

## State of Washington

## DEPARTMENT OF FISH AND WILDLIFE

Mailing Address: P.O. Box 43200, Olympia, WA 98504-3200 • (360) 902-2200 • TDD (360) 902-2207 Main Office Location: Natural Resources Building, 1111 Washington Street SE, Olympia, WA

October 21, 2025

Comments on proposed Mission Ridge Expansion Master Planned Resort Draft EIS Mike Kaputa, Chelan County Department of Natural Resources 411 Washington St. Suite 201 Wenatchee, WA 98801

# SUBJECT: MISSION RIDGE EXPANSION MASTER PLANNED RESORT DRAFT ENVIRONMENTAL IMPACT STATEMENT – WDFW COMMENTS

Dear Mr. Kaputa,

On September 6<sup>th</sup>, the Washington Department of Fish and Wildlife (WDFW) received notice from the Chelan County Department of Community Development that it is accepting comments regarding the proposed Mission Ridge Master Planned Resort Expansion Draft Environmental Impact Statement (DEIS). Thank you for the opportunity to comment on the Draft Environmental Impact Statement. Our agency's interest in this is based on our agency's mission that mandates WDFW to "preserve, protect, and perpetuate fish, wildlife, and their ecosystems while providing sustainable fish and wildlife recreational and commercial opportunities" (RCW 77.04.012). We reviewed the proposal for potential impacts to fish, wildlife, and their habitats, as well as possible impacts to recreational opportunities, according to our mission; we appreciate the opportunity to offer these comments.

## Previous Engagement

WDFW has previously submitted four comment letters to Chelan County regarding Mission Ridge MPR expansion proposal (Appendix A):

- WDFW Comments on the Mission Ridge Master Planned Resort Notice of Application; Chelan County File No. MPR2018-128, submitted October 30, 2018
  - o Identified need for site plans to reflect current land use agreements (i.e. Chair 6).
  - Effects on surface and groundwater resources from the conversion of naturally forested habitat to non-forested use need to be evaluated.
  - o EIS will need to consider and evaluate impacts to PHS, both in and outside of the project area, resulting from increased use of the area by year-round residents.
  - Addressing all potential impacts to PHS carnivore species, including mortality from road kills due to increased traffic and carnivores having to be euthanized as a result of humanconflicts.
- WDFW Comments on the Master Planned Resort Expansion to the Mission Ridge Planned Development; Chelan County File No. MPR2018-128, submitted April 9, 2020
  - WDFW recommended botanical surveys completed on State and Federal lands for listed and sensitive plant species and their habitats are needed on private lands and a report describing the survey methods, lands surveyed, findings, and actions required to avoid, minimize, and compensate for unavoidable impacts.
  - Concerns about increase in the unauthorized establishment and use of roads and trails on adjacent lands and the need to identify monitoring and mitigation measures to reduce the effect of dispersed recreation.

- WDFW Comments on the Scope of the EIS for the Mission Ridge Master Planned Resort Expansion, Chelan County File No. MPR2018-128, submitted June 12, 2020
  - o Concerns about maintaining the permeability of the landscape to wildlife.
  - o Concerns related to the certainty of an increase in human-wildlife conflict.
- Request for Comments, Master Planned Resort application, File No. MPR 2018-128, Chelan County Department of Community Development, submitted March 24, 2022
  - Before conducting a hydraulic project, a Hydraulic Project Approval (HPA) must be
    obtained from WDFW to ensure that construction or performance of work is done in a
    manner that protects fish life (WAC 220-660-010).
  - WDFW recommends using the WDFW updated Riparian Ecosystems, Volume 2: Management Recommendations (2020), as the basis for establishing riparian buffer widths.
  - WDFW recommends mitigation sequencing when considering project proposal impacts.
     Of the open space identified in the revised project proposal, WDFW recommends that the habitat be preserved in its natural, functioning condition to provide compensation for unavoidable impacts to habitat.
  - O WDFW requests that the environmental analysis includes a review of data obtained through the elk camera study conducted in 2020 and 2021 by the Washington Conservation Science Institute. WDFW is interested in knowing what the data provides regarding the extent and timing of elk movement within the Stemilt and Squilchuck subbasins.
  - O WDFW requests opportunities to engage with the County in seeing that all impacts to fish, wildlife, and habitat resources are appropriately mitigated.

We ask that issues raised and questions submitted by WDFW in previous comment letters be addressed in the development of the final Environmental Impact Statement (EIS) for the proposed project as described in the most current State Environmental Policy Act (SEPA) checklist (January 17, 2020, amended). WDFW reviewed the application materials that were prepared for the proposed Mission Ridge Master Planned Resort Expansion (Project). WDFW appreciates that the DEIS includes a more comprehensive scope of environmental analysis compared to the scoping phase, as it does include the larger Project Area where connected actions would occur. We ask that the following additional issues and questions be addressed as part of the environmental analysis for the expanded project footprint as described in this DEIS announcement.

WDFW completed an aerial map review of our WDFW Priority Habitat and Species (PHS) on the Web Map for parcel number 212030100050 and parcel number 212019000000 (Project), and the larger 'Project Area' that totals 1,090 acres and includes 436 acres of privately-owned lands, 287 acres of adjacent U.S. Forest Service (USFS) lands, and 365 acres of adjacent WDFW lands (DEIS, Appendix G; Figure 1). The Project Area contains priority habitats for northern spotted owl and elk breeding and calving grounds, and streams within the upper watersheds of Squilchuck and Stemilt that supply clean, cold water critical for downstream fish, wildlife, and human use. The scope of the proposed project designates it as a major development, as defined in Chelan County Code 14.98.560, and will require the development of a Habitat Management and Mitigation Plan (HMMP) consistent with Chelan County Code 11.78.060 that will include compensatory mitigation that shall restore, create, rehabilitate or enhance to achieve equivalent or greater ecological functions at a 2:1 ratio for critical areas. WDFW Habitat Biologists should be consulted in the development of an HMMP to ensure that all habitat values and functions are considered and mitigated for effectively.

