

Summary of Peer Review Comments on the Draft Washington Conservation and Management Plan

Remarks on Overall Plan (28 comments)

Plan is adequate for establishing a viable wolf population in Washington and addressing conflicts (16)

Plan tries to accomplish too much; can WDFW fulfill everything stated in plan? (2)

Plan contains many of the same management flaws as the plans for the northern Rocky Mountain states (1)

Cost of fulfilling the plan is too high (1)

Plan does not give clear guidance on how to influence the pace of recovery and what the tradeoffs are in accelerating or decelerating the pace (1)

Despite the plan, wolf recovery will be slow in Washington due to habitat constraints, human densities, etc (1)

Plan provides an unacceptably high level of uncertainty in attaining a recovered wolf population in Washington (1)

Wolf Working Group Letter (2 comments)

The livestock industry should not be able to exert undue influence over wolf management decisions (1)

Wolf Working Group members should consider developing a program promoting proactive deterrents before a compensation fund (1)

Executive Summary (9 comments)

[NOTE: Most comments given here involved topics discussed more thoroughly in other sections of the plan.]

Shouldn't the main focus of the plan also include improvement of habitat quality and prey resources for wolves rather than just focusing on delisting wolves? (1)

How will funding to implement the plan be obtained? (1)

What are the guidelines for when/where lethal control may be enacted? (1)

Will compensation for unknown losses be paid in areas where WDFW hasn't yet documented wolf activity? (1)

Public information and education program will be a priority for aiding reestablishment of wolves, but not a "high" priority as stated here (1)

Should note that wolves may benefit timber production through the effects that their presence may have on ungulate foraging (1)

It is unclear if the 18 breeding pairs referenced here can be located anywhere in the state (1)

The new pack in Okanogan County should be described as the first breeding by wolves in the state since the 1930s in which genetic testing was used for species validation. Others have documented breeding in the state, but did not have the ability to use genetic testing at the time (1)

Chapter 1 Introduction (5 comments)

A historical population estimate for Washington should be provided (1)

Why can't the historical wolf population size and distribution be re-achieved for Washington? (1)

Updated information is needed in parts of this chapter (1)

Chapter 2 Background (48 comments)

Additional information should be inserted into parts of the chapter (17)

Content needs to be corrected in places (11)

Chapter or parts of the chapter provide relevant and adequate amounts of information on the topics covered (4)

Parts of the chapter need to be updated with newer information (2)

Information should be given on how tribes in Washington feel about wolf recovery (1)

Chapter 3 Wolf Conservation (168 comments)

Numbers used in conservation/recovery objectives

- are adequate or barely adequate (10)
- are too small (5). One suggestion was 12 for downlisting to threatened and 15 for downlisting to sensitive.
- are too small unless there is good connectivity within the population (3)
- are too small unless wolves are present on the Olympic Peninsula and in the Willapa Hills (1)
- are too large, with 5-8-12 being preferable (1)
- numbers should not be used or cannot be provided (4)
- unsure of objectives or need more clarification on them (2)
- should provide numbers of wolves in addition to breeding pair numbers (3)
- some clarification is needed on the "wild card" breeding pairs (2)
- the target for delisting should be set at an effective population size of 50 or more (1)
- should be based on a population viability analysis (1)
- should be based on an analysis of ecological carrying capacity (1)
- use of breeding pairs in the objectives is OK (1)
- Wolf Working Group should not be allowed to advise WDFW on numbers. Objectives should be entirely biologically based (4)
- objectives should not require breeding pairs in all 3 recovery regions (1)
- unsure how the objectives fit with estimated minimum viable population size (1)

- concerned about being able to skip over a status category (e.g., going from endangered to sensitive) (1)
- some clarification is needed concerning the 18 breeding pairs (1)

Distribution goals in conservation/recovery objectives

- existing 3 recovery regions are OK (2)
- a fourth recovery region should be established, with the Northwest Coast separated into its own region (3)
- 2 recovery regions should be used, with one for eastern Washington and one for western Washington (1)
- the original proposal of 9 recovery regions based on the state's ecoregions is best (1)

Translocation

- more information should be given on its purpose and use, including triggers (15)
- supports use of translocation (6)
- should be allowed for the Olympic Peninsula and Willapa Hills (4)
- will not be needed because natural dispersal will be sufficient to achieve recovery (1)
- plan underestimates the need for it in Washington (1)
- should be conducted as soon as possible to boost recovery (1)
- should be used sparingly to avoid opposition (1)
- concerned about local opposition (3)
- should be allowed for maintaining genetic diversity of isolated populations (2)
- should be allowed from outside of Washington (2)
- depredating wolves should not be excluded from translocation (1)
- should be conducted even if it strongly reduces wolf numbers in the source regions (1)
- concerned about ability to translocate wolves from federally delisted to listed areas (1)
- concerned about excessive planning to conduct it (1)
- contradictory language exists on its purpose (1)

