Wolf-Ungulate Task Group	Identify the topics, questions, and information to frame the wolf-ungulate interaction discussion for the April WAG meeting.	April WAG Meeting
Facilitation Team, WAG volunteers	Investigate potential options for CCT training in June 2022 and provide update to WAG.	June WAG meeting

January 6, 2022

Opening

Susan Hayman, Ross Strategic facilitator, opened the Wolf Advisory Group (WAG) meeting by welcoming members, inviting introductions, and providing an overview of the meeting objectives and agenda.

The purpose of the meeting was to discuss how to evaluate science and apply it during WAG advice for WDFW; receive an update from WDFW on wolf management activities and other topics; identify the objectives for future WAG discussions around wolf and ungulate interactions and lay the foundations for future WAG advice for the post-recovery plan; create a shared understanding of the various entities involved in Washington wolf management; review, revise, and confirm proposed WAG ground rules.

Action Items Update

¹ This summary is a synthesis of the meeting discussion January 6-7. Detailed narrative notes for both days were consulted for this synthesis and made available to WAG members and WDFW staff. They will be publicly available following finalization of the meeting documentation package.

Hayman updated the WAG on the facilitation teams action items from the November meeting; to synthesize issues identified with implementing the SFA pilot/current protocol; and to investigate potential options for CCT training in June 2022. The synthesis was postponed for a later meeting when a problem-solving opportunity is better defined. The facilitation team was unable to speak to the CCT training contact but will continue to try and reach them.

WDFW Updates

Julia Smith, WDFW Wolf Policy Lead, introduced staff members providing program and policy updates.

Wolf-Livestock Conflict

Joey McCanna, WDFW Wildlife Conflict Specialist, explained to the WAG members that wildlife conflict specialists' roles extend beyond wolf conflict management into any proactive and reactive nonlethal deterrents to prevent wildlife conflict. Wolf conflict management is primarily a concern in the summer, and the specialists work with producers to prevent wolf-livestock conflict. WDFW staff reviewed the conflict mitigation plan progress from over the past year and informed the WAG that coordination with range riders was beginning for the coming year.

In 2021, wolf activity was reportedly lower and range riding more active in Region 1, District 3, Walla Walla and Columbia counties. A confirmed depredation was documented, and three producers reported missing cattle within Touchet pack territory. However, final numbers had not been confirmed and producers were checking if cattle had ended up in adjacent grazing pastures. Wolf activity levels have remained persistent around livestock for producers north of the Touchet pack, and depredations on cattle were reported on both summer and winter grazing pastures. Four separate calving pastures with new wolf activity currently have Foxlights and total fladry of 1.75 miles deployed. There was also new wolf activity around summer grazing pastures where four producers have reported missing livestock.

The Department hopes to provide more resources in 2022, particularly in the area of new wolf activity in Columbia County. The Department has deployed two GPS collars in the pack to minimize conflict and determine range and core use areas going into the next season. Damage Prevention Cooperative Agreements, which includes cost sharing for range riding and other non-lethal abatement measures, will remain an important tool for the Blue Mountains where producers graze on private property.

WAG members asked for clarification on the Department's decision for the lethal removal of wolves in Columbia County. A permit was originally issued for the lethal removal of 1-2 wolves. Two wolves from the pack were killed by vehicles and an additional wolf was killed by the Department per the lethal removal permit. The Department then killed a fourth wolf from the pack per the lethal removal permit. A Department staff member explained that the goal of lethal removal is to influence pack activity around livestock. The deaths of the first three wolves did not move the pack out of core livestock area. Lethally removing a wolf around grazing pastures has the biggest impact on pack activity, and the Department kept the permit in place to do so. The roadkill resulted in the removal of wolves but was not associated with activity around livestock.

A WAG member noted that the decision to continue wolf removal despite the two roadkills seemed inconsistent with the incremental removal contemplated by the Wolf-Livestock Protocol. Department staff said the decision was thoroughly examined by the Department Director before being made. Other

mortality factors were evaluated, and it was determined that an additional lethal removal would not impact wolf recovery. Department staff also confirmed that the roadkill deaths were unusual but not suspicious. The deaths occurred on rural gravel roads lined with thick brush. Staff noted that roadkill incidences with other wildlife are also common on these roads. Department staff further explained the mechanics behind lethal removal of an endangered species, and how the decision is determined in consideration of economic impact and species recovery.