### **Affected Environment Considerations**

During our review, we noted numerous instances where the DEIS does not capture impacts accurately or includes anticipatory plans that are not advanced to the level needed to evaluate impacts. Our ability to complete a thorough review of this DEIS is hindered by the inclusion of plans that hinge upon the outcome of long-range planning for offsite and onsite improvements that will be needed to support public safety, roads and access, energy, and water use.

## Current Land Use Agreements

The DEIS should clarify that site plans on WDFW owned lands in Section 25 do not align with our current land use agreements with Mission Ridge and USFS (e.g., Chair 6, road usage on WDFW lands, and expanded year-round recreational use; Appendix B). Although a potential land exchange with WDNR (Vol. 1, 4.4.1, 4-67) and subsequent establishment of a new agreement between WDNR and Mission Ridge that allow for those uses may be possible, they are not certain and WDFW feels it is premature and unnecessary to address a land exchange in the DEIS. After receiving direction from the Washington State Legislature, there was interest from both WDFW and WDNR to evaluate a potential land exchange, and WDFW received approval from USFWS to proceed with that evaluation, but there is currently no effort to consider it further. Moreover, if efforts were reinitiated, they would require entirely separate environmental and public review processes independent of this current EIS process. As such, WDFW feels the WDFW and WDNR land exchange should be omitted from the DEIS.

## Energy and Natural Resources

The DEIS includes site plans that are contingent upon the outcome of a programmatic-level review that is part of the Chelan PUD long-range planning process and may include new/alternate transmission lines and a power substation that will be necessary to serve later Project phases (Vol. 1, 5-62). It is impossible for WDFW and the public to evaluate the environmental impacts associated with phases 3-5 of this Project because the spatial configuration of new transmission lines and a new power substation will have both short and long-term impacts to wildlife and habitat that we cannot fully assess without spatially explicit plans.

## Public Services and Utilities

This DEIS does not consider the long-term impact that developing permanent residential housing and increased summer recreation use would have on increasing the risk of catastrophic wildfire. Washington Department of Natural Resources estimates that 85% of all wildfires that occur annually in Washington are human caused (WDNR, 2025). Increasing the number of permanent dwellings, and increasing year-round recreational user density, increases the potential for human ignitions during peak fire season which in turn increases the risk of loss of human life, infrastructure, wildlife, fish, and habitat. The fire protection plan describes the extreme fire hazards that this development would present given the steep topography, the isolated location, the high potential for wildfire.

Appendix D references the need to create defensible spaces given the 'fine-scale analysis showing current fire severity and behavior has departed from historical and future fire severity and behavior' (Gaines et. Al., 2019). Appendix D describes methods for creating a continuous fuel break, coupled with clearing all vegetation around infrastructure, resulting in a loss of habitat values and functions. Appendix D describes methods for maintaining the fuel break to be compatible with the preservation of 'Natural Open Space' but will in fact require continual disturbance to maintain the fuel break, diminishing the habitat value and function of this area. This paves the way for long-term impacts to wildlife from the continual fuel reduction treatments that will be required to protect expansion of the wildland-urban interface (WUI). These treatments can negatively impact wildlife by temporarily destroying habitat, altering species'

behavior, and disturbing sensitive animals (White et. Al., 2013). These impacts must be evaluated in the final EIS and addressed in the HMMP.

Appendix D references a future Fire Station, as well as the need for revisions to many of the roads that currently do not meet the requirements of CCC 15.30.100 (DEIS, Vol. 3). The current site plan fails to demonstrate how the proposed project will overcome the single access route in/out and will require substantial revisions, for which we cannot adequately evaluate the impacts of as this is not represented in the current DEIS. Furthermore, the Fire Protection Plan is hinging upon '4 million gallons of reservoir capacity to be anticipated' (Vol. 3, App C, p. 426, 603) but there is no reference of where that water will be sourced within the DEIS. Allowing this Project to move forward without accounting for the water needed to adequately meet safety requirements would endanger people's lives and increase the risk of further habitat degradation and loss.

WDFW is unable to accurately evaluate the environmental impacts due to the lack of details provided in the DEIS. The concern for increased risk of catastrophic wildfire is not adequately accounted for in the Fire Protection Plan, and further planning is needed to account for water needs and access before impacts can be accurately described. WDFW recommends that the final EIS be limited to the phases of this Project that have spatially explicit plans and agreements in place so that environmental impacts can be evaluated thoroughly. Future development impacts need to follow applicable mitigation requirements and permitting requirements as outlined by federal, state, and local agencies.

# **Comments on Environmental Impacts by Resource**

#### Plants and Animals

WDFW is concerned with the limited scope of wildlife and habitat assessments and drawn conclusions found within the DEIS. We have listed some of the inconsistencies found in Volume 1 of the DEIS in the following sections. We advise that short-term and long-term impacts be re-evaluated for a more complete assessment. Without this information, the County will be unable to "identify, protect, and maintain the present high quality of Chelan County's fish and wildlife habitat conservation area" (CCC 11.77.010 (4)).