Relocation

- more information should be given on its use (3)
- more background information should be given on problems and failures elsewhere (1)
- supports the use of relocation (2)
- liked the material presented on this subject (1)
- should be used sparingly (1)
- concerned about local opposition (1)
- concerned about the amount of time, effort, and cost involved if used regularly (1)
- doesn't like the use of "nearest suitable remote habitat" (1)

Relisting

- supports use as a conservation tool (1)
- better language on triggers is needed (1)
- the entire section should be removed from the plan (1)

Habitat modeling

- more background information needed on availability of potential suitable habitat (1)
- parameters from Oakleaf et al. (2006) are not applicable to Washington and shouldn't be used to model habitat in the state (1)

- concerned that Washington does not have sufficient suitable habitat (1)

Connectivity

- connectivity will be important or should be examined between northern and southern Cascades, northern Cascades and Kettle/Selkirk Mountains, and Cascades and Olympic Mountains (3)
- connectivity will be important between Washington and Idaho, British Columbia, and Oregon (3)
- more discussion needed on connectivity and immigration (2)

Game animal status

- supports the legal designation of wolves as “game animals” after their delisting (5)
- caution should be exercised that an adequate population exists before hunting is allowed (2)
- concerned about allowing hunting immediately after delisting, based on the delisting numbers presented in the plan (2)
- conservative harvests should occur until the impacts of hunting can be evaluated (1)
- more information is needed on the harvest management strategies to be implemented (1)
- focusing harvest in “problem” areas may overlap with areas used by immigrating or dispersing individuals and therefore could negatively affect long-term population viability (1)

Wolf recovery and management in Washington will likely be similar to that which has occurred in northwestern Montana and perhaps New Mexico-Arizona (3)

A viable Washington wolf population will depend on having animals present in the southern Cascades, Olympic Peninsula, and Willapa Hills (2)

The conservation tools subsection should be expanded to include other tools (3)

More detail should be given on how population objectives were established (1)

A population viability analysis should be conducted (1)

More discussion needed on viable population estimates for Washington (1)

The expected reduction in Idaho wolf numbers after hunting begins there has important implications for reestablishment of wolves in Washington and should be noted (1)

A population estimator should be used in tracking population size after delisting (1)

The high genetic diversity of wolves in the Northern Rocky Mountains will carry over into Washington, thus there should be little concern over a need for genetic management (1)

Genetic management of wolves may be useful or necessary in Washington (1)

Greater discussion could be included on genetic studies from the Northern Rocky Mountains (1)

Use of “viable” in the conservation/recovery objectives is too vague (1)

Use of the state’s sensitive status classification should be eliminated from the plan (1)

A long time will be needed for wolves to reach the threatened, sensitive, and delisted status categories in Washington (1)

Section D should be made into an appendix (3)

Chapter 4 Wolf-Livestock Conflicts (122 comments)

Material presented in the chapter is adequate/well done (8)

I understand that this is a social juggling act, but the plan appears too friendly to the livestock industry. This could risk public support for the plan (2)

Actions are more important than words in a plan; WDFW must follow up on the plan by acting honestly and fairly with the public over wolves (1)

Working closely with affected livestock producers is important to build working relationships (1)

Plan's definition of "chronic depredation" is too aggressive/should be changed (4)

Proactive measures

- Use of these tools should be emphasized, even after wolves are delisted (3)
- Greater use of these tools is needed than now occurs in the Northern Rocky Mountains (1)
- These tools should be broken into husbandry practices, non-lethal deterrents, relocation, and other approaches such as predator friendly marketing, depredation compensation, and purchasing wolf depredation easements (1)
- Non-lethal deterrents are generally only successful in small areas and for limited time periods (1)
- Will information on modified husbandry practices be provided to ranchers and others? (1)
- These should always be attempted in the early stages of recovery, but be realistic. A few chronically depredating wolves will disproportionately drag a program down. Program success will be determined by how well you balance wolf recovery with establishing your credibility among the livestock community by resolving conflicts (1)
- Clarify why a permit and training are needed for use of non-lethal injurious harassment (1)