WDFW Wildlife Conflict Specialist, Jeff Wade, continued with conflict management updates for Asotin and Garfield counties. Most cattle came off summer ranges and away from core wolf areas between mid-October and November. Several producers were still missing cattle, and uncertain where cattle went missing. Wolf activity from a Columbia County pack member was observed in mid-November and mid-December. Producers in those areas worked to keep the Department updated. No issues occurred from the activity and the wolf has since returned to Columbia County. There were sporadic wolf sightings in Asotin County in several areas where producers are calving. Daily range riders checked calving pastures and deployed Foxlights in the area. The Department is currently working on pre-season planning for the upcoming grazing season. However, recent fire activity may change grazing plans for upcoming seasons.

A WAG member requested an explanation on the status of producers with missing cattle, sharing that many producers they have spoken to are missing cattle, which contrasts with the WDFW report. Department staff clarified that only two producers in the region reported missing cattle to the Department, and asked WAG members to let the Department know of other producers who have reported missing cattle for a more accurate report.

Grant Samwill, WDFS Wildlife Conflict Specialist in Region 1 District 1, reported that the 2021 grazing season ended in October with good counts. However, only some producers were 100%. Wolf activity and wolf-livestock interaction was relatively quiet, and some producers that had sighted wolves declined Foxlights and fladry. The Stevens County Sheriff's Office tipped off the Department on where wolves were frequenting, and staff installed fladry and Foxlights to reduce wolf-livestock conflict. Staff are continuing to work with producers and install fladry and Foxlights. Department staff clarified for WAG members that there has been mixed reception from producers to these tools due to mixed success. Additionally, the Department would like to purchase more fladry as it has been hard to acquire.

The formerly known Kettle pack has merged with Togo territory wolves, and no wolves were spotted in the former Kettle pack territory. The Department will continue to observe the territory during the survey season. No wolves have been seen in the Wedge pack territory, but wolf tracks have been identified and pictures of wolves have been captured on several trail cameras.

Kyla West, WDFW Statewide Conflict Analyst from Spokane, updated the group on the Department's efforts to find more range riders, which was an action item from the last WAG meeting. Staff have worked with the deputy director and contracts manager on how to get range riders in the Blue Mountains. The contract could be completed outside of the request for quotations (RFQ) process. However, range riders who originally expressed interest were no longer available. The Department has held meetings with range riders and conflict specialists to receive and evaluate feedback on how the season went. The meetings have been productive, and the Department will continue meeting with wildlife conflict specialists. On January 12, the Department will discuss draft changes to the range riding

contract. Recently, a vacant conflict section manager position was filled, and there may be changes to come with the added perspective.

WAG members stressed the need for a range rider in the Blue Mountains and some observed that the pay and benefits were not yet competitive enough to attract them. Department staff confirmed that they would try to acquire a range rider for the Blue Mountains in the coming year and acknowledged the difficulties in finding suitable and willing applicants.

Wolf Population Monitoring and Survey Updates

Statewide Wolf Specialist, Ben Maletzke, informed the group that winter surveys had begun. The Department will be measuring how many wolves made it to December 31st. The population is generally at its lowest from December to mid-Spring as pups are usually born in early May. Staff will conduct track surveys, check cameras deployed, perform helicopter surveys, and apply new tracking collars. Staff use existing collars to locate packs and will try to add more in mid-January. Staff are observing new activity centers and have been monitoring in the Chelan Mountains where activity was spotted south of Lake Chelan. Staff are also monitoring the Blue Mountains pack to see how they fared in the winter.

Staff are monitoring for activity in Northeast Washington where two collared wolves in the Naneum pack dispersed. One wolf went south of I-90, just east of Cle Elum, and was last monitored in the south Cascades. This was the first confirmed case of a collared wolf to traveling south of I-90 and can help the Department locate other wolves in the area. Additional movement of the wolf will be included in the update. The other wolf that dispersed out of Naneum swam across the Columbia River to Coulee, went across the reservation, and ended in northeastern Washington.

The Department was approached by a reporter to work on a longer video/documentary of wolves, wolf management in Washington, and the recolonization process. The reporter will observe track counts and talk to conflict specialists, producers, and others involved in wolf management in Washington. The Department expects the video will be completed by May.

Outreach and Education

A WAG member informed the group that the North Cascades Institute, an environmental nonprofit, the WAG, and the Department will be hosting a public event called “Wolves in Washington”. The event provides updates from the Department and the Wolf Advisory Group and will take place on April 27 from 5:30-6:45 PM via Zoom. As noted on the [registration page](#), biologists with the Washington Department of Fish & Wildlife will give an overview of the status of wolves in the state, provide updates on current wolf packs, and take questions from the public. Some WAG members will attend and talk about their experiences on WAG, how it functions, and decision-making so the public can learn more about the process.