Volume 1 of the DEIS includes Table 5.4-1 that provides a list of 'Terrestrial Special Status Species and Habitats that Potentially Occur Near the Study Area'. This Table includes some species listed as State Candidates but omits other State Candidates that are known to occur within, or near, the Project Area (i.e., black-backed woodpecker, western bumblebee, and wolverine). It also omits Species of Greatest Conservation Need (SGCN) species, but it's worth noting that some SGCN species that are found in the proposed Project Area rely on PHS habitats. For example, American pika may not be a PHS species, but it relies on talus habitats, which is a listed PHS habitat. We have compiled a list of species in Appendix C that is a comprehensive list of special status (at-risk) species that are present or have the potential to be present in the proposed Project Area. Species that appear in **bold** represent at-risk species that were not represented in the DEIS.

As the DEIS authors noted previously, large mammals and flighted birds will be able to avoid direct harm, although they will lose irreplaceable nesting, foraging, and breeding habitat and migration corridors. However, the direct and indirect impacts to nestling birds as well as small, fossorial or semifossorial mammals, reptiles, amphibians, and insects are glossed over and missed entirely. In addition to losing habitat, there is a high probability that individuals of these species occurring within work zones will be killed as a result of construction by being crushed or buried alive by construction equipment (Ascensao et al., 2015; Smith et al., 2015; Lovich and Ennen 2013). Rather than fleeing the area, small mammals are known to respond to approaching vehicles and machinery by hiding in burrows or beneath forest litter and snakes tend to freeze in place, both behaviors which expose these animals to a high risk of

death (Escobar et al., 2015; Andrews and Gibbons, 2005). Direct mortality of individuals within these taxa will occur should construction move forward.

The DEIS inaccurately assumes that there would be no-effect on several PHS animal species due to moderate-to-low probability of occurrence within the Project Area (i.e., western toad, dusky grouse, sooty grouse, American goshawk, Columbia spotted frog, golden eagle, flammulated owl, pileated woodpecker, white-headed woodpecker, American marten, roosting bats, Cascade red fox, and wolverine). This finding contradicts best available science; occurrence records exist for many of these species within the study area. Dusky grouse, American goshawk, American marten, white-headed woodpecker, and golden eagle do not have a moderate or low potential of occurrence on the study area, they are known to occur on the study area. Records of sooty grouse, pileated woodpecker, and white-headed woodpecker occur near the Project Area. Based on proximity of recent sightings and the presence of similar habitat on the proposed Project Area, the species are likely to occur in the Project Area. Absent a pre-construction survey effort, this DEIS should assume that they do indeed occur in the Project Area and develop Best Management Practices (BMP's) to reduce mortality during construction and address loss of habitat values and functions for these species in the HMMP.

WDFW is concerned with the long-term impacts that this Project will impose on wildlife, loss of habitat values and functions, and continued habitat degradation and loss. Subsection 5.4.3.2 states that 'However, similar to construction-related impacts, operation-related impacts on commonly occurring terrestrial animals are expected to be minimal.' This finding is contradicted by recent available science (Machowicz et.al., 2022; Burt et. Al., 2023; Zeller et. al., 2024). At the bottom of page 5 – 52 it states that 'Operation of the proposed project would include such activities as parking lot and access road use; snow making; ski run/trail grooming; ski lift operation; winter alpine and Nordic ski run use (winter); Nordic trail use (skiing, snowshoeing, and snow-biking in winter; hiking, horseback riding, motorized/non-motorized vehicle use in summer); backcountry (i.e., non-trail) ski touring; other winter recreation activities (e.g., tubing); ski run/trail, road/parking lot, and building/infrastructure maintenance; invasive plant/noxious weed control; overnight guest accommodation; year-round commercial use (e.g., restaurants/bars, retail shops, office space, outdoor concert venue); year-round residential and vacation home occupancy and use; groundwater pumping; LOSS system use and maintenance; stormwater management; propane and solar electrical generation; and wildfire suppression and fuel management.' We know from myriad previous studies, a sample of which are presented in this letter, that the dramatic increase in the quantity, frequency, and duration of human and motorized vehicle presence that would result from the establishment of a lodge and 800+ year-round residential units have significant, quantifiable negative impacts on wildlife species from all taxa.

#### Elk and Deer:

The Project Area is part of a mosaic of migration corridors for the Colockum elk herd that produces approximately 1,200 calves annually. Chelan County Code 11.78.050(1) identified mule deer and elk winter range and migration corridors as habitats of local importance making it a Fish and Wildlife Habitat Conservation Area (FWHCA). The DEIS does not properly assess the impacts of the Project to elk and mule deer habitat. WDFW is concerned with the construction impact summaries listed in Table 5.4-2 and all the construction impacts listed on page 5-43. These impacts would result in the loss of ungulate habitat and force ungulates out of the Project Area into unsuitable habitat. Additionally, Table 5.4-2 claims that elk and mule deer are highly mobile and capable of finding alternative routes. This statement does not consider the local geography where there is unsuitable habitat for alternative routes and the impacts of the Project would result in loss of migration corridor habitat for elk and mule deer. Ungulates cannot safely navigate the surrounding steep talus slopes and are unable to access a large portion of the Stemilt and Squilchuck area fenced off by agriculture.

