

**Wolf Advisory Group  
January 6, 2022 Meeting Notes  
Zoom Meeting (Day 1)**

**WAG members:** Samee Charriere, Tom Davis (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

**WDFW staff members:** Brian Kertson (Day 1 only), Andrew Kolb, Ben Maletzke, Donny Martorello, Joey McCanna, Scott McCorquodale, Steve Pozzanghera, Annemarie Prince, Kevin Robinette, Trent Roussin, and Julia Smith

**WDFW Commissioners:** Lorna Smith

**Facilitation team:** Susan Hayman and Tristan Marquez

**Welcome and check-in**

Susan welcomed everyone to the meeting and reviewed the agenda for the day.

**Meeting Purpose**

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.

**Comment**

I will stop sharing virtual meeting participant guidelines and give opportunity to folks to introduce themselves. We have Commissioners with us so I certainly want to recognize them as well. I will move around my screen and ask that you briefly introduce yourself and your organization that you represent.

- Jess Kayser: cattle producer from southcentral Washington
- Diane Gallegos: Wolf Haven International
- Julia Smith: wolf policy lead for WDFW
- Annemarie Prince: District 1 wildlife biologist for WDFW
- Lynn Okita: wildlife advocate in western Washington
- Trent Roussin: wolf biologist based in the northeast
- Scott McCorquodale: regional wildlife program manager for WDFW out of Yakima
- Jessica Kelley: recreationist out of Mazama, Washington
- Joey McCanna: wildlife conflict supervisor for Region 1 in eastern Washington
- Bill Kemp: Pond Oreille County, represents small forest landowners in locations of wolfpacks

- Todd Holmdahl: outdoors person who lives in Seattle and has place in Ferry County, loves whitetail hunting and backpacking, hiking, mountain biking
- Ben Maletzke: statewide wolf specialist based in Cle Elum
- Dan Paul: with Humane Society of the United States and lives in north Seattle
- Rick Perleberg: Reardan High School agriculture and natural resource teacher
- Paula Swedeen: policy director at Conservation Northwest
- Steve Pozzanghera: eastern Region 1 director for WDFW out of Spokane
- Lisa Stone: representing hunters and lives in Ferry County
- Caitlin Scarano: WAG member and environmentalist based in Bellingham
- Donny Martorello: chief science division manager at WDFW and alumni of WAG
- Samee Charriere: producer in southeast Washington
- Andrew Kolb: wildlife conflict specialist Region 1 District 3
- Nick Martinez: producer
- Commissioner Smith: on the Olympic peninsula, here to listen
- Erin Souza: administrative assistant at WDFW, WAG notetaker
- Susan Hayman: facilitator from Ross Strategic
- Tristan Marquez: facilitation team member from Ross Strategic

#### Comment

Thank you. I appreciate introductions especially for those joining us who are not acquainted with WAG members and what you bring to the table. I also wanted to mention if you are joining by phone, just remember it is \*6 to and \*9 to raise and lower your hand. If you hop in the queue, I will keep track of the order you are in. If you are on a different topic than the one that we are currently on, I might just ask you to hold on to that thought and we will come back to you. I also would like to ask WAG members briefly about how we do the email distributions so shoot us a message later on how you feel about your email being in the distribution list we send out. We have been including them in the emails we send out, putting everyone in the To: field. If there are any thoughts on that, I am happy to take those now and if anyone is concerned about their email being shared that way, please let us know through chat or later on.

The other thing I wanted to touch on is we had action items from the November meeting. As you know, we determined in conversations that we didn't really have a solid wolf-livestock interaction topic we wanted to discuss at this meeting, but our synthesis of the special focus area pilot issues is still underway so we will bring it back to you. We assigned WDFW to have a presentation at this meeting about how to evaluate science, and they are doing that. We also asked WDFW to talk about "hiring of range riders now instead of waiting until 2022 grazing season." Is that something you will talk about later?

#### Comment

Which item specifically?

#### Comment

To amend the range rider Request for Qualifications (RFQ).

Comment

We will give an update when we go into our department updates.

Comment

Okay, very good. We also had an action item regarding WAG appointments and are going to touch on that in the updates. Lastly, the facilitation team asked WAG members volunteer to help us investigate options for CCT training, looking at that for maybe June 2022, and provide an update today. We have not been able to reach the CCT training contact, so as soon as we make that contact, we will bring WAG members into that conversation. I am sorry we don't have anything today but we will work on that before the next meeting. Those are all of the action items. Are there any questions?

### **No questions**

Comment

We will cover these in more detail in a bit, but I would like your consent to operate with these provisional ground rules until we have a conversation about adopting them. I sent these to WAG members and WDFW yesterday or the day before. They are:

- Assume good intent
- Be curious and open minded
- Be transparent
- Be respectful and kind
- Actively participate
- Actively listen and be present
- Acknowledge when conversations are hard

And then we have a couple for outside of meetings:

- Reach out and work with members outside your ingroup
- And allow sufficient agenda time to work through different topics

We will have those in place for this meeting and come back to them before asking you to approve them. Is there any concern about using these for now?

### **No objections**

Comment

I'll turn it over to WDFW now if you would like to begin the updates?

Comment

We will do a slight change in order; staff will do wolf-livestock conflict and then maybe we can jump in about the range rider action item we had from the last meeting.

Comment

Thanks. As I was thinking yesterday, there are new WAG members here that I haven't met in person so I am looking forward to that. But new WAG members might be thinking, "What is the role of a wildlife conflict specialist?" We work with producers on proactive

and reactive nonlethal deterrents, but we also work on anything wildlife conflict. For example, like foxes in chicken pens. With the snow, there has been a lot of turkey nuisance issues. Another big thing is a lot of elk damage where elk are getting into hay stacks. This summer was really hot and dry, and alfalfa and hay are at a premium right now so this was crucial. In the summer working on wolf issues, we work with producers in wolf territory or people that raise alfalfa to sell even in non-wolf areas. We don't actually work with wolf issues year-round. A large portion of the job is not wolf-related. I just wanted to express that so WAG can understand. Some people think we work on wolf stuff day-in-day-out but that is not the case.

I am on-point for the conflict mitigation plan. We will review the outline from last year, review what was pertinent information in there, and see if there was information that wasn't in there. There was a lot of work put into it by our team. We will be working on pushing that forward and have monthly or bimonthly meetings until spring and I will be the lead on that. Now that we have time, hopefully we will have a finished product before cattle are on range.

This is the time of year I start coordinating with range riders. With our contract range riders, the Cattle Producers of Washington (CPoW), Northeast Washington Wolf Cattle Collaborative (NEWWCC) range riders, and the Forest Service, we have monthly meetings set up from now until spring. Usually in April and May, we have bimonthly meetings because we fine-tune who we have hired, which allotments are active and not active, and put a plan together as far as who covers which allotments. We try to spread the wealth and make sure we have enough coverage, especially up in the Togo area. We have new range riders coming in and a lot of range riding coordination. I would like to turn it over to our wildlife conflict biologist in the Blue Mountains.

#### Comment

I am a wildlife conflict specialist who works in Region 1, District 3, Walla Walla and Columbia counties. Livestock grazing in the western Blue Mountains has transitioned from summer to winter pastures at this time. 2021 was a mixed bag for wolf-livestock conflict, particularly in Columbia County. Producers operating in the Touchet pack territory reported a decrease in wolf activity around livestock compared to 2020, but a confirmed depredation was documented. Three producers within the Touchet pack territory have reported missing cattle. However, final numbers are not confirmed at this time as producers are still checking with neighbors to determine if perhaps some cattle ended up in adjacent grazing pastures. Range riding increased significantly in 2021 in the Touchet packet territory compared to 2020. At this time, I am not aware of any pending direct or indirect loss claims from producers operating within the Touchet pack territory.

For producers in a documented area of new wolf activity north of the Touchet pack, activity levels have remained persistent around livestock. Depredations on cattle were documented on both summer grazing and winter pastures in 2021. The most recent report was on the 16<sup>th</sup> of December, where a wolf got a heifer outside of a pasture and chased it down a gravel county road. The producer yelled at the wolf and it ended without

further incident. Two additional wolves were observed just above the pasture by the producer right after the chase ended. Staff responded to the interaction and lent Foxlights and fladry to the producer. To date, no additional interactions have been observed around the particular pasture. Four separate calving pastures currently have Foxlights and total fladry of 1.75 miles deployed in the area of new wolf activity. Wolf activity around these calving pastures is new and not something experienced before. The same for summer grazing pastures where four producers have reported missing livestock. Two of these producers have indicated they intend to file indirect loss damage claims and are working with Headquarters staff.

Looking ahead to summer 2022, I expect we will be able to provide resources, particularly in the area of new wolf activity in Columbia County. Due to the efforts of the Department's carnivore section, we have two GPS collars deployed in this wolf group, in an effort to minimize conflict and determine range and core use areas as we head 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 private property.

#### Comment

Thank you for your thorough report. That was informative. This question may not just be to you, but I was interested in the decision-making on the lethal control action in the area of new wolf activity. The original permit was 1-2 wolves and then there was a wolf that was killed on the road in that pack. The second wolf was killed by the Department, then a third was killed on the road. At that point, after three wolves were killed in that pack, it seems it would be reasonable to suspend the permit at that point, since the original goal was 1-2 and they are already at three. Can you talk more about the decision for a fourth wolf to be killed in that pack?

#### Comment

In the Columbia pack, these wolves are rendezvousing in a core area where livestock were grazing. We did a lethal removal and removed an adult male which we thought would have significant impact in that pack and potentially on depredations. We did have the other roadkill wolf, but none of those actions seemed to move those wolves out of the core livestock area.

If you want to have a big impact, removing a wolf around a pasture is probably one of the bigger impacts you can have to move wolves out of there. If the producers happen to see a wolf in and around those livestock, we thought it would be prudent to keep the permit in place. It wasn't where they could go out and hunt the pack, but we knew from the data they were still utilizing those pastures on a regular basis. We thought it would be best to keep the permit in place. They seem to be expanding as winter moves on and go to more areas which is a good thing, but the activity center was around livestock and they were still pulling livestock off the range. Because the wolf activity center from the data we had was still centered around the livestock pastures where they were pulling livestock off the range, we kept the permit in place. Because they hadn't moved those activity centers

even with all the removal we had done and harassment we had done this fall.

Comment

I think that covered it well. While the roadkill situation resulted in removal of wolves, it was not in and of itself associated with activity around livestock. We continued to see wolf activity around livestock which is why we retained the permit in place.