Wolf Policy Updates

Smith announced that the open conflict section manager role had been filled by former Department staff member, Jim Brown. Brown has had a long career with the Department and has worked on issues across the state. He has been heavily involved in conflict issues and different species, including cougar conflicts in Okanogan County. He previously retired from WDFW in 2020 but has decided to return. Brown will begin working on February 1st.

Smith had no updates on rulemaking. The Department is on track to file the Code Reviser 102 (CR-102) for wolf-livestock conflict deterrence. The draft supplemental environmental impact statement (SEIS) and small business economic impact statement (SBEIS) R-102 for wolf-livestock conflict deterrence will come out concurrent with the CR-102 and kick off the 30-day comment period. There will be a public hearing on April 8 and the Commission decision is scheduled for May 13. A Wolf Committee meeting was added to the Commissioners' agenda to discuss the periodic status review and wolf model for January 13. A team from the University of Washington (UW) will join to review metrics from wolf recovery. The final model presentation from the UW team will take place on February 18 or 19.

Smith informed the group that WDFW posted a new [WAG recruitment FAQ](#) on the website and asked WAG members to provide feedback on it. She also announced that the Director made appointment decisions for [WAG members](#) up for reappointment, and one WAG member whose term ended December 31, 2021 was not reappointed. The Department extended its gratitude to the former member for his 7 years of service on the WAG and passionate wildlife advocacy. The Department will begin recruitment for the four vacant WAG positions later in the year.

Some WAG members expressed concern about the decision not to reappoint the former WAG member and noted that he had been a committed participant on the group since the beginning of the WAG. Smith informed the group that all appointments and reappointments are at the discretion of the Director.

Smith also reported on 2021 depredation outcomes. The Department documented 17 depredation incidents in 2021, the lowest documented since 2017. Two wolves were removed for livestock depredations, the lowest since 2015. The Department had no updates on the University of Washington Predator-Prey Project.

Scientific Method Presentation

Scott McCorquodale, WDFW Regional Wildlife Program Manager, was invited to present on the [Scientific Method and Inference](#) for the WAG. Members thanked the staff member for the informative presentation and asked if the Department was prepared to answer the questions related to wolf-ungulate interactions that were featured on the presentation and for clarification around the factors that affect ungulate populations in the state. He noted that the Washington Predator-Prey project was providing good insight into how the system of wolf-ungulate interactions work but likely will not answer all the questions. Healthy ungulate populations are known to be robust to the effects of predation and their populations will generally not be affected much as a result. Predators usually target weaker, sicker, and older prey as they are looking for an easy win. However, he noted the full story is more complicated, and there have been examples that contradict the norm. A WAG member noted one such study of how cougars in Montana did impact the ungulate population.

Department staff acknowledged that it may be a good idea for the WAG to dive deeper into scientific literature to learn more about the compensatory vs. additive mortality effects of predation and suggested the following books, *Yellowstone Wolves: Science and Discovery in the World's First National Park* and *Wolves: Behavior, Ecology, and Conservation* for more information on the subject. Staff encouraged members to think of additive and compensatory as a spectrum where no populations exist on either end, and context is important for assessment.

Some WAG members feel the predator-prey discussion has been postponed too many times and that they did not need to wait for the results of the University of Washington project to begin discussing the issue. Brian Kerston, WDFW wildlife research scientist in the Wildlife Program, who leads and oversees the carnivore work on the [Predator-Prey Project](#), joined the meeting to provide updates on the status of the project. WAG members asked if the project looks at the carrying capacity of the areas under study and how they change every year as well as how carrying capacity of the environment play into hunting season quota setting. Kerston clarified that the issue is very complicated, and the concept of carrying capacity has changed to focus on nutritional carrying capacity. He cited a study where the carrying capacity of moose was overestimated and they were in terrible condition due to a crowded landscape. As result, cow permits for the moose were increased.

He informed the group that the best and most measurable tool to manage resources is hunter harvest. For management of other species, scientists modify things when there are large wildfire events. Animals will be affected by these events and the options are to feed them during the winter or decrease the populations, so the resources are more in line with animals. Females generally matter most in these situations. However, these observations are not precise.

A WAG member noted that the group faces confirmation bias and very complex issues during these discussions--it is difficult to really know the drivers of ungulate population without good research, because it is a complex system with multiple drivers. The group discussed that management of predator populations is only one driver (others are weather, disease, human disturbance on a short-term scale, and then loss of habitat). All pieces of the puzzle must be considered when thinking about how to positively impact ungulate populations.