Lethal control of wolves

- An effective control program can help generate tolerance among livestock producers and reduce wolf depredations (1)
- Wolf control, combined with compensation, could be much more effective by taking a different approach (1)
- Plan adopts the Northern Rocky Mtns model for incremental lethal control, which has not resulted in greater public tolerance for wolves or reduced numbers of depredations. This management style will insure perpetual management actions and drains on agency personnel and funding, perpetual livestock losses and impacts to producers, and perpetual drains on compensation funds (1)
- Removal of one or two wolves from a pack seems to be a good first response, but research suggests that doing so can cause a pack to break up, thereby spreading depredation behavior to new packs and locations. For a chronic offending pack, it makes more sense to remove the whole pack, either through relocation or lethal removal, depending on your listing status and associated procedures at the time (1)
- Further details should be provided on the use of lethal control (1)
- Should not be allowed on public land in general as long as the wolf is listed (1)
- Should not be allowed on public land during the endangered phase, but could be used on private lands by state and federal agents if non-lethal tools fail. While threatened, no lethal take on public lands should occur unless under extreme conditions, but lethal take on private lands by livestock owners with a permit could be allowed. OK to go with current provisions for sensitive and game animal phases (1)
- USFWS agrees that implementation should be evaluated on a case-by-case basis (1)

- Plan should state that lethal control will likely be necessary even at small population levels and that the most appropriate method for quick resolution of a conflict will be used, including aerial control (1)
- Does the phrase “more flexible approaches” mean greater use of lethal control? (1)
- Plan is unclear about the basis for issuing a lethal take permit to livestock owners (1)
- It is often difficult to identify the offending wolf(ves). Any wolf in the area is considered guilty (1)
- WDFW should seek to minimize the double standard where small losses of livestock by wolves nevertheless often lead to lethal removals of wolves, whereas far larger losses of livestock to coyotes, bears, and cougars go relatively unpunished (1)
- Idaho no longer evaluates the need for lethal removal on a case-by-case basis (1)

Lethal take in the act of attacking livestock within 150 yards of a residence

- This distance requirement is onerous and unrealistic for many reasons (3)
- Should not be allowed on any land ownership while wolves are in the endangered phase. It can be allowed under state threatened on private lands, but the 150-yard requirement should be deleted. Use during sensitive and delisted phases can occur as described (1)
- Should be allowed by landowners, livestock owners, family members and employees on private land during endangered and threatened phases and anywhere during sensitive and delisted phases (1)
- The opportunity to kill a wolf in the act of attacking livestock at any distance is rare, but producers should be allowed to do so because it is more efficient than having a government agency do it after the fact and allows the depredating wolf to be killed (1)
- Can anyone kill a wolf attacking livestock within 150 yards of a residence? (1)
- Language is too broad regarding killing wolves attacking livestock or pets and seems like a sure way to result in relisting. Also could result in use of lethal take by livestock or pet owners using poor husbandry practices (1)
- Should not be allowed for wolves attacking dogs on public land in any phase, which may result in use decoy dogs to attract wolves, similar to what is done with coyotes (1)

Other management tools for addressing depredation

- Plan should state whether locations of dens, rendezvous sites, and wolf territory core areas will be made available to ranchers (1)
- WDFW should be cautious/very concerned about releasing locations of dens, rendezvous sites, etc because it could lead both to illegal killing of wolves or to unrealistic public expectations that WDFW knows where all wolves are at all times and will warn producers of wolf presence prior to any depredation (3)
- Wolf location information may be of little help to producers - will loans of radio tracking receivers be made? (1)
- Should add translocation and relocation as tools for dealing with depredations (2)
- Rubber bullets are effective for non-lethal injurious harassment, but beanbags are not (1)

Compensation program

- This program is adequate and/or appropriate (2)
- Mention is needed of how Substitute House Bill 1778 relates to the plan (2)
- Compensation for wolf-related livestock depredations will increase support for wolf reestablishment among livestock producers in Washington (2)