Comment

Thank you for answering that. I completely understand the logic. Taking four wolves out is a big impact so something on that still feels a little... Is that really how the protocol is intended to be implemented when the idea is to disrupt behavior? I do understand, but the original intent was to take out 1-2 wolves, and four wolves ended up dying. I wonder what the long-term implications are on that pack. I am not saying you guys made a terrible decision, because I do understand that logic if the wolves were still close to producers' cattle and you didn't see change in behavior. I get that, but it was still just a startlingly large loss when the idea for the protocol is incremental removal. Four doesn't feel incremental.

Comment

I want to add that the two wolves hit on the road were hit on a gravel county road that is very remote. It is not a freeway by any stretch of the imagination so the community's response was if they are getting hit on gravel roads, there is probably plenty of them. Again, that was a community response, but it is not like they were getting hit on a freeway or paved road. The last one was hit fairly close in timing to when the last wolf was taken. I don't know for sure if it was days or hours, but it was pretty dang close.

Comment

I don't think the road kills and the wolves taken through agency action are producer-permitted. I understand four sounds like a lot but there was vulnerable livestock out and they had continued conflict. They didn't have anything to do with the roadkill. That doesn't mean that losing four wolves is any easier but that was the rationale behind keeping the permits.

Comment

I don't want to monopolize but that statement you made about not being related... If they are the same pack, then it is related. Four wolves dying in the pack will affect the composition and behavior of the pack. It is not just numeric, there is a reason for thinking about that. Again, if the original permit was two wolves from a pack to change behavior and four wolves were killed – and I understand the logic and am not saying you guys made a mistake – that needs to be taken into account.

Comment

We definitely do take that into account. We knew of the two roadkill. We made the recommendation before the one was hit but the Director waited to make a decision until he talked to us. I was looking for a change in behavior and we just weren't seeing them

move away from those livestock, so we kept the permit in place. Wolves do die for many different reasons. Sometimes we know about it and sometimes we don't. Even taking out the adult male I thought we would have an impact but we weren't seeing that. We knew there was other mortality in there, but we just weren't seeing them make that move. Usually with permits there is a high probability the permits don't get filled. There was a bigger impact on this pack and bigger mortality than we may have originally anticipated, but we are trying to influence that behavior. Bottom line, we are trying to keep wolves out there and protect livestock too, finding that balance.

*Chat: What is the goal of lethal removal? Is it to remove a wolf? If a wolf is removed in other ways, how does that impact the lethal removal order? What I'm hearing is "doesn't impact it at all"*

*Chat: Where there more depredations, though? Isn't that the metric?*

Comment

I want to talk about the roadkill too. Does the Department do mortality investigations on the roadkill? Can you speak to the circumstances behind those like when they happened in relation to each other? Just hearing these rural unpaved roads described, I am just wondering the speeds they were hit at. I would like to have more of a breakdown about these two roadkill situations which seem unique within wolf packs. We don't get tons of these and we got two in a short time in the same area.

Comment

Yeah, I looked to local staff who picked up those animals and did look to determine if there was anything other than roadkill associated with what they observed.

*Chat: Roadkill 1: Nov. 5*

*Roadkill 2: Dec. 5*

*Juvenile wolf killed with permit: Dec. 8*

Comment

We did have Enforcement check it out, collect the carcasses, and look at the scene and evidence of the wolves being hit by vehicles. One was a paved county road and one a more gravelly backroad. In both instances they were definitely hit by a vehicle from evidence. We did collect both carcasses and investigated. It is kind of an oddball situation; I wouldn't typically expect that, but things happen. These wolves were moving across an area with roads people use every day. On one road, there are tons of whitetails that get hit on the same road. There is a lot of brush on both sides and it is a tough area for wildlife to cross. I think it is just something that can happen from time to time.

Comment

That is helpful just to visualize the amount of brush near the roads. I didn't know, so that is helpful.

Comment

Were you saying there is a lot of brush on the gravel road or the busier road?

Comment

There is a mix of openings and brushy areas. I am not sure specifically but it is a mix of open fields and hawthorn and brush. I don't know the specifics of the actual scene because I wasn't there, the officers were. But they didn't raise any red flags that it was out of the ordinary.

Comment

I think with a low speed on a gravel road it is highly unusual that an animal could not be avoided, however.

Comment

I don't know the specifics. Skyline is a big, wide gravel road so I think you could still be moving at 40 miles per hour. Who knows who saw it or what happened? We get the scene after the fact with the car parts and skid in the gravel.

Comment

I think it is interesting how these conversations come up. I wouldn't even think of this scenario. What I was thinking is I understand the justification, but I think with lethal removal the more transparency and expectations to the public, the better. I wonder if, with the Department being the discretion, there could be a policy on this so it is clearer in the future.

Comment

A policy regarding...?

Comment

What happens when there is a lethal removal order but the wolves in that pack have already been killed. What happens with the lethal removal order? What impacts are there?

Comment

A part of the evaluation leading up to any recommendation for lethal removal as well as a re-evaluation based on lethal removal that occurs and does consider other mortality factors, is staff are constantly reviewing if the status of lethal removal will in fact impact recovery of the wolf population within a recovery region or at statewide level. Those discussions occur constantly during any lethal removal activity in place and any additional mortality we are aware of. The conversation on would lethal removal with added road mortality affect wolf recovery in the region and the answer based on where we were with total wolf mortality was clearly no, this would not negatively impact wolf recovery. I just want people to be aware that those conversations occur leading up to any lethal removal and is re-evaluated during the course.

#### Comment

I think for folks not familiar with eastern Washington or where wolves live is wolves get hit on roads with some regularity and it doesn't matter if it is gravel, paved, woods, or field. It happens. Every year a handful of wolves are hit by vehicles. I just say that to help folks with discussion of gravel or how brushy. I think that is missing the point. It is just part of having a wolf population; animals get hit all the time. I think that was a good question but, yes, we do consider the other mortalities, the age, and sex of individual. And if so, does that change the future risk of depredations? At a larger scale, how does this affect the population as a whole?

#### Comment

To that point, I guess the question is are there similar strategies to thought process on any wildlife population causing impact? Is that consistent across the board? In dealing with populations of any wildlife, is there a difference between recovering populations that are having impact on residents of an area? Is the assessment of how those are dealt with a similar process across the board? Or is it a different strategy per species per population?

#### Comment

I am a wolf biologist but it is different per species. A lot comes down to recovery status if they are endangered, threatened, or game species. All those come into play as well as biological factors. Some species have low reproductive rates, so that would affect it. All those go into the mix as we consider any species. We might move more quickly to remove a wolf than, heaven forbid, a grizzly bear, because that bear has lower productive rate compared to a wolf. We keep all that in mind based on biology and state of recovery.

#### Comment

I want to say that was an excellent response. Other staff correct me if wrong, but I am not sure if any other process in the agency is as intensive or remotely close to the process we go through when we think about removing a wolf. Granted, wolves are kind of special because they do cause economic damage and they are endangered. A lot of times we are not talking about that, but I don't know any other process remotely like this. Pinnipeds, maybe. Seals and sea lions.

#### Comment

If you feel your question was answered about processes with other species, we might leave it there. I am being mindful of time and also pertinent of the discussion. I do want to check back in as there was a question regarding a potential policy in the future about what happens when there is a lethal removal order and wolves are impacted in some other way. Hopefully you got your answer there. The other thing mentioned was transparency--is there anything you want to add as far as what you were thinking about when you said you want transparency?

#### Comment

I think what the Department members said about what goes into it is not surprising to me and I believe that is what they are doing. I think my question is just in the scenario which

seems like a specific scenario with two wolves being killed on the road, how could that be preemptively explained to the public? It happened to come up in this conversation, but I am sure the public may have questions. Should it be in wolf updates? I am just posing questions, not trying to take a firm stance. I am just thinking about the communication on a complex decision before it gets to the WAG meeting.

#### Comment

I can understand, but updates while these events are unfolding? Nope. We are literally taking things as they occur, so we cannot update the public while things are underway more than we do. Phone calls, as always, feel free. After things are completed, we can think about how we can better publicly address this or answer more questions. To be fair, I didn't know those questions were there because I didn't hear from folks. We also do after-action reviews after every single lethal action noted in the wolf report.

#### Comment

I think we missed one of the questions in the chat regarding the goal of lethal removal. We never want to miss the opportunity to have this soundbite. The goal of lethal removal is not necessarily to kill wolves, it is to modify pack behavior associated with livestock. Therefore, our activity and the opportunity for lethal removal remained in place. I want to emphasize the goal is not to kill wolves but to modify behavior and stop the pattern of depredation.

#### Comment

Thank you. It is a good discussion. Anytime we have discussions on these impacts we want to allow adequate time for that. Back to you to see if there are other updates.

#### Comment

First, we will give updates in the Blue Mountains then in northeast Washington.

#### Comment

In Asotin and Garfield counties, between mid-October and November, most cattle came off summer ranges and away from core wolf areas. Several are still missing cattle, one of which had cattle in both Oregon and Washington so they are not sure where cattle went missing. Also, in mid-November and again mid-December, we had wolf activity come over from an area in Columbia County. Producers in those areas worked to keep them updated, but most didn't have access to collar data. As far as I am aware, no issues occurred from that activity and that wolf has since returned to Columbia County. We had sporadic sightings in Asotin County, the most recent being western Asotin County in several areas where producers are calving. Daily range riders are checking calving pastures and deployed Foxlights in the area.

Looking at February and March, we are working on pre-season planning for the upcoming grazing season. In the past, things stayed the same for producers but this year's fire activity may change grazing plans for upcoming seasons. That is the majority of what occurred here. We are still tracking any reports that come in and working with producers

when possible.

*Chat: That is inconsistent reasoning from what you used in Togo, at least that is what it looks like. There were still cows and wolves in proximity and you ended your operations. The key question is whether depredations stopped after the first removal, not whether there was continued proximity. And we can take this point off line given the amount of time we have spent on it.*

*Chat: There were no producer permits issued in Togo. If there had been, I expect they would have remained active until their 30-day expiration date.*

*Chat: I think the question about the inconsistent reasoning should be addressed publicly at some point.*

Comment

I do note the conversation in the chat and there may need to be greater discussion around this. Perhaps we can form a conversation around that. Is that fair?

Comment

Yeah, that is why I say to take it offline, since we talk about it a lot.

Comment

I don't know of a single producer who has come back whole. I know more people who are missing cattle. There is a bunch of people missing cattle and I think that is a misreport to the public.

Comment

All producers I have talked to with the exception of two in Grouse Flats came back whole. So maybe that hasn't been passed on to me. I haven't heard that from any others down there. One producer is missing one cow and is not so sure that it didn't end up in a different herd. A second producer ran in both Oregon and Washington and is missing six calves but had difficulties with their range manager quitting unexpectedly. He was trying to figure out what she recorded and we haven't heard back thus far. If you know of any that are missing, please let me know so I can reach out and verify I didn't get bad information.