WDFW is concerned with the operation impact summaries listed in Table 5.4-4 for elk and mule deer stating that operation activities would only temporarily displace these species and are unlikely to cause

population level impacts. Best Available Science leads us to believe the proposed Expansion will permanently impact deer and elk in the following ways:

- 1. Heightened physiological stress responses in deer and elk, decreased foraging, and avoidance of areas used by humans for various recreational purposes such as hiking, skiing, mountain biking (Anderson et al., 2023; Wisdom et al., 2018; Wisdom et al., 2004; Morrison et al., 1995).
- 2. Avoidance of roads and increased mortality from vehicle collisions (Riginos 2022, Montgomery et al., 2013; Rowland et al., 2004).
- 3. Population level effects of lost and fragmented habitat and migration corridors (Jensen et al. 2023; Millhouser 2019).

WDFW requests a species survey of the area to fully understand the impacts of the Project and ensure that these impacts to deer and elk are fully addressed in the HMMP.

WDFW also has concerns with the following proposed mitigation actions under 5.4.3.4 "Applicant-proposed mitigation measures":

- 1. Number 4 states "To avoid disturbance and impacts on elk and deer during calving and fawning season the Applicant will coordinate with WDFW ... to incorporate seasonal use restrictions...". This would necessitate prohibiting human access/recreation in areas adjacent to elk calving and potential deer fawning areas from mid-April to the end of July. WDFW supports this but wonders if this is feasible with the year-round residential units being proposed and if/how Mission ridge will enforce a seasonal use restriction.
- 2. Number 7 listed in this section states that "Mitigation for operational impacts.... will include.... periodic run/trail closures during periods when wildlife may be more sensitive to disturbance (e.g., elk calving)". "Periodic" implies that run/trails will sometimes be open which will negate the mitigation activity. Closures must remain in effect during the entirety of the calving season to effectively reduce disturbance to elk during this sensitive period. WDFW asks that all mitigation measures are described in detail to fully understand how the measure will offset the Project impacts to elk and mule deer.

It appears that the DEIS was using some outdated information in its analysis. For example, Appendix G states that mule deer populations in north-central and eastern Washington are stable to increasing (Vol. 4, G-22). Instead, mule deer populations in north-central Washington are stable to decreasing, depending on the subherd in question. The Project Area is located within the range of the Wenatchee Mountains subherd, which has seen decreasing post-hunt fawn:doe ratios- used to monitor productivity and population trajectory- since 2018 (WDFW, 2024). The claim that mule deer winter range is limited to areas of lower elevations of the sub watersheds and not typically present in the Project Area due to its higher elevation and increased snow cover (Vol. 4, G-22) is inaccurate. It is common for mule deer to use the Project Area year-round especially during mild winters (Gaines et al., 2024). Appendix G of the DEIS claims that the Project will offset the displacement of ungulate species and the decrease of available habitat by increasing the forage availability in the new ski runs (Vol. 4, G-53). WDFW disagrees with this claim. Any potential benefit to mule deer resulting from the early successional vegetation in ski runs is negligible when compared to habitat lost, and when coupled with the increase in human use from the year-round residential units, mule deer are unlikely to use these areas. WDFW asks that this information be updated in the DEIS and recommends proper consultation with WDFW to avoid misinformation.

#### Spotted Owl:

Northern spotted owls are projected at a township scale to protect sensitive location information; the Project Area lies at the center of two overlapping Northern Spotted Owl Status Buffers and there have been observations within a tenth of a mile of the Project Area. Northern spotted owls are a state endangered and federally threatened species, making the Project Area subject to CCC 11.78 FWHCA. WDFW appreciates the approach and level of detail in the northern spotted owl affects analysis. The proposal states the Project may affect, but is not likely to adversely affect, the spotted owl. Surveys

should be conducted prior to construction to ensure spotted owls are not present in the Project Area (CCC 11.78.060 (12)). If spotted owls are observed, additional mitigation measures may be needed.

While surveys are important, detection probability is influenced by breeding status and the presence of barred owls suppresses the calling behavior of spotted owls a). Surveys may inform mitigation needs during operation and construction, but this does not address mitigation needs for permanent loss of suitable habitat. The report addresses that the impacted area is not currently in use, therefore not likely to adversely affect spotted owls, but does not address if the impacted area is in potential habitat. Since this is not a timber harvest but rather permanent development impacts, the DEIS should consider the impact of the proposed project on suitable habitat and discuss mitigation measures for impacts. Despite the qualifiers listed for the 'not likely to adversely affect' finding in the DEIS (Vol. 1, 5-47), the end result is still a net loss of spotted owl habitat. To improve habitat conditions for the species in the proposed open space designation, the applicant should seek to reduce fire risk and promote forest canopy cover and structure that supports the species habitat use. The permanent loss of habitat values and functions for this species should be addressed in the HMMP, consistent with CCC 1178.060.

## American Goshawk:

WDFW has received multiple sources of data that confirm American Goshawk (formerly Northern Goshawk), a candidate for listing in WA state, use within the Project Area. The DEIS references surveys that were completed in the late 90's and identified approximately 100 acres of potential habitat in the Project Area. There is no reference to recent survey efforts in the DEIS. The DEIS described the habitat within the study area as 'very little old forest structure and impacts to lower quality goshawk habitat would not negatively impact goshawk populations.' (Vol.1,5-47). In the 2025 Mission Ridge Plants and Animals Resource Report (Anchor QEA; DEIS, Vol 4, G-23) the author states: "This habitat is considered lower quality because it does not provide the large and old forest structure northern goshawk use for nesting." This determination that the study area provides only lower quality goshawk habitat is incorrect, as American goshawks generally breed in relatively dense forests with relatively high canopy closures, which describes a significant portion of the study area, and forage in an array of habitats (DeStefano et al. 2006). Goshawks are not old-growth obligates and are known to nest in a variety of forest stand structures (Reynolds et al. 2006).