- The plan adopts the Northern Rocky Mtns model for compensation, which has not resulted in greater public tolerance for wolves or reduced numbers of depredations (1)
- This program should pay for losses based only on fair market value (1)
- This program is obviously designed to appease ranchers. It should not pay for losses on public lands (1)
- Compensation for depredation on WDFW land is a conflict of interest for WDFW because its lands were purchased for wildlife and wildlife should have priority (1)
- Compensation for depredation on other public lands should be excluded since those lands are supposed to be used for multiple purposes, including wildlife (1)
- Why will compensation be paid for wolf losses, when such payments are not made for other carnivores, which cause far greater losses? (1)
- Does wounding of livestock include injuries from being run through a fence? (1)
- Updated information on Montana's compensation program is needed (1)
- Payment of 1.5-2 times an animal's worth
 - This approach overvalues an animal's true worth (3)
 - The 100-acre size requirement is not appropriate and will invite misuse and fraudulent claims (2)
 - This approach makes it beneficial for livestock owners to suffer depredation, thereby encouraging abuse of the system (1)
 - This approach is arbitrary. Payment should instead be based on historical losses (1)
 - Why are probable losses on parcels larger than 100 acres compensated at three times the value of a loss on smaller parcels, when confirmed losses are compensated at only twice the value (1)
 - Compensation ratios should be specific to type of livestock, with a 1:1 ratio used for sheep in all situations (1)
- Compensation for unknown losses
 - This program is too liberal, too difficult to justify regardless of the formula used, and too open for abuse (3)
 - These losses should not be compensated (2)
 - More detail is needed on how this program will work and how data validation will occur (3)
 - Data collection should begin now to document baseline stress levels (through hormonal tests) in cattle living in areas likely to be occupied by wolves (1)
 - Compensation for these losses is subject to considerable fraud in Idaho. It also under-compensates some claimants with valid losses and pays some claimants for invalid losses (1)
- Accountability is important. The state should be vigilant and demanding of top-quality evidence by the confirming agency before paying damages (1)
- Compensation should be established under state statute and be paid by the state to avoid negative feelings and political conflicts of interests associated with accepting compensation from pro-wolf conservation groups (1)
- Plan doesn't require any reciprocal responsibility by producers to taking steps to reduce depredation in exchange for compensation (1)

- Best management practices that producers must follow to continue receiving compensation should be better described (1)
- WDFW must strictly enforce the requirement for the use of best management practices before paying compensation (1)
- Compensation for veterinary costs will be very problematic to administer (1)
- Eligibility requirements for compensation need refining (1)
- Will producers compensated for confirmed and/or probable losses also be compensated for unknown losses? (1)
- Will tribal members qualify for compensation under the plan? (2)
- Compensation for confirmed and probable losses should be paid on tribal lands as well (1)
- Should consider alternative compensation programs used in Europe and Israel, which require a deductible before paying compensation, less compensation is paid for herds less than 200 animals in size, etc (1)
- Producers who illegally kill wolves or allow wildlife violations to occur on their lands should be ineligible for compensation (1)
- Compensation should not be paid on public grazing allotments established after approval of this plan, because the bidders should factor wolves into their business plan (1)
- Large operators (defined by yearly gross sales) should receive less compensation (1)
- Compensation should be reduced in cases where the owner is able to salvage and sell part of the carcass (1)
- Compensation for injured livestock should be paid up to the market value of the animal (1)
- Definitions of depredation categories need improvement (1)
- Categories for non-depredation and unconfirmed cause of death should be added (1)
- The Washington Compensation Review Board should have WDFW wolf specialists and possible USDA Wildlife Services field agents as voting members of the board (1)
- How will the Washington Compensation Review Board be appointed? (1)
- Why will members of the Washington Compensation Review Board, who are non-biologists and unfamiliar with wolf predation techniques/signs/behavior, be allowed to determine the signs of depredation? (1)
- A separate phone number for suspected wolf depredations should be established so that it can be monitored daily including weekends and holidays (1)
- Plan should state that the hotline will be checked at least once every 24 hours (1)

Funding of wolf management activities

- It is unclear what contributions are “already provided” by WDFW for animal damage management. If this refers to money, it should be stated that this funding is not secure and demand regularly outstrips the availability of these funds (1)
- What happens to the compensation program if funding cannot be obtained? (1)
- Concerned about long-term funding of the compensation program (1)
- Unused compensation funding should go to proactive measures (1)

Chapter should note that far more livestock die from causes unrelated to predation (1)

Predictions of the expected numbers of livestock that will be killed annually by wolves in Washington should be included (1)

Chapter 5 Wolf-Ungulate Interactions (60 comments)

Suggestions made for material to be added or corrected (37)

Concerned that wolves will cause wintering elk to disperse onto agricultural lands, resulting in crop damage (4)

Background material presented in this chapter is adequate/well done (3)

Doubt that the plan's low targets for downlisting and delisting wolves will have any negative impacts on elk or deer herds (1)

Should note that wolf predation could negatively affect some small ungulate populations (1)

Should add predictions of the numbers of deer and elk that may be killed by wolves (1)

Should consider developing strategies to address wolf impacts on specific ungulate populations or herds (1)

Should indicate that wolves will improve the gene pool of prey populations (1)

Should note that elk numbers in Yellowstone National Park were artificially high due to human management (1)

Unsure whether long-term judgments on habitat condition should be made given that climate change may affect the landscape dramatically over the next few decades (1)

An increased potential for disease transmission among elk concentrated by wolves seems like a minimal concern given that elk are already congregated at feeding sites (1)

Chapter 6 Wolf Interactions with Non-Prey and Other Species (12 comments)