Comment

I won't name them on air, but I can think of at least four off the top of my head that are not full.

Comment

Go ahead and text me the names and I will reach out to them.

Comment

I am a wildlife conflict specialist in Region 1 District 1, north Washington for those not

familiar. In this part of the state, the 2021 grazing season ended in October. After several weeks, producers wrapped up the grazing season with good counts. However, only some were 100%. One in the middle of the Togo pack territory experienced weight gains for a multitude of factors. Wolf activity and wolf-livestock has been relatively quiet. I have been actively retrieving equipment. Some producers have seen wolves around but declined Foxlights and fladry. I expect that to change. The Stevens County Sheriff's Office tipped off wolves are frequenting, so I reached out to install fladry and Foxlights to reduce wolf-livestock conflict. This is a huge win since we have been trying to install fladry for a long time. We are continuing to work with producers and install fladry and Foxlights.

Comment

Did you say that some producers have had some wolf activity but declined fladry and Foxlights?

Comment

Yes, that is correct.

Comment

I am wondering what folks are seeing in terms of pack activity. I know the central Kettle area, where the Kettle pack and used-to-be OPT is, looks like those wolves became part of the Togo pack, so I am wondering if that observation stayed within the season or any additional that looked not associated with the Kettle pack. Did there end up being any additional wolf activity in the Wedge this year?

Comment

Starting with Togo and the recently named Kettle pack, after a good effort at the beginning of this season getting collars in that pack, we were able to get a better understanding of pack behavior. The formerly known Kettle pack had merged with Togo territory wolves and there didn't seem to be wolves living in the Kettle pack territory. That didn't seem to change for most of the grazing season. We will have a better understanding nearing survey season. As for the Wedge pack territory, we haven't seen wolves but the pack territory have been sighting tracks and I believe have gotten pictures on several trail cameras.

Comment

Have there been any situations where the Department has not had enough resources to go around? Do we have enough fladry and Foxlights for producers who are interested in the support?

Comment

It is just a matter of receptivity to the resources we have. The fladry and Foxlights have been around for years with mixed success and reviews. A lot of producers that have declined those resources are just questioning their effectiveness. That is what it boils down to.

Comment

We did have to move some resources from northeast Washington down to the Blue Mountains in the last month. We have been able to purchase more fladry but it is hard to get. It is six-to-eight months out, so if you have a lead to someone who makes fladry then let me know. If we could find more fladry to purchase I am sure we would.

Comment

It is break time but we have some more updates. I am wondering if we can give people a break and finish up the updates in 15 minutes?

Comment

That sounds good, but can we speak to range riding since it is on this topic?

Comment

I am a statewide conflict analyst in Spokane. To speak to an update on range riding and an action item from the last WAG meeting, during and immediately after the WAG meeting, I worked with the deputy director and contracts manager to seek options on how we can get range riders in the Blue Mountains. The contract could be completed outside of the RFQ process. However, range riders who originally expressed interest were no longer available. With it being so late into the season, no contract ended up being drafted. But since then, we held meetings with range riders and conflict specialists to give feedback on how the season went. So far, they were productive meetings and we will continue talking to wildlife conflict specialists next week. On January 12, we are going to be discussing draft changes to the range riding contract itself. We have had a vacant conflict section manager position that just got filled, so there may be changes to come with that added perspective.

Comment

I have asked multiple times and I will ask again. Can we have a range rider for the Blue Mountains? I asked all season for it last year and we couldn't provide one. We have time now and I have given all the names to give, so it is time for someone else to figure that out. We will have the same problems if we cannot get a range rider.

Comment

I was not given names or contacts. The resource we had was not available at that time so I worked with the information I had. But if there is more information and continued interest then I am happy to make that effort.

Comment

Yes, we will continue to reach out to individuals for next year. We will solicit for range riders in the Blue Mountains, and I think you are in the same boat as we are. We just cannot find anyone. But we will try to solicit a range rider in the Blue Mountains for next year.

Comment

No, I have provided the names. They have reached out to them. The Department doesn't pay enough. It is a fulltime job. There is nobody that is going to do it. That is the bottom line here.

Comment

I appreciate what you just said. I think you are saying it better than I can. We are struggling with a lot of things relating to range riding right now. I want to say that so folks know that having a range rider or a DFW-contracted range rider is not a guarantee because of everything just said. It is a problem that needs to be worked on, but you encompassed a lot of why it is a problem.

Comment

We will track that and see if that is a problem-solving conversation for this group to have at a certain point.

Comment

I think the question about the inconsistent reasoning should be addressed publicly at some point.

Comment

I see your chat message regarding inconsistent reasoning (*\*see page 11*). I think that is something we will track and I think it is a conversation intended to have offline. We will certainly follow up on it as well. Can we take 10 minutes? If we need to take additional questions after lunch then I am sure we can adjust as needed.

## **Break**

Comment

I want to acknowledge and appreciate that we have 41 people who are observing the meeting today. I really thank all of them who are participating in this way and reminding folks there will be opportunity for public comment and informal conversation with DFW at the end of the meeting.

Let's go back and have you walk us through the rest of the updates.

Comment

Maybe we can hit outreach and education quickly. I wonder if we could talk about the event that we are working on for the North Cascades Institute (NCI). I know several WAG members are involved. Could you tell us a bit? I am sorry to put you on the spot but it is a really cool effort.

Comment

Can I have two minutes?

Comment

Yes. Let's go to survey updates then.

Comment

Thanks. It is that time of year where we are actually starting winter surveys. We want to know how many wolves made it to December 31. We expect the population to be at its lowest. Pups are usually born in early May, so they go through the summer. A lot of times wolves die for various reasons and the population gets to its lowest point this time of year and toward April/May. That is why we do counts in the winter. We have really good snow this year, probably almost too much, but I am not complaining. We will do track surveys, check cameras deployed, do helicopter surveys, and add and switch out collars. We can use existing collars to locate a pack and go in and try to put in a second. That will start mid-January for capture work. We are looking at new activity centers and have been monitoring in the Chelan Mountains. South of Lake Chelan we had some activity occurring that we documented. Down in the Blue Mountains, obviously the pack that had depredations, we are monitoring that and seeing how many made it through the winter.

Up in the northeast Washington areas, we are figuring out who is out there. We had a couple wolves disperse and two wolves we collared in the Naneum pack dispersed there. Exciting news: one did go south of I-90, just east of Cle Elum. It is looking like it is down in the south Cascades now. We know we have had wolves south of I-90 but this is the first confirmed with a collar. It is exciting to know he is down there and has a better chance of finding other wolves, so we will monitor where he goes. He could be in Oregon or back up to B.C. so we don't know what he will do, but it is pretty exciting. That will be in the update.

The other wolf that dispersed out of Naneum actually swam the Columbia River, went up to Coulee, went across the reservation, and ended in northeastern Washington. It is pretty amazing how animals can move across the landscape. There are a couple other smaller movements that will be in the annual report but pretty neat stuff happened this winter.

We were approached by a reporter and we are working on a longer video/documentary of wolves, wolf management in Washington, and how recolonization is going. He will come out while we do track counts and talk to our conflict specialists and potentially producers and folks involved in wolf management in Washington. We are looking to try to have this sometime in April or May, but he is doing a lot of outreach in January and February to get footage. I don't know if I missed anything.

Comment

I think you covered it. Starting January 1 is the peak of our winter survey season and the snow is good for that so we are thankful.

Comment

Again, although the wolf team has tracked evidence of wolves south of I-90 before, I don't think we ever tracked a *collared* wolf south of I-90 before. Like he said, it could be

somewhere else within a day but that is pretty good news. You all are the first to hear that but yes, it will be in the wolf updates. This is big news, so let's be happy about that!

Comment

I have some close friends who work at the North Cascades Institute, an environmental nonprofit. Last year, WAG and the Department put on an event with the Institute open to the public. We will repeat that event this year. It is called Wolves in Washington and provides updates from the Department and the Wolf Advisory Group. This will be April 27 from 5:30-6:45 pm via Zoom. The [registration page](#) says "In this follow-up to last year's popular online program, 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."

A few of us will be representing WAG and we will talk about our experience on WAG, how it functions, and decision-making so the public can learn more about this whole process. I haven't gotten final word on if event will be \$10 or free, but you can sign up for the institute newsletter and I will drop a link. If you scroll down you can sign up for updates from NCI. I don't know if there is anything else but that is all I have.

Comment

Great job covering the event. Thank you.

Chat: <https://ncascades.org/discover/north-cascades-institute> That virtual event is April 27th, 5:30PM: Wolves in Washington: Updates from WDFW and the Wolf Advisory Group

Chat: [https://wdfw.wa.gov/sites/default/files/2022-01/20220103\\_wag\\_recruitment\\_process\\_faq.pdf](https://wdfw.wa.gov/sites/default/files/2022-01/20220103_wag_recruitment_process_faq.pdf)

Chat: It might be helpful to publish a current 'DFW wolf staff roster again with various changes over time.

Chat: <https://wdfw.wa.gov/about/regulations/development/periodic-status-review-gray-wolf>

Comment

Excellent, I appreciate the link. Are there any questions about this?

## **No questions**

Comment

Were there other outreach and education actions?

Comment

No, our Public Affairs queen is always cooking things up but she is taking well-deserved leave. But you can expect to see blog posts and more of that. A personal thank you for pursuing this outreach event on her own and for involving WAG members. Thank you,

guys, for stepping up. I could not be more thrilled you all are doing this.

We can move up to wolf policy updates.

#### Comment

The first thing was mentioned but we filled the conflict section manager vacancy and are super excited to announce Jim Brown accepted the position. Many know of his long career with DFW. He grew up hunting and fishing in Washington, started at DFW in 1992 in Clarkston, worked on issues all over the state, and moved into his position of Region 2 director in 2013. He is heavily involved in conflict issues and different species, finding solutions in cougar solutions in Okanogan County. He retired from DFW in 2020 but came out of retirement and back to DFW. He still loves the outdoors and lives in rural Okanogan County. We are fortunate to have him come back on board and look forward to collaborating on solutions because that position and mine have a lot of overlap. His first day is February 1.

On rulemaking there are no updates to provide. We are 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) will come out concurrent with that CR-102 and kick off the 30-day comment period. To those who have worked with contractors who work on the SEIS, I sincerely appreciate that and making that document robust and informative.

April 8 will be the public hearing and the Commission decision is scheduled for May 13. These dates can change but that is the schedule. For the periodic status review and wolf model, just yesterday a wolf committee meeting was added to the Commissioners' agenda for January 13. That will be discussed with the team from the University of Washington (UW) to discuss metrics from wolf recovery. The final model presentation from the UW team will take place on February 18 or 19.