McCorquodale stated that complexity is an integral component of the discussion. It is difficult to tease out the impacts because these are top-down (predation) and bottom-up (food availability driven by climate, etc.) and intrinsically linked in the sense that one affects the other. It is difficult to control every variable in an open system. Predator-prey dynamics and ecosystems is it exists along a swinging pendulum. He said the idea of a "balance in nature" is flawed--it is dynamic, where the pendulum swings in one direction or another depending on other effects. Sometimes things are better for predators than prey, and vice versa. There is always uncertainty present in the best studies. Complexity is important and the group will need to grapple with it during discussions. Scientists do not arbitrarily dismiss anecdotal information; it is often used to fuel research projects.

Kerston noted there are two study areas in the Predator-Prey Project. One is a northeast Washington robust wolf population, and the other is in Okanogan County on the colonizing front. There are no wolf packs continuously throughout that study area, and the deer being monitored there are not subject to consistent predator risk from wolves. There is also a lot of research from other parts of Washington going back decades that reflect pre-wolf conditions. The Predator-Prey Project does not exist in a vacuum. A lot of methods being used are universal and are typically applied in any study of ungulate population dynamic study. The ability to extract information to other areas is limited, but it does provide baseline comparison. Kerston said caution needs to be used because there are other variables in the system, but there is a good amount of science that can be drawn upon.

WDFW staff agreed that while there may be fewer deer than there were 10 years ago, this cannot be confirmed without the data. At a basic level, wolf, bear, and cougar populations reflect the prey

population. If there is not enough prey to support a predator population, the predator population will decline. There are lags in the system, but at some point, if the prey declines at certain level the predator does as well. There are many factors in the observation of declining deer populations. One may be that there are fewer deer, another may be that they are just in different places. Harvest data is used for population index. Scientists try to conduct surveys to collect buck:doe and fawn:doe ratios, but this is very difficult. The white-tailed deer population in northeastern Washington is down according to harvest numbers. There was a huge bluetongue and Epizootic Hemorrhagic Disease (EHD) epidemic which killed 25% collared white-tailed deer over the summer, which had big impact. The population decreases for several reasons. Severe winter, disease outbreak, and carnivores eating deer all affect the population. The Predator-Prey Project seeks to answer what effect predators have on the population.

Hayman acknowledged that predator-prey discussions are very important for the WAG and will continue to be addressed in future meetings. Hayman noted that the presentation and subsequent discussion provided a useful foundation of understanding for framing future conversations around wolf-ungulate interactions. This discussion will be undertaken during tomorrow's meeting.

Wolf Management Relationship Map

In response to WAG member requests to have a better understanding of wolf management in Washington state, Smith presented a [Wolf Management Relationship Map](#), which detailed of the entities involved in wolf management and their relationships to one another. In response to a comment from a WAG member, Smith agreed that WAG guidance to the Director is filtered through WDFW staff. For example, in the Wildlife Program, the Director ultimately makes the decisions and signs off on the protocol. It is the staff's job to present information to the Director and leave it up to their discretion how this information is used. Hayman noted that the relationship map will be edited to reflect this connection. A staff member also noted that Interagency Wolf Committee meetings are not currently open to the public.

In summary, Hayman said this map is a "living" document that can be referenced in future discussions around how program and policy decisions are made. Hayman invited WAG members to offer suggestions at any time about how to improve this diagram to make it clear and usable.

Ground Rules Confirmation and Closing

Hayman presented the [ground rules](#) that the WAG had proposed in the November meeting and asked if members had any modifications. A WAG member suggested the inclusion of "*Let others finish their thoughts before speaking*". WAG members agreed on the additions and confirmed the finalization of the rules. The facilitation team will distribute the newly adopted ground rules to WAG members and WDFW staff.

Hayman invited meeting attendees an opportunity for public comment. Seven persons provided public comment, as documented in Appendix A. She then thanked the attendees and participants for joining and adjourned the meeting, inviting the public and WDFW staff to reconvene from 4-5pm for the regular informal public discussion session.

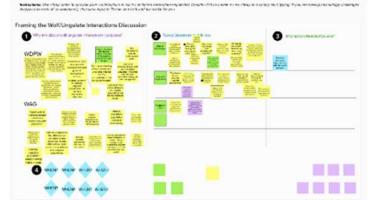
January 7, 2022

Opening

Hayman opened the second day of the meeting by reviewing the meeting agenda and objectives.

Wolf-Ungulate Interaction Discussion

Hayman introduced a [Mural Board](#) (linked in image) activity for WAG members to identify the framing for future wolf-ungulate interaction discussions.