Adequate information on this topic is provided (2)

Plan should not overplay the cascading effects of wolves on Washington's ecosystems (including coyote reduction) because the state may not support the required high populations of wolves and such effects are usually important only in pristine areas such as national parks and wildernesses (3)

Caution should be exercised in using the conclusions of the Beschta and Ripple (2008) paper without additional review and analyses (1)

A response plan should be prepared in advance regarding potential management responses (including relocation) to wolves preying on mountain caribou (2)

More information should be provided on potential impacts of wolves on mountain caribou (1)

Chapter 7 Wolf-Human Interactions (6 comments)

Adequate information on this topic is provided (3)

Habituated wolves are an important concern. Appropriate actions should be taken to prevent habituation and to lethally remove immediately any habituated individuals (2)

Chapter 8 Land Management (12 comments)

Plan gives good information on this topic (2)

Plan should be cautious about implying that no land use restrictions will be needed. It is difficult to believe that WDFW wouldn't try to stop or alter some development projects or land use activities that might negatively affect wolves (1)

Plan understates the likely use of private lands by wolves in Washington (1)

More information should be given indicating that wolves will probably move to lower elevations in the winter in Washington as they follow their prey (1)

Some land-use restrictions might be needed near active den sites (1)

Administration of grazing permits on federal lands should be mentioned in this chapter (1)

USFWS agrees that the state forest practices rules should be reviewed and revised accordingly (1)

USFWS agrees that when appropriate, private landowners should be asked to temporarily delay an activity near a den during the denning period while wolves remain state listed (1)

Shouldn't the sentence stating that WDFW has no legal authority over private lands because the agency requires hydraulic permits for various activities on private land (1)

Should mention that WDFW does own and have full management authority over its wildlife areas (1)

Chapter 9 Information and Education (4 comments)

Wolf outreach must involve two-way communication between agencies and the public. Agency staff need to be well-trained, provide factual information, and go out into different communities to listen about the real and perceived concerns of local residents (1)

A strong education program is important to wolf recovery (1)

Does information dissemination include data sharing with other agencies? (1)

Chapter 10 Research (0 comments)Chapter 11 Reporting and Evaluation (0 comments)Chapter 12 Goals, Objectives, Strategies, and Tasks (83 comments)

Recommendations were made for clarifications to the text (11)

Objectives and strategies in this chapter should be rearranged to establish priorities for funding and to ensure that the most important strategies are implemented first (1)

I commend you for embracing this radio telemetry as a tool. It is more useful in monitoring wolf survival rates than in following wolf movements (1)

Both the feds and WDFW should be responsible for some level of monitoring as well as depredation evaluation. Current staffing at WDFW means that only minimal monitoring can be done, thus additional funding will be needed to achieve monitoring goals (1)

- Genetic analysis, cameras to document pup production, aerial monitoring, etc should be noted as less intrusive and cheaper methods to monitor recovery progress (3)
- WDFW and USFWS should coordinate during the required 5-year monitoring period after federal delisting (1)
- After state delisting, what will be the population objectives for the number of wolf packs? (1)
- Will WDFW be exempt from restrictions against foot-hold traps in Washington when trapping wolves? (1)
- Federal land managers administering grazing permits will be important in providing wolf information to livestock permittees (1)
- Implementation of protective measures around wolf den sites will likely be situational (1)
- All translocated wolves should be radio-collared and permanently marked for future identification (2)
- Agency land managers should be part of efforts to develop translocation plans (1)
- Are robust population models available to predict population growth after translocations and is WDFW prepared to handle the potentially high growth that may result? (1)
- USFWS agrees with the translocation strategy presented in the plan (1)
- USFWS will work with WDFW to ensure that translocations are compliant with the ESA (1)
- Wolves involved in depredation could perhaps be translocated to the Olympic Peninsula where few livestock exist (1)
- If part of a pack's home range overlaps another state or province but the den is in Washington, will WDFW still translocate members from it? (1)
- One wolf management specialist should be hired instead of two if just a few packs are present (1)
- Non-lethal approaches should be continued even after the wolf population grows beyond the recolonizing phase (1)
- Adequate training will be needed for anyone confirming depredation (1)
- Do compensation programs exist for other carnivores in Washington, and if not, why are wolves singled out in this way? (1)
- Task 5 provides standard information on this topic and is well thought out (1)
- Ungulate populations should be managed so as to continue to provide adequate prey for wolves and current statewide levels of harvest for hunters (1)
- Wolves, prey, and habitat need to be managed in balance. Once there is a "healthy" wolf population, it should be managed towards established population goals like other big game species in Washington (1)
- Staff at national parks, with state and tribal partners, have committed to long-term monitoring of elk populations, and are working to improve elk population monitoring methods (1)
- Plan doesn't call for the potential reduction in wolf numbers (I would suggest through translocations) in areas where the impact to game populations is deemed too high. This will be controversial, but it is better to address controversial aspects at the outset rather than after wolves are on the ground (1)
- In regards to offsetting game losses, how much more can WDFW do other than reducing hunter harvest. It already devotes lots of resources preserving open space, restoring habitat, reducing poaching, and preventing vehicle collisions (1)
- The fact that wolves can inhabit Washington speaks to an already adequate prey base. Alteration of human harvest seasons is probably the most likely strategy to be effective in support of wolf recovery should some sort of ungulate management be required (1)