For WAG recruitment, there is now a frequently asked questions (FAQ) document on the website in case you have questions or want to share. I will post the link. Please feel free to give feedback on that FAQ. The Director made appointment decisions for those WAG members up for reappointment, and one won't be reappointed. We want to extend gratitude because he was on WAG for 7 years and a passionate wildlife advocate. That leaves us with four vacancies on WAG, so we will look at recruitment later in the year. When we open up recruitment there will be a press release.

There is a lot on wolf-wildlife conflict, but here is a wrap-up of 2021. By metrics we use, the Department documented 17 depredations incidents this year. That is the lowest documented since 2017. There were two wolves removed for livestock depredations, which is the lowest since 2015. That is all.

#### Comment

I am curious why he was removed from WAG, since he has been on there since the

beginning of the WAG.

Comment

Ultimately, the Director makes those decisions. He decided he wanted to add someone else to represent the hunting community and someone that is more solution-oriented. It was the Director's decision.

Comment

It doesn't make any sense to remove someone who has history. Was it a Director or Commission decision?

Comment

The Director makes all appointment and reappointment decisions. Members are appointed on 2-year terms.

Comment

Okay.

Comment

On the Predator-Prey Project, there is an update on January 13<sup>th</sup> and then one in February that we can follow up on? Will there be a presentation?

Comment

My fault, I breezed through. That is the University of Washington presentation on the wolf population viability, so it is totally different and not related to Predator-Prey at all. This is the model to inform, the periodic status review. I know this is hard to keep up with so let me post the website there. I don't have updates on the Predator-Prey Project.

Comment

Okay. Again, I thought that was the first half of this year? Is there more data on that or you don't know that at all?

Comment

Maybe the science division manager can give more information, but students have finished data collection and results are expected in 2022. But that is not something I work on so maybe those who work on it have something.

Comment

Why don't you consider that important for wolf stuff? It seems like it is one of the few pieces of data we have on ungulates and predators. I will echo that this should not be single species analysis, it should be multi-species. They all interplay. Maybe I am missing the themes of the Predator-Prey Project but it seems important to follow and use it to inform us.

Comment

Sorry if I came off like that is not important. It is incredibly important. We don't have results to share. When there are results to share, we will make sure it is priority for those working on it to get in front of WAG and give a presentation for you all. I don't have updates because there are none to give. When there are updates to give, absolutely, it is critically important and we will make sure WAG has an update.

Comment

That topic will probably resurface again tomorrow so keep an eye on that for tomorrow.

Comment

I will just quickly say that you hit it on the head. We are trying to look at holistic stuff, so students working on wolf-cougar interactions and top-down bottom-up effects. When you look at complicated questions, the data analysis gets more complicated. They are diligently working on that and seeing collar data. It might be only Washington-specific – well, it is actually not – but we do have a wealth of knowledge we can pull from other states that are similar in some situation.

Comment

Thanks. Hopefully we can talk about the wealth of data later or tomorrow to make sure we all understand. I do think that is where we are likely headed, too.

Comment

Part of today's presentation may also speak to how everyone thinks about types of questions when looking at data. Thank you for raising that. Are there any other questions on updates to be provided?

### **No questions**

Comment

Okay, so it might be time for you to do your presentation. Do you want people to hold questions until the end?

Comment

Yeah, we can do it any way. As a starting point, my face has popped in and out of WAG for several years but some newer folks might not know me. Before becoming regional program manager, I spent about 30 years as a large mammal research person and 20 years an associate editor for the Journal of Wildlife Management. I have been in mechanics for research before being a supervisor. As conversations between WAG and the Department move, recovery of wolves and topics like wolf management/conservation in future/ungulate questions brings us to the topic of having talks about science and how science is done. This is not wolf-focused, it is more laying basic groundworks so we have a common understanding as we have conversations.

## Presentation begins

I have always liked this saying on a sign in Einstein's office. This is an on-target quote on wildlife work: "Not everything that counts can be counted, and not everything that can be counted counts."

### Scientific Method

The scientific method in its essence is an empirical approach to making observations about the world, generating explanations (hypotheses) about the observations, and testing the explanations

1. As needed, hypotheses can, and should, be revised as a result of testing
2. The method promotes objective reasoning over subjective reasoning
3. Applied properly, the scientific method is blind to a desired outcome.

You not only want to know if what you discovered works but you want to know if it doesn't. Ideally, we are wanting to learn something and not necessarily to confirm what we want to be true.

### The Holy Grail: Cause and Effect

- What drives a system or outcome? If there are multiple influential factors, which ones are most important?
- It is nearly impossible to clarify cause and effect without a *controlled* experiment
- In a controlled experiment all differences between a treatment and control are eliminated except for the variable of interest, isolating its effect
- Unfortunately, it only works in a certain realm. True controlled experiments are typically limited to the physical sciences (chemistry, physics, earth sciences)
- In ecology, environmental science, and wildlife biology, controlled experiments are exceedingly rare, and always difficult, because research is done *in situ* (in its place)
- The natural world is replete with variability, and we are seeking the signal in a world of noise

### Hypotheses and Predictions

Unfortunately, scientists use similar words for different things. There are actually two different types of hypotheses.

- Statistical hypotheses are not the same thing as research hypotheses
- Statistical hypotheses are formal constructs of data analyses
  - E.g., null vs. alternative hypotheses
- Research hypotheses typically focus on proposed explanations (often process or relationship oriented)
- Testing research hypotheses is the goal, statistical hypotheses are the route to the goal
- It is often difficult to directly test a research hypothesis, so often scientists focus on testing logical predications of a given hypothesis

It is difficult to test head on, so instead of testing research hypothesis, we test the logical.

## What Are We Testing?

Unfortunately, scientists use language imprecisely and add confusion.

- We are not analyzing the data to determine if the *hypothesis is true*
- We are analyzing the data to determine if data like we obtained *would be likely* under the assumption that the hypothesis is true
- If the data are likely, the hypothesis has support

## Elements of Scientific Investigation

1. Research question is generated
2. Appropriate hypotheses developed based on what is already known
3. Research design developed to address question
4. Data are collected according to research design
5. Data analyzed
6. Conclusions, based on results, are formulated

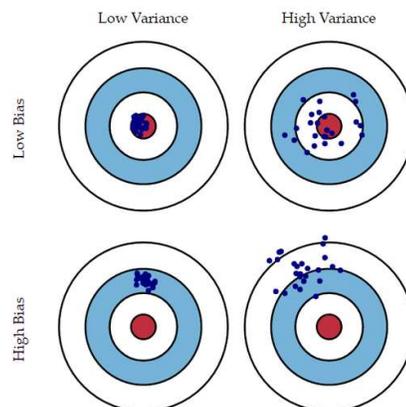
This is important. It is always preferable that 1-3 occur before 4-6. We do things sometimes where we grab data off the shelf. But the most powerful work is done when we have a question developed before ever collecting data.

## Populations and Samples

This probably is not really complete.

- We are typically interested in inference about *populations* (the universe of data or all individuals)
- We usually can't obtain or afford the universe of data
- Thus, we collect a *sample(s)* from the universe of data
- Importantly, the sample data must be representative (*unbiased*) of the universe of data
- Often *randomization* is used to reduce the risk of biased sampling
- If sampling is done well, we can usually obtain reliable estimates of parameters (the universe of data values)

## Bias and Precision in Estimates: Our goal is to achieve both low variance and low bias



This is a figure often in textbooks. These are possible outcomes when estimating something. We want the upper left one, where it is a very precise estimate. The alternatives we can have are at the top right, where the mean value of that estimate is pretty much on center but is not precisely estimated. In the bottom left, we have a very precise estimate but it is off, it is biased. The worst possible is both imprecise estimate and estimate not close to the population value you are trying to estimate (bottom right).

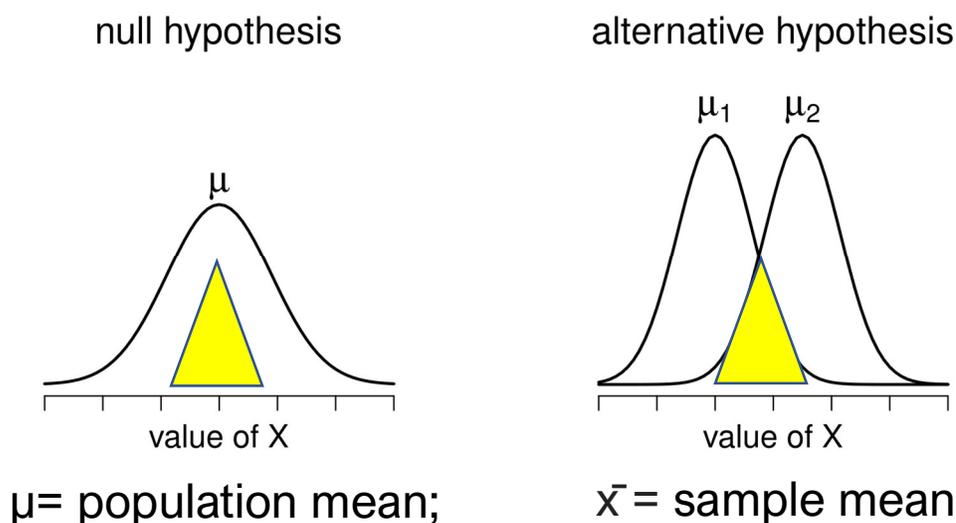
### Statistics Assumptions

- A variety of statistical tools exist, ranging from simple single variable to complex multivariable approaches
- Most methods invoke assumptions that are required for valid results (*e.g., that the data came from a normal distribution*); assumptions differ across methods
- One universal assumption is that variables are measured correctly, or if error is likely, that it is acknowledged and its influence estimated
- In general, simpler methods deal with attributes (size, values, measurements); more complex methods are typical for investigating processes (survival, population dynamics, habitat selection, density dependence, migration)

### Strong Inference

- The goal of hypothesis testing is to find support for those that are valid and reject those that are not
- The researcher wants to avoid 2 errors:
  - Concluding there is a real effect when there is none
  - Concluding no effect when there actually is one
- It is easier to make strong inference when the effect size is large, and/or the sample size is large, and/or variability in the data is modest

### Effect Size and n: example



Effect size is a really big deal. Let's create a hypothetical example: We are interested in if adult males and adult females are the same. The test for that is not to test specifically for if

they are different, it is to test if they are the same. If we had the weights of every individual of the population, we would know the true mean for males and females. That is the real mean we don't know. Our best way to estimate that is sampling and generating a sample mean, also known as the average. The question and the test is could these data come from a common distribution? If they are from a common distribution, the yellow triangle shows most probable values. What we think is they are different. There is a  $\mu_1$  and a  $\mu_2$  and we have sample means to estimate for males and females. On the right side where we have two curves, that same yellow triangle would include values from both of those. The point here is the closer  $\mu_1$  and  $\mu_2$  are together, the more the overlap exists and the harder it will be to tell if they are different. I hope that illustrates why when the effect size is big you don't need large sample size.