WDFW recommends that a survey be conducted prior to construction to ensure American Goshawks are not present in the Project Area. If American goshawks are observed, additional mitigation measures may be needed during construction. The effects of timber harvest and conversion of forestland to development would result in a permanent loss of habitat values and functions for American goshawk. The DEIS should consider the long-term impacts of the proposed project on the loss of suitable habitat and discuss mitigation measures for those impacts in the HMMP. WDFW's Management Recommendations for Washington's Priority Species – Volume IV: Birds is a source of best available science. WDFW is available to provide recommendations for appropriate survey methods, such as broadcast surveys, and mitigation measures.

# Golden Eagle:

WDFW has received multiple sources of data that confirm golden eagle use within the Project Area. WDFW designated golden eagles as a candidate for listing in Washington State and the Project Area includes suitable habitat for golden eagle breeding. There is a high probability that the Project Area may include golden eagle nesting, roosting, or foraging areas, which is inconsistent with the finding of "low probability of occurrence" in Table 5.4-2 (DEIS, Vol, 1, 5-49). Golden eagle populations appear to be limited by the availability of undisturbed nest sites, and human activities have been shown to cause breeding failure (Kochert and Steenhof, 2002). WDFW recommends a survey for golden eagle nests through the Project Area prior to implementation, especially along cliff ledges and rocky outcrops. If any nests are found, maintain a buffer of at least 1000 meters (~3280 feet) with no human disturbance to

avoid disturbing nesting eagles from February 15 to July 15 (Spaul and Health, 2017; Larsen et al., 2004). The permanent loss of habitat values and functions for this species should be addressed in the HMMP.

## Other PHS Birds:

The DEIS does not include any survey efforts and inaccurately concludes that there is 'low probability of occurrence' for flammulated owls and white-headed woodpeckers (Vol. 1,5-48). To the contrary, the Project Area encompasses suitable mid-elevation montane habitat for flammulated owl, a cavity-nesting species strongly associated with Douglas fir, aspen, and ponderosa pine, and numerous recent records exist nearby (Miller et al. 2024). White-headed woodpeckers are known to occur in the Project Area, with multiple recent records within its boundaries. Like flammulated owl and white-headed woodpecker, black-backed woodpecker is listed as a Candidate Species by the State of Washington. Although it is never mentioned nor considered within the DEIS, the black-backed woodpecker is known to occur in the Project Area, with multiple recent records within its boundaries. The DEIS also concludes that 'only a few species [of forest birds] are likely to occur in the Project Area' (Vol. 1, 5-56); this statement is incorrect, as current data suggests that 105 bird species have been observed in the Project Area, many of which depend on the habitat found there to complete their annual cycle. These incorrect findings in the DEIS highlight the need for further assessments to be completed to accurately evaluate the impacts of the proposed project.

#### Wetlands:

The Project Area includes wetlands, a priority PHS habitat, that are listed as Category III wetlands and are ephemeral, making them an opportunistic habitat for PHS listed Dusky grouse. Dusky grouse are known to occur in the Project Area, with a documented occurrence just NW of the current facility. WDFW management recommendations state that streams, springs, and wet meadows should be safeguarded from potential damage to protect rearing habitat for grouse.

#### Aspen:

In Table 5.4-2, the Impact Summary under Aspen claims that a 0.9-acre aspen stand does not meet WDFW's definition of a priority habitat since it is less than 1 acre. This contradicts Appendix G, where a 2022 botanical survey mapped this aspen stand as being approximately 1.5-acre in size, making the stand a priority habitat (Vol 4, G-6). Additionally, this report found a smaller 0.2-acre aspen stand within the Project Area. The DEIS should be updated to accurately reflect this. The construction of the main access road should avoid the aspen stand that is a priority habitat, if not impacts need to be addressed in the HMMP.

#### Talus:

The DEIS states that impacts are expected to be minor due to the abundance of talus features in the Project Area, underrepresenting the ecological importance of talus habitat (Vol 1, 5-49). Talus slopes are a WDFW Priority Habitat and supports native wildlife and avian species, like hibernating bats and the American pika, a Species of Greatest Conservation Need (WDFW, 2015). Any loss of talus features will result in a direct impact to the wildlife species that utilize this habitat. Talus slopes are an extremely sensitive habitat feature type and are hard to recreate through mitigation. Therefore, WDFW does not have mitigation recommendations for talus slopes, and work in talus slopes should be avoided. This DEIS does not clearly identify the full scope of the impact in terms of how many acres of talus slope will be impacted. WDFW recommends more detailed descriptions of the proposed activities and species surveys to better understand the impacts of the Project. If impacts cannot be avoided or minimized to talus slopes, WDFW recommends avoiding working in these areas because any impacts to talus slopes would result in a net loss of that habitat.

#### Bats:

When identifying important habitats, bats were not considered as users of those habitats (DEIS Vol. 1, 5-49). The finding that 'roosting concentrations of bat species have a "low probability of occurrence" in the study area' is inaccurate. This should be addressed, as bats are known to use aspen, forest, wetland, and talus habitats (Hayes and Wiles 2013). Construction activities can minimize impacts to roosting habitat by avoiding construction in the fall and winter.