- Who in WDFW will work to improve or manage habitat for prey species. Nobody seems to be assigned or funded for the important role of negotiating WDFW's position in favor of large amounts of high quality habitat for wolves and their prey (1)
- Land acquisition should be included as a tool for improving habitat for prey species of wolves (1)
- Should note that increased herbicide use on public and private timberlands after harvests has greatly reduced the amount of lush vegetation regrowth available for ungulates (1)
- Improving ungulate habitat may be a problem within and adjacent to the caribou recovery area if it causes reductions in forest overstory (1)
- Fire can improve habitat for ungulates. Timber harvest is not an issue on the east side (1)
- Managing elk-wolf conflicts at winter feeding stations should be added as a new task (1)
- The plan's recommendations for managing wolf-human interactions are acceptable (2)
- The plan is aggressive on habituated wolves, as it should be, but it moves too slowly to kill them. Quickly getting rid of habituated wolves will increase public tolerance and reduce the chance that the behavior will spread (1)
- Installing wildlife resistant food and garbage storage structures at recreation sites to prevent habituation should be added as a new task (1)
- Given the high human density in Washington, dealing with wolf-human safety and wolf-dog interactions will be challenging (1)
- A wide-ranging outreach/education program can be effective in dealing with wolf-human safety, but the information must be accepted and used by the public (1)
- Concerns exist over relocating wolves to "nearest suitable remote habitat" because wolves often return to their former home range, cost is high, other wolves may already be present, etc. Higher success may result if wolves are moved as far away as possible to suitable remote habitat (2)
- What about having veterinarians and wildlife rehabilitators notify authorities about pet wolves or wolf-dog hybrids that they treat? (2)
- USFWS has no authority under ESA to regulate wolf hybrids and pet wolves (1)
- A response plan should be prepared soon to address issues with mountain caribou (1)
- What about creating a data sharing system for other agencies and tribes? (1)
- The education and information section is well thought out/acceptable (3)
- Should add tribes to the target groups receiving and giving wolf presentations (2)
- Chatrooms should not be recommended because anonymous comments can quickly spiral into negative and unconstructive commentary (1)
- Education must include schools and youth, especially in rural communities in wolf country (1)
- Add a new task to inform livestock producers on actions for protecting livestock from wolves (1)
- The plan should be expanded to describe how WDFW will "coordinate and cooperate" with tribal governments to achieve wolf conservation and management (1)
- Cultivating good working relationships with federal, state, and tribal agencies and large land-holding companies should be done before plan implementation so that all entities know their roles in wolf recovery and management (1)
- It is important to establish that WDFW is the lead agency and that other agencies work for the WDFW. Collaboration with other agencies will be crucial in developing your program (1)
- Keep other agencies informed of wolves and wolf management issues (1)
- While wolves are listed as endangered, I recommend much greater use of VHF over satellite radio collars because of lifespan issues (1)

- Will research be done that maximizes collection of data on home ranges, mortality, reproductive success, habitat selection, locations of den and rendezvous sites, etc.? (1)
- Because wolf research is expensive, it will be important to limit it to what you need to know to manage your populations rather than to repeat studies already done in other states (1)
- Should WDFW begin collecting scat samples for analysis and can diet analyses be done internally? Will genetic analyses be done by an outside lab? (1)
- USFWS supports use of a Wolf Interagency Committee to oversee implementation and monitoring of the wolf plan, and would be available to participate (1)
- The Wolf Interagency Committee should include at least one member from Idaho, British Columbia, and Oregon because of the regional nature of the wolf population (1)
- Continued guidance by the Wolf Working Group and later by a Citizens Stakeholders Group can be a problem. Their input into the plan should be considered sufficient now to allow your professionals to manage wolves on their own (1)

Chapter 13 Budget Estimates for Implementation (8 comments)