### Models...

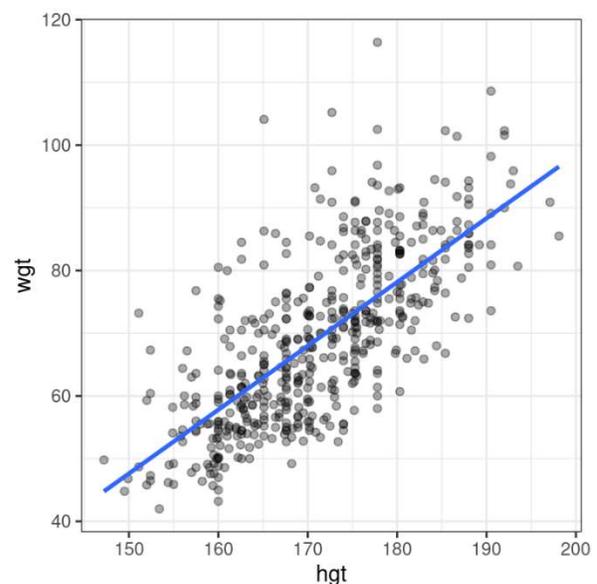
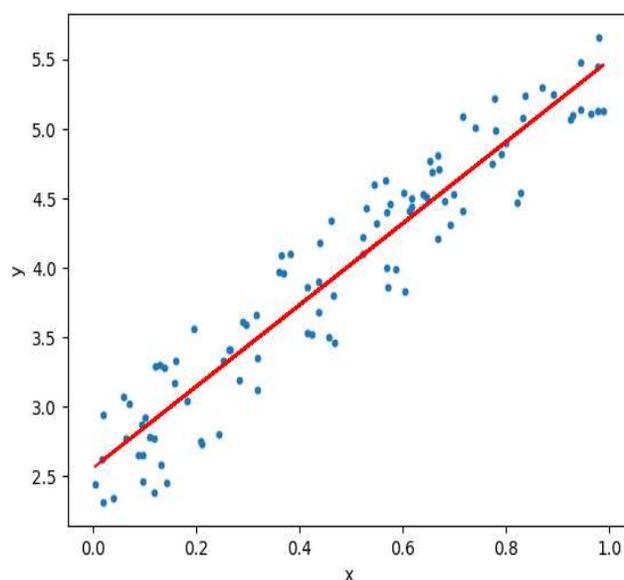
- Developing mathematical models is a common and useful way to explore process hypotheses

Sometimes people get skeptical and think that is like magic. I just had my annual physical this week and my doctor took my blood pressure and age, no family history, no smoking, to generate the probability that I would have a heart attack in the next year. That is a model. You are more exposed to models than you might think.

- Models are an abstraction of a process
- Models are *always* simplified compared to the real process
- Alternative models using different predictors are usually compared using the *principle of parsimony* (what is the simplest model that still explains the data well)
- We often encounter models (e.g., heart disease and risk factors)

Don't get scared by the word "model." Evaluate it and see what it entails and don't necessarily think that it cannot be reliable.

### Relationships and Prediction



The one on the right is a pretty real example where the x-axis is height and y is weight.

Data are plotted and you can generate a line that goes through mean values. If height was a perfect predictor of weight, the dots would all be on the blue line. But they are not. In a real world, like the data set like on the right, it is clear that height is an influential factor for weight but it is not the *only* one. Because it is scattered. This is a really popular quote used a lot from George Box who said, “All models are wrong, but some are useful.”

### Common Pitfalls

- Inferring causation from correlation.

That photo of the cat on the roof kind of captures “causation versus correlation.” That cat didn’t really dent that roof, right? It just happens to be in that place.

- Violations of statistical assumptions
- Spurious correlation (e.g., ice cream sales and drownings)

The famous example about ice cream sales and drownings are correlated. When one goes up so does the other. And the reason for that is this one:

- Confounding (2 variables are correlated because of each’s relationship to a 3<sup>rd</sup> variable)

When the weather gets hot, both of these will go up. People will swim more when it is hot and eat ice cream more when it is hot. You have this relationship being related to a third variable, weather.

- Poor sampling
- Small sample bias (survival example)
- Data dredging and/or P-hacking

For work that is driven not by having a good question guiding you, but just digging around in data to see if you can find something interesting. It is likely to generate spurious correlations.

- Outlier effects

Imagine a line that looks like a relationship between two things but if you remove one data point, it will totally change. Overly influential data point or two.

### Confirmation Bias

- Confirmation bias is a fundamental human trait (we all have it... and so do all scientists)
- Confirmation bias is the tendency to seek to affirm what we already believe
- In science, confirmation bias occurs when researchers seek to find support in data for what they already want to find
- Behaviors that reflect confirmation bias include data dredging and repeated iterations of analysis until a desired result can be obtained
- Consumers of scientific information often consider research good when it aligns with pre-existing values and poor when it conflicts with those values; this also is



- confirmation bias
- Good research design is the best mitigation for confirmation bias

### Confirmation Bias Case Study from Colorado

Written principally by a colleague of mine, this is about a challenge they had with a deer abundance question in Colorado. It is an interesting read. We can provide that to folks, but it is right on this topic of confirmation bias and how challenging it can be to work through.

### Publishing Research Results

How does the research become available to people?

- Science on a topic grows through the publication of research in scientific journals
- Peer review (typically anonymous) is the established process for assessing if research is rigorous enough to be published

I am an associate editor for the Journal of Wildlife Management. This is how we get a good estimate on whether a paper is publishable.

- Peer review is not a perfect process, but it is the best one we have found
- Published papers continue to be critically read by other scientists; some survive the test of time, others do not; science evolves with continued research

Sometimes flaws are found and people write rebuttal papers. So publishing is important because it generates things for people to think about and typically generates other work on the topic.

### Traditional Membership Publications

- Journal of Wildlife Management
- Northwest Science Journal of the Northwest Scientific Association
- Ecological Society of America

### Open Access Publishing

- Recent development and rapid growth of open access (free, no subscription) journals
- Reduced processing time (submission to publication)
- Many use peer review
- Quality (rigor) varies across OA Journals
- Researchers have both lauded and criticized the OA format and process
- Some papers are published in OA journals after being rejected by traditional journals

### Assessing Abundance

Where do we go now? These conversations with science are just beginning so it is not important we get it all done today. One question that comes up especially around ungulates is assessing abundance.

- A census is a count of all (N) individuals
- Anything less than a census is a sample count (n) or tally
- A “tally” is not a formal estimate of anything
- Detection probability is the link between a tally (n) and an estimate of N

- A formal estimate always includes a measure of precision (e.b., SD, SE, CI)

### Monitoring vs. Research

- WDFW (and other agencies) collects routine monitoring data for many species
  - These surveys are research applications, not research per se
  - Unless a method is applied to account for detection bias, such counts are indices at best, not abundance estimates
  - A variety of methods exist to correct tallies for detection bias and provide an estimate of  $N$
  - Precision suffers when detection probabilities are low; cover is often problematic
- A rule of thumb is if detection probability is less than 50%, you have a challenging problem. With things like deer/elk/moose tree cover, it is problematic issue.
- Environmental variation (weather, snowpack, etc.) can affect time series inference, usually through effects on detection probabilities

### What to Monitor for Ungulates?

- Population size and/or a variety of demographic parameters are possibilities; many are challenging and costly to measure
  - Abundance and trend are affected by age structure, age-specific reproduction, juvenile survival, and age-specific adult survival
  - Adult female survival is the most influential vital rate, but is usually relatively stable
- If you tweak adult female survival, you will get the biggest change in trend line for population.
- Juvenile survival is less influential, but is often the most variable vital rate year-to-year
  - Observed trend in  $N$  often reflects cumulative annual dynamics of juvenile cohort survival

Sometimes a cohort survives well and sometimes they don't. That is often what we see in trend.

- Pregnancy rates are usually stable; when conditions are poor (drought, severe winter), pregnancy rates of yearlings and old adults will often decline

### What About Ungulates and Wolves in Washington?

- Clearly there is interest (general public and WAG) in the effects of wolf predation on native ungulates, primarily in NE Washington at this point
- Several informal hypotheses could probably be articulated
- Because such hypotheses are typically general, they are not easily tested directly; the focus should be on logical predictions that could be tested, assuming any specific hypothesis is true
- Putting resources into large-scale data collection in the hopes of finding something useful without well thought-out questions is likely to be unproductive
- Start with defensible questions, not with heading to the field for data
- Ideally, considerable thought will go into:
  - What do we need to know and why do we need to know it?
  - Can what we think we need to know be practically measures (high precision,

- low bias)?
- How would we interpret things such as the number of deer or moose, or...?
- How would we use the information we think we need?
- Do we need a single good estimate or estimates through time?

## End of presentation

### Comment

Thank you. That is very helpful. I would say to keep that presentation handy in case someone wants to go back to a slide.

### Comment

Thank you very much. That reminded me a bit of a college statistics class. Good reminders. I have a couple of questions: Do you feel like we have things in place now to answer the questions you posed on the last page? The thing I know about is the Predator-Prey Project but I wonder if there is other research to potentially answer some of those good questions.

Second, more specifically, I hear among the hunters that cougars eat 25-50 deer a year. Do we know what impact predators have as a rule of thumb on the ungulate population that we can throw out there? Or is that just impacted by so many variables that it is hard to get a good number?

### Comment

There is a lot there. On the first one, I will acknowledge this is my take and not anyone else's. There is some really interesting, well-done work being done on the Predator-Prey Project. I think what we will find is it will provide insights on how the system works and how these things occur and relate. After the Predator-Prey Project is done, I think we will remain with questions that we think are important that will not be answered by the Predator-Prey Project. I think that is reality and that is how these things work. Academic projects usually explore new thinking. There will be meat there – no pun intended – in those projects but I don't think it will be difficult to say we still want to know this other thing.

On the predation thing, there is a long history to that question. It has been looked at a lot. I will just give you a simple but pretty true answer. With wolf populations that are operating well, the habitat quality is there, and there is nothing weird like disease or parasite outbreaks, most ungulate populations are going to be pretty robust to the effects of predations. It depends on the predator, but if you removed the predator effect, the annual survival rate of the ungulates would not change. They would just die from something else. If something disturbs the systems (hoof disease or something that changes the whole population dynamics) and brings the population down, that creates a scenario where predators may have a different kind of effect. I think there are documented cases of that. Again, in healthy populations, usually predation will not drive them somewhere undesirable. They kind of evolved with that. Predator effect can be a factor. So typically,

compensatory mortality by predation usually has to do with predators looking for animals that are susceptible in some way, or not the healthiest individuals. Bears are different because they usually have their effect right after the neonates hit the ground. There isn't a calf elk alive that can take on a bear, so it is, "Can I catch it?" But for a cougar, it is, "Will I be able to hunt tomorrow if I take this animal on?"