The following information was captured in response to the discussion prompts:

Why talk about wolf-ungulate interactions? (WDFW):

- There is already guidance from the GMP (Game Management Plan) that comes into play if predators are determined to have a negative effect on an at-risk ungulate population. Does the WAG support that guidance when it comes to wolves, now and/or in post-recovery? If not, what are metrics WAG could support?
- Guidance on post-recovery wolf management and goals of management actions
- Better understand the role and effects” of wolves in the systems they are now part of again
- Gain understanding of how wolves and ungulates interact and the complexities of the biological “system”
- If wolves were determined to have a negative effect in an at-risk ungulate population and wolf removal was on the table as a partial solution, would WAG support hunting as a tool in this situation?
- Increase public confidence that (including hunters) that WDFW knows what they need to know to manage these species
- Our constituents and the public expect us to
- Have solid understanding of what we know about ungulates in WA state and the other documents that guide their management
- What are common projects WAG could spearhead to help ungulate populations in certain areas? E.g., Sponsor a prescribed burn, fence removal project, spearhead funding for disease-related projects/research
- Understand other known stressors on ungulate populations that are not related to wolves
- What do we mean by “healthy ungulate populations” – so we have measurable objectives
- **Why talk about wolf-ungulate interactions? (WAG)** Stated goal of wolf management is to have a healthy ungulate population
- Healthy ungulate population may reduce livestock wolf interactions
- Healthy ungulate population keeps hunting viable in state
- Healthy ungulate population increases biodiversity
- Allows us to provide good input on post-recovery plan
- Interested to have scientific data regarding actual impact of wolves on the ungulate population vs. speculation
- Address societal assumptions that may not be correct

- Want to understand the relationships between human predators, human infrastructure, other non-human predators, and ungulate populations
- We need to know how many prey there are to know how many predators an area will support. This will make livestock interactions less. Supply and demand
- Want to understand if there are benefits to wolves helping manage rising/problematic ungulate populations, such as elk in Hamilton and Lyman
- How do we use the fact that there are multiple drivers of ungulate population dynamics to open up “common ground” avenues of action, e.g., habitat restoration projects?
- Healthy ungulate population important to Eastern WA communities

A WAG member clarified that they added the idea of using the multiple drivers that affect ungulate populations to open common ground to discuss how removing wolves will not necessarily help ungulate populations recover, and that other factors can be addressed as possible solutions instead. Other WAG members agreed that the issue was important but very complex. WAG members reflected on the perspective among some hunters that removing wolves is a good way to manage ungulate populations. The WAG can explore ways to ally hunters with the environmental community to address unsatisfactory hunting experiences without the need to kill wolves. Another WAG member noted that the potential for hunting wolves is a very difficult issue that will likely introduce controversy, but it is an important issue to address. Department staff clarified for WAG members that the Department doesn’t always expect consensus from the WAG on issues, but any consensus reached is very powerful.

Building from an initial list developed at the November 2021 meeting, WAG and WDFW staff identified topics/questions to address, grouped under each of the following categories:

State of Knowledge Topics and Questions to Address:

- How are different species of ungulates impacted by wolves (moose vs elk vs mule deer vs sheep etc.)?
- What are other states finding with wolf-ungulate interaction?
- What do we know about other predators with ungulates?
- What are the research questions being addressed in the Predator-Prey study?
- What does the current literature say about “prey switching”?
- Does a decrease in ungulates lead to more conflict with livestock?
- Less about mgt and more about interactions
- Be specific about what literature would be most impactful for WAG work
- How does disease management play into ungulate population management? (i.e., CWD, hoof disease)
- Once lethal control is determined as necessary, what other options are there besides hunters? For example, WDFW lethal control, contracting with another agency, etc.

Ungulate Populations Topics and Questions to Address:

- What factors influence ungulate populations?
- How do these factors interact with predator/prey dynamics to further influence ungulate populations?
- What data does WDFW have on ungulates/latest ungulate harvests?
- What are the risks to smaller or isolated ungulate populations (sheep, goats, caribou)?

- Where are areas where ungulate populations above nutritional carrying capacity?
- What will actually knowing the ungulate population give us?
- What is the current state of ungulate species populations and their trends?
- How much is wolf predation adding to annual mortality of ungulates?
- How does hunting impact the ungulate population?
- Other important metrics in addition to population numbers: survival, recruitment, etc.
- Discussion of the population “need to know” question

Triggers for Action Topics and Questions to Address:

- Under what circumstances might wolf predation be a major concern?
- How can it be determined that wolves are having an adverse effect separate from potential other causes of a local decline?