## Natural Areas and Open Areas:

The DEIS identified 'preservation of open space as a primary component of the Proposed Project' (DEIS Vol, 5-64) and further states that "An overall goal of the Proposed Project to keep the area as natural as possible with a combination of natural vegetation and infrastructure design (LDC, 2022). The proposed project is referencing a major development that is planned to occur in an otherwise contiguous forested landscape. The total proposed project includes 1,090 acres of proposed development and 25.46 acres of disturbed area within the Utility Corridor. However, 620 acres of dedicated open space is comprised of ski runs (38 acres), undesignated open space (44 acres), dedicated conservation areas (530 acres), and managed open space (8 acres) (LDC, 2022). By this analysis, over 75% of the site is dedicated as open space, which exceeds the requirements in CCC 11.89.050(2) that requires 40% of the site be left as open space. The claim that "leaving 75% of the site in 'open space' also translates to permanent preservation of existing vegetation." (Vol 1, 5-41) is inaccurate; many of the acres that constitute to the '75% of the Project Area' would be subject to extensive vegetation management.

The DEIS states that 'the undeveloped areas within the Project Area (i.e., outside of commercial, residential, and recreational areas) are zoned 'Commercial Forest' and would be preserved as permanent open space (Vol. 1, 5-64) by noting that 'though zoned for commercial forestry, the land is not currently used or planned for commercial timber harvest.' However, in 4.2.1.1 the DEIS links open space to the creation of Temporary Fire Refuge Areas (TFRA) where vegetation will be maintained to create safety zones. In Appendix D of the DEIS, there is reference to creating a continuous fuel break, coupled with clearing all vegetation around infrastructure, that would 'contribute to the preservation of Natural Open Space'. The DEIS appears to create an incorrect link between the concepts of natural areas, open space, and defensible space. Vegetation management will be needed to maintain ski runs, TFRA, and the various fuel breaks needed to create 'defensible space' around the Wildland Urban Interface (WUI). This removal of trees may not constitute a commercial timber harvest, but it will require long-term vegetation management that is not consistent with 'permanent preservation of existing vegetation' (Vol 1, 5-41). This major development contradicts the concept of a natural landscape, the percentage of natural open space in the site plans should reflect areas that will not be subject to vegetation management actions needed to create defensible space or to operate ski runs. As noted in our previous letter (Appendix A), this removal of native vegetation may alter snow retention, ground water storage, water runoff, and water infiltration throughout the watershed. Fragmented sections of "open space" dominated by year-round human activity are not synonymous with natural landscapes and preserved habitat. The impacts to the natural landscape, including loss of unique habitat features and connectivity for PHS, must be accurately described, evaluated, and mitigated.

#### Connectivity:

The DEIS does not evaluate how the Project may impact landscape connectivity. The assessment of impacts and mitigation needs for plants and animals should consider landscape connectivity data. In 2025, WDFW and partners published the Washington Habitat Connectivity Action Plan (WAHCAP) to establish priorities for protecting and reconnecting Washington's landscapes for wildlife. The plan synthesizes multiple landscape connectivity datasets and resources to form a statewide connectivity map that can be found on the WAHCAP website. Appendix D includes both small-scale and large-scale map images depicting the connectivity value of the Project and Project Area from a landscape connectivity standpoint.

The proposal is in an area of the central cascades that has high landscape connectivity value, is classified as a Tier 2 core area, and serves as a bridge between Tier 1 core areas, according to WAHCAP data (Appendix D). This data highlights the importance of the Project Area for habitat and wildlife movement. Expansion of the Mission Ridge Resort will further fragment this landscape, resulting in permanent negative impacts for wildlife in the area. Some taxa may be able to move through the Project Area post-implementation, but it will become impermeable for many taxa. Impacts to wildlife movement, breeding, genetic exchange, and population health will be unavoidable, and should be evaluated and mitigated.

Section 5.4.3.4 states that the 'Applicant will protect all known special status species sites, and those discovered prior to or during implementation of Project activities.' "Special status species site" is not well defined so it is difficult to assess the biological significance of this designation. These "special status species" use and occupy more than one "site" and often rely on a variety of "sites" that are connected spatially and temporally across the landscape. Therefore, "Special status species sites" are not only discrete units like nests and den sites, but also more dynamic areas like pathways for amphibians to get to and from aquatic habitats, or movement corridors for deer and elk. The DEIS lacks sufficient details around what specific activities or actions the Applicant will assume to identify these "special status species sites". Additional mitigation measures are needed to ensure the Project Area and surrounding areas continue to support connectivity. We encourage the Applicant to work directly with WDFW biologists to ensure that the dynamic natures of these "sites" are factored into the HMMP.

Additional consideration under transportation needs to be given to access roads on property where ownership is not controlled by Mission Ridge. In Appendix D 2022 Analysis of 5 Secondary Road Options to Mission Ridge Ski and Board Resort, Route 1 crosses into Section 20 of WDFW using a county road, Upper Wheeler Rd., and continues off the county road through WDFW property, on a two track. WDFW purposefully installed a gate within the last few years to block off road use from occurring to protect natural resources and landscape connectivity. The portion gated off is mapped out as potential secondary road access which is not allowed within the Land Use Agreement with WDFW.