- Estimated enforcement costs in the table seem too high (1)
- Is a full-time staffer to conduct public outreach necessary? A half-time staffer may be more appropriate (1)
- Does monitoring cost include funds for seasonal volunteers/technicians? (1)
- Where is funding to support the Citizen Stakeholders Group, Wolf Interagency Committee, and Compensation Review Board? (1)
- The upper estimated cost for compensation funding of \$40,000 per year may be underestimated, given that the plan recommends twice the value of confirmed livestock kills. Funding for probable losses, unknown losses, and proactive non-lethal deterrents will also be needed (1)
- Monitoring costs are underestimated when based on a fulltime person and seasonal field crew, satellite collars for 2 animals for 15 packs and download costs (\$150k) (1)

Chapter 14 Economic Analysis (44 comments)

- Chapter is well written and does a good job of reporting both benefits and costs of wolves (2)
- The summary of wolf impacts on ungulates and hunting is good (1)
- Section on ecotourism benefits of wolves to Washington is well done (1)
- Some of the dollar amounts are not corrected for inflation, but elsewhere it is concluded that revenues and expenditures are going up without indicating whether this is in real terms or includes inflation (2)
- The chapter uses a regional economic accounting framework that examines potential changes in actual expenditures, for example by hunters, or in compensation as for livestock damages. Another accounting framework that could be used is a benefit-cost framework that looks at net benefits and costs for society as a whole, including values for nonmarket uses. For example, hunter expenditures are the cost of going hunting, but hunters hunt because they receive net benefits (often referred to as willingness-to-pay or consumer surplus) from the experience over and above their costs. If hunters are displaced by wolves, the cost is really

their foregone net benefits. The benefit-cost framework also includes passive use values or nonuse values, for example the value individuals may place on knowing that wolves have been restored to some of their historic range in Washington. One could add a benefit-cost perspective to this chapter, but this would be a large undertaking. You might want to acknowledge at the beginning of this chapter that you are using a regional economic accounting framework and not presenting a full benefit-cost perspective from the standpoint of the whole society (1)

This analysis should be expanded to address impacts on the subsistence economies of certain Indian tribes, which could be affected more heavily by increased predation on ungulates (1)

Because of the large proportion of extra small livestock operations in Washington, potential wolf depredation may be especially impactful on these producers. However, livestock in these operations may be easier to protect with non-lethal tools (2)

Retirement of grazing rights on public allotments should be added as another method for reducing wolf-livestock conflicts (2)

Social and financial impacts of wolf predation on livestock will be a function of where wolves re-establish. Some heavily grazed areas may prove to be unsuitable for wolf recovery (1)

Wolves could eventually repopulate most of the state and cause higher livestock losses than estimated here (1)

I suggest recalculating Table 14 using calf values for cattle losses, and adding a line at the bottom multiplying the loss by 2.0 to calculate the compensation funding level needed to support the plan's compensation formula (1)

The value used for cattle, \$1,120, is the 2007 USDA NASS average value overall all cattle classes: beef cows, milk cows, beef heifer replacements, milk cow heifer replacements, other heifers (feedlot), steers 500 lbs and over, bulls 500 lbs and over, and calves under 500 lbs. However, calves are most commonly depredated and should be used as the standard value for this calculation. Average calf value from 2004-2007 ranged from \$643.65 to \$705.66 (1)

Are non-predator losses, such as disease/weather, figured into "above-normal mortality"? (1)

Research should begin now to measure baseline stress levels through fecal/blood hormone tests (1)

Why is compensation being paid for physiological impacts if they have not yet been proven? (1)

With a "recovered" population of 300 wolves, there should be little problem accommodating both hunters and wolves (2)

Should note that seeing or hearing a wolf, seeing a wolf track or wolf kill, watching wolves hunt, and hunting among wolves may enhance the hunting experience for some hunters, including clients of outfitting companies (2)

Elk and deer kill estimates should be presented as a range of values based on range of kill rates and numbers of wolves (1)

Given the difficulty of modeling predator effects on ungulates, the specific approach used in Table 16 of looking at consumption rates was appropriate for use in this document (1)

Should note that the scientific community is divided in its interpretation of the impacts of wolves on the northern Yellowstone elk herd (1)

Will making wolves a game animal increase funds to WDFW and improve local economies? (1)

How willing is WDFW to forego license revenue by "sharing" ungulates with wolves? (1)

Reductions in coyotes, cougars, and maybe bobcats could result in increased numbers of small game species such as upland birds, rabbits, etc. (1)

Number of visitor days at Yellowstone should be compared for pre- and post-wolf periods (2)