WAG members discussed the purpose of knowing the population count of ungulates in the state. The Department will likely never get an accurate, absolute number. However, some WAG members asserted that as accurate a count as possible should be gathered because of its importance as baseline information. Members noted that the topic would require further discussion. Department staff indicated that a good place to start on all topics and questions would be to share the data/information the Department already has (e.g., 2017 Ungulate Assessment, annual game harvest reports, annual status and trend reports).

Hayman, WAG members, and Department staff agreed on forming a small group tasked with framing wolf-ungulate interaction discussions for future WAG meetings. The task group will help in identifying the Department’s relevant data to present to the WAG and help identify the timing and sequence of the discussion topics.

WAG members recognized that there are many divergent views regarding wolf-ungulate interactions but expressed hope that the group can find common ground to push conversations forward. They recognized that the topic had been put off for a long time and hunters felt underserved by group as a result.

Following the discussion of wolf-ungulate discussion planning, 7 persons provided public comment, as documented in Appendix B.

Closing

The group confirmed that it would meet again on April 26 and 27, and also set a calendar hold to meet again on June 22 and 23. The wolf-ungulate task group will convene in the months before the next meeting to set up the framework for the discussion.

Hayman invited WAG members and WDFW staff to provide final comments. Many expressed appreciation for the meeting and anticipation for the next meeting. Hayman thanked participants for their time and closed the meeting.

Public comment received at the end of each meeting day is paraphrased below:

January 6, 2023

- Steph Taylor from the Northwest Animal Rights Network:
 - This felt like a good productive day. Thanks Susan, you run a tight ship. I want to say thank you for the presentation and to the Department for providing that review to WAG and the public before diving into predator-prey discussion. I also appreciate the study recommendations on foundational science that should be applied.
 - I want to remind the Department of studies from northeastern Washington that show incremental removal of wolves does not change pack behavior in how you are hoping, but instead increased depredations and targets easier prey. I want to second the raised concern about the Columbia County wolves killed by cars and counted toward the count. Are we considering those decisions based on best available breeding members?
 - My final point is I appreciate the confirmation bias versus facts and honoring the complexities. Well said. I do think climate factors will have increasing impact on a global level. Thanks again for offering that and looking forward to discussion tomorrow.

- Erin McKenna:
 - I really want to say thank you today. I am a philosopher and I write on human/animal ethics but also democracy. In my last book, I suggested WAG was a good model for what I call ecofeminism. Especially a philosopher I work with, Jane Addams, and what you do is in the vein of democracy as life. I am impressed to see it, hope you are sharing your model, and would like to see this model spread more widely across the country. I just really appreciate this work.

- Dave Hedrick of Ferry County:
 - Thanks, today was a good presentation. I want to touch briefly on the anecdotal evidence discussion and point out not all anecdotal evidence is created equal. I run the Conservation District in Ferry County and ranch in Stevens County. There was talk about her friends – and I am sure I know her friends – saying the moose population is going down, and that is based on years and years of watching the same piece of ground just like we do. There is this long-term sort of relationship with the population. There is no doubt when you show up there, you might see animals and say, “What are you guys talking about?” That is true, but I think it is the long-term aspect is important there and needs to be taken more seriously.
 - More importantly, what hunters are talking about over here goes to the point of when ungulate population goes down, predator population goes down. But then you have to consider the cattle on the landscape are basically prey at some point. So, what happens? I think those were points that those hunter friends were probably trying to make. I thought it was interesting when the point was raised that nobody was willing to comment on that which spoke loudly to me.
 - Also, protocol, which is your least favorite thing to hear... You have beat it to death, but from my point of view in Ferry County, the protocol is not sustainable. It is being heavily subsidized at a state level right now through the Department of Agriculture and direct grant from legislature. As much as you guys hate to do it, you need to revisit the protocol and come up with a sustainable model because what is going on now isn't working.

- David Linn:
 - I have nothing prepared for today, but I found the meeting very informative and learned a lot. I want to echo Steph's comment and want to comment on the question about the two wolves killed in traffic accidents. Did the Department do an autopsy to determine the cause of death? If so, what were the results? Or whether there was poaching involved, or the "shoot, shovel, and shut up" model, so perhaps these were poached and put out there to look like traffic accident. I want to know whether or not the Department did an autopsy.

- Rachel Bjork:
 - I appreciate today's discussion. I thought it was very good.
 - I want to second what Steph said and echo David Linn's concerns about wolves killed by – attributed traffic deaths.
 - I also appreciate discussions about the variable of prey populations. It is important to past populations that may not be indicative of what is truly healthy or sustainable. I hope that gets taken into account. I think WAG has been more productive since the new facilitation team took over.
 - Lastly, given changes to WAG membership, I wonder when the roster will get updated.