#### Water

# Aquatics and Hydrology:

WDFW appreciates the analysis of the aquatics and hydrology resource found in Appendix E, including the analysis of each selected resource indicators. The Mission Ridge Expansion acknowledges that, implementation of the proposed project would result in temporary, short-term effects to Aquatic Resources such as increased sediment delivery, erosion, and flow, decrease in water quality and loss of riparian vegetation and habitat during the time of construction and from 1 to 5 years after construction. Permanent, long-term effects over five years would result from operations and infrastructure that remains in place, reducing Riparian Reserve acreages and surface flow should shortage of water supply result in overuse. Infrastructure impacts could be reduced by having all stream crossings designed with hydraulic capacity to pass the 100-year flood event and associated debris flow. Work conducted below the ordinary highwater mark in these streams must be conducted during approved in-water work windows and the dry season.

Recreational use of Nordic trails during wet periods could increase flows and erosion. Applying seasonal closures on Nordic trails would prevent or limit increase in flows, erosion, and sediments in streams. Additionally, year-round recreational use will incur long-term effects, such as permanent removal of riparian vegetation and habitat, erosion, and sedimentation. These need to be mitigated by the restoration of degraded Riparian Reserve acreages (2:1 ratio) designed to help off-set direct impacts to Riparian Reserves from the Proposed Action. Mitigation of permanently disturbed riparian habitat on private land must be mitigated per CCC 11.78.040.

# <u>Impacts to the Stemilt Creek Watershed:</u>

While the proposal primarily addresses the Squilchuck Creek watershed, a notable portion of the development including housing, Nordic trails, and a new road, occurs in the upper Stemilt Creek watershed (e.g., Orr Creek and its tributaries). The Stemilt watershed has a unique aquatic environment with reservoirs, diversions, and advanced irrigation management. Please evaluate potential impacts to aquatic life and water management in the Stemilt Watershed.

## Watershed-Scale Impacts and Water Quality:

The upper watersheds of Squilchuck and Stemilt supply clean, cold water critical for downstream fish, wildlife, and human use. Increased road density, impervious surfaces, ground disturbance, and water consumption in these high-elevation areas can have cumulative impacts. Notably, both Squilchuck and Stemilt Creeks are listed on Ecology's 303(d) list for water quality impairments (e.g., temperature, pesticides, fecal coliform, pH). These impacts are especially important given recent surveys confirming multi-season use of lower creek sections by coho, federally threatened steelhead, and federally endangered spring Chinook (van den Broek et al., 2025). Additionally, the Squilchuck Creek watershed contains approximately 7.5 miles of stream habitat suitable (intrinsic potential) for steelhead and 0.3 miles of suitable habitat for federally threatened bull trout, the nearest of both are 2.5 miles downstream of proposed activities. The Stemilt Creek sub watershed contains approximately 6.3 miles of stream habitat suitable for steelhead and 8.8 miles of suitable habitat for bull trout, the nearest of both is 1.1 miles downstream of proposed activities (Upper Columbia Salmon Recovery Board, 2008). Habitat used by federally listed species, such as these salmonids listed here, are identified as Fish and Wildlife Habitat Conservation Areas (CCC 11.78.010) and the potential impacts should be fully understood before proper mitigation can be prescribed. These potential impacts should include the water consumption of all 5 phases of the proposed project and the risks of depleting the aquifers that are critical for maintaining instream flow for fish life in Squilchuck Creek.

Much of the proposed project will replace natural surfaces with developed surfaces, increasing the rate of delivery of surface runoff to watercourses and reducing the capacity of the landscape to infiltrate surface water to groundwater, especially in flat/low-gradient areas such as the proposed location for much of the resort village construction. Developed surfaces are also a source of sediment and pollutant delivery directly to watercourses (e.g., from vehicles, vehicle tires, and ski/snowboard wax) that could contain a variety of chemical compounds harmful to aquatic and terrestrial organisms. WDFW requests that the final DEIS discuss how the proposed development will address how the increase of developed surfaces will increase surface runoff, decrease groundwater infiltration, and increase the delivery of sediment and pollutants to the Squilchuck and Stemilt watersheds, and how these impacts will be monitored and mitigated for.

The DEIS anticipates the proposed expansion of ski trails will require 150afy in addition to the 129-206afy used during the recent operating past (Vol. 1, 5-14). The DEIS further states that expanded snowmaking will utilize existing Mission Ridge water rights which include direct surface diversions from Squilchuck Creek (pumped to reservoirs) as the source of artificial snowmaking. While the DEIS suggests artificial snowmaking could enhance groundwater infiltration and late-season baseflows in Project Area watersheds, it does not discuss how increased surface diversions to support an approximate doubling of snowmaking operations will impact stream flows, and the fish and wildlife that depend on them in the fall/winter operational snowmaking months.

As this DEIS looked only at the localized impacts construction impacts to the watersheds, WDFW recommends a watershed scale assessment, including road density and water use analysis, of both the Squilchuck and Stemilt watersheds to better understand the cumulative and long-term impacts this Project will have on these watersheds.

#### Other

## Recreation:

The conservation value of adjacent WDFW lands as well as wildlife use will be significantly impacted in the Stemilt Basin, outside of the outlined expansion area. For WDFW, higher amounts of recreationalist will call for the need of additional green dot road maintenance, increased signage, trail maintenance, enforcement, additional wildlife area staffing hours, etc. Sections of the Colockum Wildlife Area are included in the Project Area. The Colockum Wildlife Area Management Plan, and the information it includes about WDFW's mission and why those lands were acquired, should be considered when evaluating effects on land use, plants and animals, and habitats.