Comment

If you could guide us to some of that research, that compensatory additive, I would love to read through that.

Comment

What is the specific information you are looking for?

Comment

What was referenced, that in a healthy ecosystem predation does not impact the population. What happens is the main predators go after animals that are already weak, so those animals were going to die anyway. Did I capture that right?

*Chat: I think that he has requested some publications where predation was determined to be compensatory and where it was considered to be additive.*

*Chat: I would like to see those publications, as well.*

*Chat: Happy to follow up with WDFW on this and make this available to WAG members.*

Comment

Right. I am not saying healthy strong individuals are never taken, but usually those other predators are looking for a win. They are looking for high payoff with low risk, so if they can then they will find older or debilitated animals if they can. But under the right circumstances, they will still kill a healthy elk in deep snow or something.

Comment

A reference was sent that they did a study of cougar population down in Montana that had two control groups and it did have impact on ungulate population. It went up when you took out a percentage of cougars. It seems a little inconsistent with what you said, so I am just trying to understand.

Comment

Yeah, it is complicated and there are lots of examples that don't say the same thing, so we can get resources.

Comment

I am thinking about the things WAG and DFW are interested in for the wolf-ungulate topic so let's not get too far into trying to learn about predator-prey relations. I think he is trying to deliver how WAG can think about science so when you get into those conversations

you are able to discern science that is reliable versus less reliable.

Comment

Right. With new information we can help with these pieces of scientific inquiry.

Comment

Thank you for that really good presentation. I wanted to double down on the tally. When we have conversations on predation or wolves and ungulates or ungulates in general, folks share what they are seeing (folks being people out in the community). Often times it may feel like we look past that or discredit it, but it comes down to without that connection of detection probability, it is just a tally. It is anecdotal information. We really cannot do too much with that. I wanted to acknowledge how to transform that into a repeatable measurement when we have conversation tomorrow. It is not that we don't have anecdotal information: it is that those are tallies. We have to combine that with another element to make use of that.

Comment

First, maybe we can consider continuing this item after lunch. It is important and probably precedes tomorrow's information. The idea behind having the presentation is because it precedes a lot of what we talk about in WAG. We need to understand the scientific method and all of that before we dive into, "What are the results of the Predator-Prey Project?" It all goes before that, even concepts like compensatory and additive.

We could do a review and honestly look into ecology textbooks. We could hand you a suite of scientific studies in different areas with different predator and prey. Some might say predation is additive, some compensatory, so let's start from the beginning and build up. The present is the place to start, but given your questions, maybe we do need to talk about concepts in ecology and then dive into scientific literature.

There is a great book that just came out called *Yellowstone Wolves: Science and Discovery in the World's First National Park*. Whenever there is any scientific study, those are the results for that particular place and ecosystem. But the Yellowstone studies are informative because of circumstances there. It is brand new from 2020. If you can get a hand on that book, there are chapters that talk about this. Remember we are applying this to Washington. We cannot do that but it does provide the frameworks. Also, *Wolves: Behavior, Ecology, and Conservation* has a great chapter on this. That stuff and learning about kill rates is sort of more foundational. I would recommend starting with books rather than papers, and even Google search "compensatory versus additive" and do that work first. We have so many folks here who are actively working on questions you asked, so they could answer what research questions are there. Again, those results are not ready, but we can say what questions were focused on and why.

Comment

Maybe this will help too. Think of additive and compensatory as a spectrum. Almost no populations are on either end. They are all somewhere in that other part of the spectrum

and that is why there is a ton of literature. But context is super important.

#### Comment

We are a bit over time and want to spread conversation to people in the queue. If you would be willing, let's hold questions until after lunch. I hate to intervene so hard like that but I think if we keep going, we will just keep going. We will come back at 1:15 and spend more time on this.

### **Lunch**

#### Comment

We wanted to take another 30 minutes to focus on the presentation and your questions there. We are not getting into Predator-Prey Project specifics but we can spend 30 minutes to make sure everyone feels they have had a chance to ask questions provoked by that presentation. Then we will move into the relationship map for Washington wolf management, then break, then spend less time than planned on ground rules. I am guessing there is not a lot of controversy around those so I am thinking we can get time from that. Does that sound like a reasonable approach? Does anyone object?

#### Comment

Since we have the benefit of having our wildlife research scientist with us, I wanted him to introduce himself and weigh in. I know we have other agenda items but he asked some big, important questions so I want to make sure we have space to dive in.

#### Comment

My only question for all of you will be we were not going to get really deep into the Predator-Prey Project in this meeting so I will be keeping an eye out for that.

#### Comment

That is my point. I feel like we keep pushing this predator-prey discussion down the road and we are not trying to answer and pose the right questions. I have been on this for a year and it has been continuously pushed. I am not looking for results of the University of Washington project per se but having a good predator base for everyone involved is good. It is good for producers and it is good for hunters. We just keep pushing it down and I am confused as to why we don't want to spend more time on it.

#### Comment

I appreciate that and let's see where the conversation goes. I am just going on the basis of this agenda and knowing that this would be a topic sometime, but whatever meets the needs of this group. Unless there are other concerns, let's have the wildlife research scientist introduce himself and I can get to your questions and take on those other responses that staff wanted to make. That is what I propose.

#### Comment

For those that don't know me, I am a wildlife research scientist in the Wildlife Program. I

lead and oversee the carnivore work on the Predator-Prey Project, and my ungulate research scientist colleague is leading the ungulate components. That may seem fractured but that was by design because of the size and complexity of the project, and the number of different research questions being done on the project. We have compartmentalized a lot of the work. I think of it as a big wheel with spokes. At the center, we have the overarching research question and each of us take on different parts to answer that question. I am the tip of the spear in the carnivore world in terms of research in the Predator-Prey Project, so I should be able to provide updates or insights on the project. I cannot speak as well to the ungulate work but I can speak to some of it.

Comment

Thank you. I appreciate you being in this space and we will see if questions come your way you can shed light on. Let's hop over to previous questions.

Comment

I am not sure who to direct this to, but I want to take a deeper dive into what the Department considers as far as changes that happen in the landscape each year (fire, drought, diseases) on a species level but more. Do you guys look at the carrying capacity of these areas and does that change every year? When you are looking at hunting season quota setting or impact to population, how does the carrying capacity of the environment play in?

Comment

I will start by saying that is a really complicated question. The concept of carrying capacity has changed, and what people focus on now is nutritional carrying capacity. That requires intensive vegetation sampling in a really large scale to say if there is enough food for x number of animals. We looked at that with moose in Game Management Unit (GMU) 117 and it was a fairly holistic project in where we captured adult cow moose, captured them the next year or two year later, and monitored calf survival. We didn't collar calves because it doesn't work out with moose but we got visuals on those moose. What we found was moose were in terrible condition. Their pregnancy rates were lower than expected, likely due to too many moose on the landscape. We think we overshot carrying capacity, so we left increased cow permits for those moose.

In my situation, the best and honestly most measurable tool to manage resources is hunter harvest. For management of other species, we do modify things when we have large wildfire events. You have this really large wildfire event so you know those animals will be affected and your options there are you can feed them during the winter or you could decrease the populations so the resources are more in line with animals. Most of the time, females are the ones that matter in most situations. We do look at all that stuff, but it is maybe not as precise as you might think or we would even want it to be logistically. It is not able to be that precise.

Comment

That is really helpful. Thank you. I can see the challenges because it is a constantly

changing landscape. How did the moose population in GMU 117 turn out after that year?

Comment

We know they have decreased. If I had a ton of money, I would love to catch moose and see more but we know populations decreased. We have cut back on antlerless permits because we probably are more in line in that unit with what the landscape can hold. Since we just manage wildlife, sometimes we have limited influence over that habitat, so that moose population exploded. But we cannot always go to timber companies and say, "I know this forest isn't quite ready to cut but can you cut it for moose?" It makes it more complicated because we don't have large tracks of land we own.

Comment

I think my comment flows really well from this discussion so I wanted to circle back to the informative presentation. Two things relevant to what we tackle as WAG: One being confirmation bias, and the other one being complexity. Ecosystems are complex. There are multiple drivers that affect populations. The moose population is declining because of multiple factors including lack of adequate forage and hunting adjustment, but during that time I would hear people in northeastern Washington say the wolves are killing the moose. That is an example of confirmation bias. I have participated in discussions where rancher friends of mine that also hunt say all the deer are gone and the wolves killed all the deer. Every time I go up there, I would see lots of deer, some mule, and lots of whitetail. For me, I am like, "What are they talking about?" Both of those were anecdotal.

I just think it is really good to take lessons from the presentation and the idea we cannot really know what the drivers of ungulate population are in the absence of good research. Because it is a complex system, there are multiple drivers. We talk about ungulates in the lens of predator-prey dynamics, but I have spent a fair amount of time in literature. Some say the biggest driver is residential development. When we switch over to this discussion of what we want, I think that will open up more space to find common ground about action. If we remember this is a complex system and 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). When we think about if we want to positively impact ungulate populations, what are all the pieces of the puzzle? I don't know if any biologists or scientists want to react to that but it just seems it opens up discussion if we remember that none of our anecdotal observations nor confirmation biases will let us have a complete picture.

*Chat: The rancher could be saying the deer are gone because there is a lot less than what there use to be. But we have no baseline for what the deer and elk population was before wolves. Just like she may not know how many deer she would of seen 20 years ago vs what she sees now.*

Comment

Very well said. Maybe we can visit offline more but giving time for the presentation today, I think our rationale was to tee up the conversations you want to have. I hope it doesn't

seem like we are shying away from it. We just talked about how to get this group to a place where we can more meaningfully talk about these things. Some of these questions that come up are complicated so maybe we can talk offline a bit more to come in better prepared. I think we will do some of that tomorrow on this specific topic. I don't want it to feel like we are pushing it away.

#### Comment

Thank you. I thought a lot of good points were elegantly said about how complicated and diverse it is. The meta-point I keep getting back to is it feels we want to get a good handle on these ungulate populations as well as other things, but we never will get good handle unless we start rolling things out and discussing. We have two new people here. I thought the experts may be able to say two or three things we should be doing and lay groundwork so we talk about it now instead of April. My main point is we have the people here and it seems like we are rolling forward well. We have smart people, and if we cannot go farther with it then it was a great effort.