- Tino Villaluz:
 - Firstly, this was a very well-run meeting. Thank you, there were some emotionally charged comments.
 - Second, there were excellent points raised on additive versus compensatory. I think it was touched on that displacement of animals would fall in line with observations and questions brought forward as far as where the deer are at. I think that is a major factor and appreciate the science on it.
 - Big thank you for the presentation. I appreciate a look into your world. In closing, I think I want to say huge thank you to Julia. Excellent job herding cats and taking over. I know you are new in your role, but you look like you have done it for years. Gratitude to all of you. I know it is not easy and it is a labor of love in terms of developing recommendations for large carnivore. Hats off to everybody and thank you for the work today.

- Dakota Rash:
 - Thank you all for being here today. It was a long day so I will be brief. I wear a lot of hats, and right now I am presenting a class on climate change problems and solutions to middle schoolers. As we talk about solutions, they ask what they can do. They feel a power disparity because they feel they can't make decisions about the world they are inheriting. I remind you to keep that in mind.
 - There has been great discussion so thank you the decisions being made in regard to even one species. Predators are going to affect our ecosystems for the next few decades. I want you all to keep in mind that it is affecting our youth and the world they are going to inherit. Thank you for the detailed discussions for this planet and the youth that inherits it. Hopefully it will be diverse with wildlife species, and we can live in harmony with the nature that inhabits it. Thank you all.

- Don Fast, southeast Washington hunter:
 - Over here in southeast Washington, I always heard that the native wolves of Washington here were lot smaller than other ones. I have heard from hunters – most don't like the wolves – talking about how wolves have come down from Canada and are way bigger than native ones that used to be here. Sometimes they will go out just to be killing and not even use it to feed the pack. I am wondering if there is any truth to that.
 - Like it was said, I know a lot of people who have trail cams and say the cougar population seems to be big. We think that has got to be hurting mostly deer. Whatever the reason is, the deer and elk populations have been going down for multiple reasons.
 - Thank you, guys, for your meeting. It is really good just being open to different conversation and not a one-pointed meeting. One more little thing, if you guys could send me something that was about needing range riders. I would like to see information on what that is. I might be interested. I have been retired for a couple years now. Thank you.

- Rachel Bjork:
 - It was a really interesting discussion today and I appreciate everyone.
 - Regarding the discussion of using hunting wolves to have healthy ungulate populations, is WAG also going to consider non-native livestock that wolves compete with? If WAG is serious about tools in the toolbox, WAG must take livestock into account. I am not sure why there is nothing about non-native livestock being discussed. Environmental degradation is a big reason for decline in ungulate populations. If WAG and the Department are going to discuss using a wolf hunt, I ask they also discuss reducing non-native livestock operations. We see how other states have detrimental impact, particularly with bison and wolves, so I would hate to see if we don't focus on environmental impacts.

- David Linn:
 - Thanks Rachel, that was a lot of my thinking also.
 - On the whiteboard, some comments seem to focus on a “healthy ungulate population”, and I am not sure that is the right question. I think it should ask what a healthy *ecosystem* is. If you have that, then healthy ungulates follow.
 - What does it mean to have a healthy ungulate population? Does it mean healthy ungulates? Which I think it does. Or does it mean a large population where not all are healthy? If you look at carnivores, they tend to take out less healthy ungulates. Wolves and other carnivores are not sole variables.
 - Cattle grazing and human hunting affects also need to be looked at with ungulate population effect. Humans are not smart enough to play God and say how many of what species should exist. For decades we have done that, and the results are not very good. Humans try to solve problems but end up creating other problems. It leads to problem-solution, problem-solution, and never gets back to what the real problem is and how we coexist with nature.
 - Yesterday someone commented on nature not being balanced and not accurate. Again, it is not nature being in balanced, it is a dynamic balance that does need to ebb and flow with prey and predator.
 - Somebody said today that hunting is underserved. I have a hard time getting my mind

around that. A number of the Commission see the sole function as hunting. I think the Department is too aggressive with wildlife killing. We need to focus on a healthy ecosystem including all species as part of that.

- Zoe Hanley, northwest representative of Defenders of Wildlife:
 - I missed the November meeting, so I wanted to welcome Ross Facilitation. I have been pleased with the facilitation so far.
 - I want to add to comments that other folks made about how to frame this conversation about wolf-ungulate interactions. I would recommend the group start with remembering wolves are a native species returning to the state who evolved with ungulates in a robust relationship, where other predators strengthened population genetics because the strongest survive. That arm race between prey and predator continues today and it happens across populations throughout the world.
 - I get leery about wolf-ungulate populations because it usually starts with what impacts wolves have on ungulate are. This implies that wolves are a stressor instead of asking in a holistic context how the dynamics between predators, prey, and humans shift and accommodate this predator returning to the landscape. I urge you to focus on larger ecosystem processes that are influenced by predators, ungulates, and humans at a holistic scale rather than looking at wolves as a stressor as so much research has.