- Should emphasize that wildlife watching pulls in more money than hunting and fishing combined and can benefit communities in wolf territory (1)
- The fragmented nature of wolf habitat and likely sporadic distribution of wolves over most of Washington make it very unlikely that wolves will generate the level of ecotourism seen at Yellowstone (1)
- Without a secure setting and open landscape, such as a national park, it seems unlikely that wolves are going to be regularly visible enough to draw reliable wolf-based tourism (1)
- The main reason wolves at Yellowstone are seen by so many people is because many of them are radioed and park service staff spread the word where they are (1)
- Relative to economic costs, it is important to emphasize that the wolf plan does not expect to impose any land use restrictions, whereas land use restrictions associated with some other endangered species resulted in significant economic costs. If land use restrictions become a factor with wolves, the economic costs would be significantly changed (1)
- The USFWS believes that it may be necessary to protect den sites from disturbance during reestablishment of wolves in Washington (1)
- What about other potential wolf impacts, such as benefits to forestry, habitat improvement through reduced foraging by wild ungulates, reduced vehicle collisions with wild ungulates, reduced crop damage, and reduced expenditures at winter feed stations due to population reductions and improved foraging habitat? (2)

Glossary (1 comment)

- Definitions for “in the act of attacking” and “successful breeding pair” should be changed [but no recommendations for improvements were provided by the reviewer] (1)

Appendix G, Minority Opinion (14 comments)

- The number of wolves identified in the Minority Opinion does not represent a level sufficient to achieve a self-sustaining wolf population in Washington (5)
- The plan could use 5, 10, and 15 breeding pairs as its target goals in order to address concerns of management flexibility (1)
- Lethal take by the public on private land at 3 breeding pairs, on private and public land at 6 breeding pairs, and public hunting at 8 breeding pairs is untenable (1)
- Washington has far more suitable wolf habitat in the eastern part of the state than the 297 sq. mi cited here (3)
- Arguments that Washington has too many people to support wolves are not supportable (3)
- Legal challenges to federal delisting are beyond the scope of this state plan and should not be used as an excuse for modifying the plan’s biological recovery objectives (2)
- Minority Opinion is contradictory by arguing that there should be fewer wolves because there are not enough ungulates and suitable habitat to support them, but then it claims the wolf population will increase dramatically each year (1)
- Minority Opinion is correct that more wolves will equal more livestock loss/economic impact, but it fails to acknowledge that there will be compensation for confirmed losses (1)

It's also hard to accept the assertion that 15 breeding pairs will cause "severe negative impact on private landowners and livestock producers" given the level of livestock losses in Idaho, Wyoming and Montana caused by wolves and the fact that this plan calls for compensation of those losses (1)

Minority Opinion presumes that wolves will pose a management problem prior to state delisting, but this is not necessarily true (1)

Minority Opinion is a fairly well written opinion and the points made about the higher recovery objectives are valid and should be addressed (1)

I understand that most wolf plan recovery objectives are a negotiated number. However, because the Minority Opinion raises questions about habitat availability, human population, and recovery numbers in other states, it would be wise to thoroughly discuss how Washington decided that minimum recovery numbers are higher than all three of the principle Northern Rocky Mountain "wolf states". Why was Oakleaf habitat model apparently chosen over Carroll? What are the limitations of each model as applied to Washington? (1)

Other Appendices (0 comments)

No comments were provided.

Number of Peer Reviewers Solicited for Comments: 163

State and federal wolf managers (current and former): 13

Canadian wolf managers: 2

Wolf researchers: 14

Washington Interagency Wolf Committee: 16

Tribal chairs and biologists: 54

WDFW (biologists, research scientists, enforcement, public affairs; current and former): 53

USDA Wildlife Services: 2

Geneticists: 2

Economists: 2

Information and outreach specialists: 2

Population modelers: 2

Forest ecologists: 1

Number of Peer Reviewers Submitting Comments: 43

State and federal wolf managers (current and former): 8

Canadian wolf managers: 1

Wolf researchers: 5

Washington Interagency Wolf Committee: 6

Tribal chairs and biologists: 2

WDFW (biologists, research scientists, enforcement, public affairs; current and former): 16

USDA Wildlife Services: 1

Geneticists: 1

Economists: 2

Population modelers: 1

Total Comments: 626

Overall plan: 28

Wolf Working Group Letter: 2

Executive Summary: 9

Chapter 1: 5

Chapter 2: 48

Chapter 3: 168

Chapter 4: 122

Chapter 5: 60

Chapter 6: 12

Chapter 7: 6

Chapter 8: 12

Chapter 9: 4

Chapter 10: 0

Chapter 11: 0

Chapter 12: 83

Chapter 13: 8

Chapter 14: 44

Glossary: 1

Appendices A-F, H: 0

Appendix G: 14