#### Comment

I appreciate that. I think this idea of complexity is an integral component of these discussions and how you think about them. I have heard folks use terms like "multiple drivers" and "factors in the system." Yes, these systems are complex. It is difficult to tease out the impacts, even in the most idealized research, because these are top-down (predation) bottom-up (food availability driven by climate, etc.). All these things are intrinsically linked in the sense that one affects the other. Top affects bottom and bottom affects top. That is what makes ecology really hard. When people think science, they think physicists who can control every variable in a lab. But in an open system like what we work with in nature, that is very difficult to do. For predator-prey relationships and how it is affecting ungulate populations, yeah, predations matters. There are few universal truths and one is "predators eat prey." There isn't a deer or elk alive that doesn't spend a good portion of the day thinking of ways to avoid being eaten. But they have to balance that with different behavior and acquiring food and whatever. The way I think about predator-prey dynamics and ecosystems is it exists along a swinging pendulum.

Folks talk about the "balance of nature." I hate that term. I don't think there is such thing as balance in nature. I think there are winners and losers and it is dynamic where the pendulum swings in one direction or another depending on other effects. Sometimes things are better for predator than prey, and vice versa. If you think of it as a dynamic system, it humbles you to not say "this is exactly what is going on." There is always uncertainty present even in the best studies. The complexity part of it is really important and something that this group will grapple with as we move into discussions.

*Chat: I think we are hanging on the edge waiting for the predator prey study to give us results. But consider when this study started and when wolves became prominent on the landscape. The study to research the populations started after wolves were on the landscape*

#### Comment

I want to go back to the mention about complexity. When you think about the different background of all of you WAG members and communities you represent, and as you talk about wolf-ungulate or just ungulate dynamics, there will be anecdotal stuff that will put you in a circle again. Because it is not demoting it but it doesn't lead to that repeatability. It is an anecdote, so how do you move forward in that? One thing you could think of as WAG is what is the standard you would look for? If you had a community member ask, how would you describe, "the standard WAG is looking for is *this*." To understand this, you have to start at this base level. You are going to have a lot of conversations about this so how do you encourage your communities to embrace the science?

#### Comment

I think we are missing some of the points here. Dealing with a son who is in active addiction recovery, his perception is his reality. I feel the statements brought up like "there are no deer" or "wolves eat a deer a week" that hunters say... Maybe the answer is that it is complicated, but if we can get better answers or real answers, I guess that will help address the perceptions that are out there. It would help if we all spoke with the same voice too. I worry that we don't have answers for some basic questions.

#### Comment

Good point. I would add that it is not that we as biologists or scientists flat out dismiss the anecdotes that we hear. A lot of times we use them to fuel research projects. It is, "Huh, they are seeing that, so can we design an objective study?" That is how the Predator-Prey Project was designed; to use measurable data around answering those questions around those initial "there is no deer" comments. There is a big disconnect that is hard to convert to the public. Let's say a pack of wolves will eat x amount of meat per week. That may be true, but at the same time, what effect does it have on the elk or deer population? If they can eat that much and it doesn't affect the population, then what? Wolves eat deer and elk, no doubt, but what impact does it have on that population? That is what is hard. That is the compensatory versus additive discussion.

#### Comment

Really great discussion. I have been capturing questions we will want to get on the chart for tomorrow to identify when those will be explored if not answered. I am looking forward to that and wondering if there is anything else to cover here before we hop over.

#### Comment

I just feel like we can do all the research and science we want but if we don't have an accurate base of what ungulate population is, it is futile. In my opinion, we need to focus on an accurate number of prey out there to start with and then move forward that way.

#### Comment

I didn't want to leave what was said hanging. I think a good future agenda item might be the information we do have, but to harken back to the presentation, there are some areas where we don't have perfect information and won't ever have it. What was presented

about tallies versus estimates is really import. Maybe just diving into more detail on that topic specifically and having staff take time to present information that we do have and do use as an agency might be a worthwhile use of time.

Comment

Thank you. I appreciate that. Noted. Do you think that some of that what you proposed might address one of the concerns raised?

Comment

Maybe. It is along the same lines. Again, it just gets folks to the same sheet of music about what information is out there? What is standard? What can we collect versus what cannot we collect?

Comment

What I am hearing is a willingness to have that conversation before the Predator-Prey Project is completed. Not to provide the Predator-Prey Project information but what the Department knows now generally?

Comment

Sort of. Let me decouple this from the Predator-Prey Project. The Predator-Prey Project is intended to answer specific research questions about predator-prey dynamics in that area. That is separate from district biologists and other WDFW staff monitoring ungulate populations, doing routine monitoring, and collecting harvest information. That is part of their job. It is not specifically a study with research questions. Does that make sense?

Comment

That answers my question, for sure, and I see heads nodding. Thanks.

Comment

To answer a question in the chat there: the Predator-Prey Project is structured in a way that the comment isn't entirely correct there. There are two study areas. One is a northeast Washington robust wolf population, and the other is Okanogan in the colonizing front. There are not wolf packs continuously throughout that study area. I am not saying where there are not wolf packs there are not wolves, but there are definitely deer being monitored that are not really subject to consistent predator risk from wolves. We have a gradient of wolf presence. The comment is alluding to some sort of baseline before wolves were on the landscape. There is also lots of research from other parts of Washington going back decades that are pre-wolf. If we chose, when those areas become occupied by wolves, you could replicate those earlier studies to find how much affect there is pre-wolf and post-wolf.

Any research project and the Predator-Prey Project don't exist in a vacuum. There is existing data to tap into. A lot of methods we are using are pretty 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. We can say,

“This is what we see with in places without wolves,” but there are some inferences there. Caution needs to be used because there are other variables in the system, but it is not like we know nothing in any given place. There is a good amount of science that we can draw upon.

Comment

This is to you because you are the most knowledgeable. What do I say to all our Ferry County friends that say there is not nearly as many deer as 10 years ago? What is the answer to that? I would love to say, “No, they are exactly the same,” or, “it depends on winter.” I get this asked every time I travel there and never have good answer. I feel like we are circumventing.

Comment

I think the answer is maybe. Could there be fewer now than 10 years ago? Sure. You are asking us to answer a question for which we may not have an answer. I don't have the data, but biologists might have data from surveys. My whole take on what you hear people say is there are too many predators and they are decimating ungulate populations. At a basic level, wolf, bear, and cougar populations are a reflection of 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.

Ultimately, I am not sure anybody, outside of actual data, can really answer someone's “I see less deer than I saw 10 years ago.” That may be true but there are lots of different things to that observation. One might be there are fewer deer. Another may be there are not fewer deer, they are just in different places. I ask you why you feel like you have to answer that question to friends in Ferry County.

Comment

Again, their perception is their reality.

Comment

Absolutely.

Comment

How would you tackle that one?

Comment

I get asked that question all the time. While I don't have the data in front of me about 10 years, that would certainly be true for 20 or 25 years ago. We know that we use harvest data for population index. We cannot see deer through trees so we cannot fly around and count them like other places. We try surveys and drive around the road where we can get buck:doe or fawn:doe ratios. Ideally in the spring, but we don't have good luck so we do it late summer. I can currently say the white-tailed deer in northeastern Washington is down. Our harvest numbers are down. This summer, we had huge bluetongue and Epizootic

Hemorrhagic Disease (EHD) which killed 25% collars from white-tailed deer, so it has big impact. We had an outbreak in 2015 and the next year had declines. We can never really see that or need to, but we do know the population has gone down.

What you can tell them is, yes, we acknowledge the population is currently down, but it is not one thing. We know severe winter, disease outbreak, and carnivores eating deer affect it. That is the big thing with the Predator-Prey Project. We can look at these populations and say there is a decline in the white-tailed deer population. The next question we ask is, "Why?" We are asking with the Predator-Prey Project, "Is it due to predators?" That is the data we are currently working through. I think you could say yes. We don't have hard numbers from this year, but I am guessing they won't be great declines due to disease outbreak, at least in certain GMUs.

Comment

Can the Predator-Prey Project research questions be shared?

Comment

Yes, I will put the link to the University of Washington predator-prey website in the chat. It includes not just research questions but the big layout of how they anticipate tackling those questions. I can also put a link to our page which has how many deer have been collared.

Comment

I am tracking that and also noting the comment that there is a large body of science with and without wolves. We actually had questions raised in November about lessons learned from other states. I really am trying to move you into the wolf management conversation. I don't think we will get to ground rules today and that is okay with me as I think this is an important conversation.

Comment

Just to comment on what was mentioned about predator numbers declining as the prey base declines: that I won't argue with, but I don't believe that could be true unless you consider the livestock as part of the prey base.

Comment

I will say this to the comment about Ferry County and why things matter. I live in Ferry County, I am a hunter, and these are questions we want answered so please remember that. Thank you.

Comment

My question was why those two would feel like they had to be the ones to answer that question, not that the question was unimportant or of no interest to people. I am just not sure why they felt like they had to provide an answer to that. Certainly, my agency should be interested in that and answering that. I just wanted to clarify there.

Comment

I appreciate that. I guess, in response, because I do live over here, I do get that question asked of me and I do refer them to the WDFW biologist. I missed a lot of the conversation and context but that comment fired me up so I wanted to mention that.

Comment

That is totally fair and referring folks to our biologist on questions like that is a good idea.

Comment

To your point, we need to keep talking about this. In fact, the point of today was to get a common foundation on the science piece which will help future conversations. There is a lot of passion about wolves in this group, so my intent was to not talk about wolves but science in general and get an impassioned ground floor built for us all. I do think having built that foundation, we do need to figure out what we need to talk about and have those conversations. I have hesitancy here but that case study I mentioned would be an interesting read. It is about a basic question in Colorado on how many deer are in a particular place. It became such a gnarly issue that even the governor's office became involved. I am not advocating the governor to be involved. In fact, generally that is not a good idea, but read that with a thick skin. It is interesting and relevant. I think I will leave it at that. I am looking out the window at my snow-covered yard and thinking of brilliant meteorologists. I still have confidence in tomorrow's forecast but not the day after tomorrow. For any systems with complexities, predicting the future is challenging.

*Chat: A good example of a very general hypothesis. Tough to tackle directly. But, think about what must happen if that is true. What does the hypothesis predict and test those predictions. What would happen to harvest data, what would happen with survey data, what would happen with predator diets...*

*Chat: <https://predatorpreyproject.weebly.com/>*

*Chat: <https://wdfw.wa.gov/hunting/management/predator-prey-study>*

*This link includes a video that provides an overview of the project.*

Comment

If people are good to go, we will move into the wolf management in Washington conversation. Just so you remember, this came as conversations that the facilitation team had with WAG members. Many of you indicated that where decisions are made in policy, who are all players, and how do they connect would be useful information.