- Susan Kane-Ron... of the Wildlife Committee, Sierra Club
 - We have 100,000 members in Washington and the Sierra Club is not anti-hunting. I appreciate the hunter who did speak earlier because he brought up an important reference which was the perceptions that people make about their observations. For instance, "There are more cougars or less ungulate because of *that*."
 - I was hiking and met a hunter who told me about the moose numbers in Idaho being lower because of wolves. I read research that commented about the studies going on and that there are Lyme disease, ticks, climate change, and other things. Any moose can have 70,000 ticks on them. The perception is important. It is really hard to change our perception. You need to consider this when we talk about the fact that wolves are lowering the ungulate population, the psychological aspect of stating things we don't know to be fact is really of concern.
 - The second thing I have heard about ungulate numbers is wildlife connectivity. In the Winthrop area, about 350 mule deer are killed a year. I think we need to look at ungulate numbers as related to wildlife connectivity. It is expensive but needed. When we look at ungulate numbers in populations, we need to consider how many are killed on roadways and how many roadways are in migratory areas for forage and shelter. I don't think that when you look at numbers you are including that issue right now.

- A:
 - Thanks everyone in WAG for the productive environment. I agree with concerns that conversation around wolves and delisting connects to potential for hunting. This follows the track that other states have gone down. I can tell you people in WI and MO have strong feelings toward the torture of these animals. I am hoping Washington won't go down this path.
 - We had scientific studies yesterday that would be useful in these conversations. Some are around Canada where things don't work, and Montana also extended shoulder seasons because of an increase in elk yet they say there are too many wolves. The U.S.

Fish and Wildlife Service (USFW) is to blame for mismanagement in some states because of a lack of national recovery plan. I am fifth generation Washingtonian and watched sealions being persecuted, trout being engendered, etc. Is it the fault of sea lions?

- I am hoping we look past band aid solutions and take the idea of a hunt off the table. It will be social conflict, but cattle operations can be problematic. I point to tule elk in California. Thank you.

- Judith Atkins of western Washington:
 - I appreciate the conversation today. I have heard you talking about what is in agreement. The need for ungulates and biodiversity seems to be the right thing for the environment, and everyone is interested in that balance.
 - I have not heard why there is a need to hunt wolves. I think that is a question that I would have of the hunters. We are hearing a lot of comments about what other factors are hurting the ungulate population and it seems like wolves satisfy a desire of people to hunt. For post-recovery, what is the rationale versus the justification for hunting wolves? I think that is part of the conversation that needs to happen.

- Joanie Beldin of western Port Angeles Washington (comment emailed after meeting):
 - A question that I would like to see added for consideration in this discussion is "In what ways do wolves benefit elk and deer?" Because wolves hunt elk, it is easy to focus on negative impacts. This was the overriding focus in today's discussion. However, it is well documented that wolves also have a positive impact on elk. They help to increase the health of the herd by primarily hunting the old, weak, and sick. In Yellowstone National Park, being killed by their prey is the second most common cause of death for wolves. For this reason, they go to lengths to find prey that are less likely to injure them. According to Doug Smith of Yellowstone, they found that the wolves weren't killing the prime age segment of elk, the ones who have the most reproductive potential for the herd. Rather, wolves were primarily killing the elk that were the most vulnerable thereby increasing the herd's health.
 - Another consideration needs to be the potential of Chronic Wasting Disease. While CWD may not be in Washington yet, it may just be a matter of time before our elk are infected. It has recently been detected in Idaho. It would be wise for Washington to be proactive in preparing for the possibility of this disease. If CWD crosses into our state, it may rise to be the greatest threat to our elk population. Ironically, wolves may be the friends that Washington needs.
 - As WAG considers the various aspects of wolf/ungulate relationships, I urge the group to view both sides of the story - wolves as predators who take down elk and wolves as predators who, by their preferred hunting methods, help to build more resilient and healthy herd populations. I urge that WAG's discussions acknowledge the positive aspects of wolves and their benefit to ungulate populations. The main important goal I picked up on in today's discussion was having a healthy elk population. I am encouraging WAG to be open to the idea that rather than be the solution, killing wolves may be counter to meeting that goal.