Comment

I shouldn't be talking too long so maybe I will go through it and then we will take questions. I do encourage staff to jump in and add but others, please hold your questions.

## **Presentation begins**

### Wolf Management – Primary Participants

We talked about this at the last meeting and it is hard because there are a lot of people involved. To address this, we sat down and talked through the web of relationships so we can explain it to you. Here are primary participants. It is not a comprehensive list. I want folks to think about the state of Washington as a whole. We are the state fish and wildlife agency so we are the management authority for wolves on a state basis. But of course, we have tribes who are sovereign nations and have vested interest in wildlife management in the state. We work with Tribes and other wildlife agencies like the U.S. Fish and Wildlife Service (USFWS) and the National Parks Service (NPS). When wolves are listed as federally endangered, the federal government are the management authority for the state. Again, Tribes are the management authority for wolves on their reservation. The NPS are the authority within parks' borders. All of us are partners and collaborate, but that is how wolf management works in Washington and other states. Wolves are federally de-listed, so they are managed by Tribes, federal government, WDFW, etc.

The Interagency Wolf Committee is a group that DFW does lead, but it encompasses other groups like USFWS, Bureau of Land Management (BLM), NPS, Tribes, and other state agencies like the Department of Natural Resources (DNR). That is a group that doesn't convene that often, but that is the purpose of that group.

### Wolf management isn't solely within the authority of DFW

Now let's talk about state management. We all elect a governor of Washington. The governor appoints our Fish and Wildlife Commissioners. The Fish and Wildlife Commissioners are the ultimate decision makers for most of the large wildlife decisions that come through for the state. Within the Commission, there are committees that have special focuses and dive into in-depth issues. Commissioners have to know everything from salmon recovery to habitat to land transactions, so we have committees like the Wolf Committee. The WDFW Director carries out items the Commission brings to WDFW. Within WDFW, you have different levels of staff. We all work together on wolf conservation management decisions and you have an executive management team which has WDFW regional program managers, Public Affairs, Enforcement, etc.

We try to make sure we have participation from a variety of levels and positions that participate in WAG. You have WDFW Headquarters which is where I am based out of as the wolf policy lead. You have a wildlife conflict section manager and wildlife conflict specialists. On wolf conservation, we sometimes have our carnivore section and our game manager involved, depending on what issue. The wolf team is actually all over the state. There is someone in Region 1, someone in Cle Elum, and someone in White Salmon, but they all travel around the state based on needs. Each region has regional experts. For ungulates in northeastern Washington, you often hear from our District 1 wildlife biologist. She is the expert for a lot of these questions. But when we talk about others, they are going to be the subject matter experts on deer populations, elk populations, and even wolf populations. We share expertise both statewide and locally. Also, wildlife conflict

specialists are based in regions and not supervised at an HQ level, so that is why you hear from experts on the ground for their region. This also goes for Enforcement.

We have a Wolf Internal Group (WIG) that is similar to WAG. It is a group of WDFW staff who work on wolves. It is intended to be a cross section of agency-encompassing folks working in the field, HQ, and the Director's Office so that there is a group that informs decision making. WAG is you all, who are appointed by the Director to give guidance to the Director and to the agency. Surrounding all of that is the public. We are all public servants, including the governor. The public influences everything we do.

#### Next slide

The frame around all this is the Washington state public. We work with and for the public on wildlife conservation and management. The circles on the right side are the groups of WDFW staff who work directly on wolf conservation and management. How is law enforcement involved? That would be investigating dead wolves. Who went out and looked at roadkill? Law enforcement staff. Often, they partner with our biologists and do investigations together. The wildlife program director supervises me, our science division manager, and other program leads, so a lot goes through him. In HQ, you have staff handling many issues like range riding, damage claims, compensation, and depredation investigations. Again, wolf biologists who work statewide or based out of HQ need to confer with regional folks.

Zooming out, we have relationships with Tribes and other agencies. WAG is appointed by the Director and appointed to provide guidance to the Director and the agency. The Governor's Office appoints the Fish and Wildlife Commission.

Items that need to be delved into more come from the WIG. I don't know if this makes it messier but it is something we can do if you are wondering how x decision is made. We can talk with an example. It is complicated because there is a lot of collaboration. Most decisions made are collaboratively and talked through many folks in many areas of the agency.

#### **End of presentation**

#### Comment

When you said everything is very collaborative, is there somebody who ends up signing their name on decisions? If there is an example it would be helpful if there is a final person who has to sign even if 20 people collaborate. For WAG members, we want to ask you to make suggestions to improve this diagram. If there is a question about rulemaking or decisions, we could pull this up and walk through it.

#### Comment

This is a good chart. I truly do appreciate the visual on that. I am wondering how WAG is directly talking to the Director. The Director is on very few of our calls. I know he is a busy man but it appears more like our advice is filtered through the Department staff to get to

the Director. I might consider changing it in that way because he is not the one getting advice directly. As far as I understand, what we work on is dictated through the staff back to the Director. If we do something on paper, I don't know if that directly goes to him or not.

Comment

I think that is a great point. You are absolutely right that WAG guidance is filtered through. For example, in the Wildlife Program, the Director ultimately signs off on the protocol period. The Director ultimately decides. For example, when I link to the protocol on things, the Director read it and signed off on that. Sometimes the Director does come to WAG meetings. I know he has visited with many of you in groups or one-on-one. A lot is filtered through but not always. It is our job as staff to present information to the Director and leave it up to their decision.

Comment

Thanks so much for this. I find it helpful. I have a question about the interagency wolf committee. Are those meetings open for the public to observe? If so, how are notifications sent out?

Comment

Great question. Right now, those are not open to the public to encourage participation from any group that is interested. Some groups didn't want to participate because of the public aspect. That group meets once a year, and not even that frequently right now. In the past, it might have been open to the public. Again, the decisions made are really collaborative which makes the decision-making really difficult, but robust too.

Comment

If there are WAG members who indicated this has been murky to them, I would be interested to hear if this makes sense to you. Are there any questions or clarifications? It will be a continued resource that can always be improved.

## **No questions**

Comment

I forgot to reflect earlier that sometimes people speak more or less depending on the topic. When the Predator-Prey Project came up, it is important to my job but I don't work on it directly. You may hear more or less from certain folks depending on the topic. If you reach out to one of us, we will always make sure your question gets to the right person. That goes for the public too.

Comment

We will tune this up to reflect this WAG line going directly to the Director and will provide this as part of the meeting documents. We may actually have time to do the ground rules before we take break and move into the public comment.

Let's swing back over to the ground rules. What I am looking for is whether or not there are any that we got wrong as the facilitation team. We took input provided at the November meeting on the Mural board, put that into the meeting summary, then generated this. The document received when we were contracted to work with you all also had agreements you made with each other. It was around things like supporting decisions once they are made even if it is not exactly what you would like and notifying other WAG members if you will speak against a decision made. Those are still in place. There were agreements and 35 ground rules previously, so this is a smaller list generated from the list back in November. Is there anything on here you cannot live with or anything missing?

Comment

It just occurred to me there isn't anything about "don't interrupt others when still speaking." Most of the time we don't need that but it has happened when things get heated. I think it was in the old one.

**Added:**

- Let others finish their thought before speaking

Comment

If that looks good then we have a list of 10 here. Things around being respectful and kind also apply during public comment, so I would also hold our public commenters to be respectful. They are free to comment on whatever they like but I am asking for it to be framed in a respectful way.

Now we suddenly are ahead of schedule, so should we go to public comment at 3:15 instead of 3:30? Does anyone have a preference?

Comment

We have a lot of the public on now, so I think a lot of those who want to comment are already here but I am assuming. It would be great to go early, but I am not sure what others think.

Comment

Thank you. I appreciate your points. Do others have a preference?

**No objections**

Comment

If you are a member of public, if you would like to make a public comment would you chat us a message or raise your hand? Why don't we give this group a break and then come back for public comment?

*Chat: As a reminder to panelists, the public session at 4pm is primarily a conversation with the public and WDFW staff. WAG members are welcome to attend, and there was some great conversation in November between some WAG members and the public. But*

*definitely optional for WAG members attendance.*

## **Break**

### Comment

It looks like we have six folks interested in public comment but we will check again. You have up to three minutes to make a comment. If you are still talking, I will just hop in and remind you it is time to wrap up. Please note if you don't get all things you want to say said, we would be happy to get written comments from you, send to: [wagfacilitationteam@rossstrategic.com](mailto:wagfacilitationteam@rossstrategic.com). We now have seven people in the queue. Unless there are any other comments or questions from WAG or WDFW staff, we will get started.

## **Public Comment**

- 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.

*Chat: Thanks for your comments, Dave. First, hope you understood I was acknowledging my anecdotal observations did not likely reflect reality 😊 Also would like to hear more about what you mean about the protocol not being sustainable and not working. Happy to talk if you are interested.*

- 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.

## **End of Public Comment**

### Comment

You had this great conversation that the presentation kicked off, about science and how you think about research questions. We do have a Mural board (online whiteboard) set up for that discussion tomorrow. I am not assigning you any homework but I would be very happy to send the link just for you to look at and get your head in the space of where we will be in that conversation tomorrow. Some of you told us it helps to have the information and have time to think about it before being asked to respond.

### Comment

The last thing I would propose is I want to make sure we captured this. In the WDFW updates, I felt there were questions raised about the transparency of if there is a lethal removal order or wolves are impacted in some way that the Department offered to post something in the wolf updates to describe what happened after the fact. Is that right?

Comment

Not exactly. Maybe we need to have more discussion. I think someone answered how each time there is a removal there is always a set of circumstance. Staff deliberate, so I don't think we are committing to that because I need to understand better what actually is being asked and why. We can dive in a bit more. We do an after-action report in every annual report and can certainly debrief in WAG, but before we commit to this to the public, I want to make sure I know what that is.

Comment

My notes say you could update and disclose to the public that there were these two traffic fatalities.

Comment

Yeah, we did and we do that. We document every wolf mortality that happens.

Comment

Okay, perfect. I also had other notes to pursue the discussion regarding decision-making, understanding that better and how the protocol describes that. I had a note that someone asked for any sources of fladry that WDFW could benefit from that, as they were having trouble sourcing that. There might be a pursuit of potential problem-solving discussions of range riding in the Blue Mountains. We got links to NCI and there was a request for WAG members to route recruitment and the [FAQ](#) is already posted.

It could also be helpful before tomorrow to take look at predator-prey research questions. Those are some takeaways. We have the wolf management in Washington as a resource. We have the ground rules you gave thumbs up to and will use those going forward. Then we had some interesting public comments. I will invite any other conclusionary thoughts before we come back at 4:00 and start the public information session with WDFW and WAG members. You are absolutely invited to participate but not required.

**Meeting Adjourned**