WDFW is concerned that impacts could incur throughout the Project Area and surrounding lands from this development project. The DEIS characterizes effects as either construction-related or operation-related, and based on these, concludes no significant or unavoidable adverse effects (Vol. 1, 5-62). Furthermore, the DEIS explicitly states that direct and indirect impacts were considered "collectively" (Vol. 1, 5-42). Experience managing lands near residential areas leads WDFW to anticipate that there will be indirect effects from recreation on plants, animals, and habitats. Examples of such effects could include, but are not limited to: 1) visitation to the wildlife area that is more frequent, longer-lasting, increasingly crepuscular or nocturnal, and spread throughout a larger proportion of the year relative to current usage, with the potential to influence wildlife foraging and movement patterns; 2) higher probability of unauthorized trail building on the wildlife area from surrounding development; 3) introduction of weedy seeds and vegetation to portions of the wildlife area that are currently less accessible; 4) increased likelihood of ignitions; 5) increased wear and tear on things like fencing and roads; etc.

The DEIS considers effects *on* recreation in Section 5.10 and acknowledges that the Project would result in increased recreation in the immediate region (Vol. 1, 5-108), but the DEIS neglects to formally consider the effects *of* this increased recreation. Appendix B contains the current WDFW Land Use Agreement for Mission Ridge, which specifies allowed current uses and highlights future uses that are incompatible with the current land use agreements, for instance:

- WDFW's Land Use Agreement for Mission Ridge under "Occupancy Restrictions" Section 1.03 states that the agreement is for the purpose of operating a winter recreation ski area. Dates for recreational use are restricted between the Saturday immediately prior to Thanksgiving through April 30th. Outside of this window the grantee's use within WDFW leased lands are restricted to the limited purposes of maintenance, construction, vegetation management and fire suppression. Within the Project Area there are 365 acres of WDFW lands that is part of expansion area. The portion of the expansion to occur on WDFW (Section 25), would need to be approved through WDFW's Land Use Agreement with Mission Ridge. Our current agreement does not allow summer use to take place. The proposed expansion does not align with the Occupancy Restrictions clause in the WDFW Land Use Agreement.
- DEIS, Vol. 3, Appendix A, p. 40 mentions "trail construction on adjacent lands" under "reasonably foreseeable activities". There is no mention of what trails are being referred to and what lands are considered "adjacent lands". This is concerning regardless of whether it is referencing WDFW lands. We have already seen in the Stemilt Basin unauthorized trails and ORV use spreading onto WDFW ground. The likelihood of unauthorized trails increasing on WDFW property from additional trails established on adjacent property would be high.
- The DEIS lacks reference to the WDFW Land Use Agreement and the approval that will be needed for the Project on WDFW land. The 2020 USFS Mission Ridge Expansion "Alternative 2, Proposed Action" seems to be the only statement in the DEIS referencing that approval from WDFW is required (Vol. 3, App. A, p 21).

The expansion would draw in higher numbers of recreational users from the increase in recreational opportunities, housing developments, and more. This increase will have greater impacts to wildlife and habitat than the historic winter use and will expand use to all seasons. Increased disturbance from motorized and non-motorized recreation to several wildlife species including elk, mule deer and black bear was documented in the "Recreation and Wildlife in Washington: Considerations for Conservation" (Machowicz et.al., 2022). Impacts associated with increased noise was limited to construction and operation (DEIS Vol. 1; 5-97) but failed to consider the long-term impact that increased year-round noise from human recreation may pose to wildlife. Impacts associated with the permanent, year-round increase in noise disturbance should be addressed in the final EIS.

Thank you for the opportunity to comment on the proposed Mission Ridge Master Planned Resort Expansion Draft Environmental Impact Statement. WDFW staff are available to engage in a more formal consultation effort to evaluate impacts to fish, wildlife, and habitat that the proposed project will incur and to participate in the development of the HMMP. WDFW looks forward to continued engagement with the Chelan County and Mission Ridge throughout the planning process and appreciates your consideration of our comments.

Sincerely,

Brock Hoenen

Brock Hoenes, Regional Director, WDFW Region 2

## Cc:

Michael Livingston, Regional Director, WDFW Region 3

Justin Haug, Wildlife Program Manager, WDFW Region 2

Brian Gaston, Habitat Program Manager, WDFW Region 2

Mallory Hirschler, Assistant Habitat Program Manager, WDFW Region 2

Emily Jeffreys, District Wildlife Biologist, WDFW Region 2 Chelan and Douglas Counties

Ross Huffman, Wildlife Program Manager, WDFW Region 3

Jeffrey Burnham, Assistant Wildlife Program Manager, WDFW Region 3

Daniel Didrickson, Habitat Program Manager, WDFW Region 3

Cody Gillin, Assistant Habitat Program Manager, WDFW Region 3

Melinda Gray, Colockum Wildlife Area Manager, WDFW Region 3

Brandon Austin, Forest Habitat Section Manager, WDFW Ecosystem Service Division

Lisa Dowling, Forest Habitat Biologist, WDFW Ecosystem Service Division

#### Appendix:

- A. Previous WDFW Comment Letters for Mission Ridge Master Planned Resort Expansion (Project)
- B. Current WDFW Land Use Agreement
- C. Comprehensive List of At-Risk Species in the Mission Ridge Expansion Area
- D. Washington Habitat Connectivity Action Plan (WAHCAP) Landscape Connectivity Analysis

## Literature Cited:

- Ascensao, F., LaPoint, S., and van der Ree, R. 2015. Roads, Traffic, and Verges: Big problems and big opportunities for small mammals. Handbook of Road Ecology, Chapter 39. <a href="https://doi.org/10.1002/9781118568170.ch39">https://doi.org/10.1002/9781118568170.ch39</a>
- Anderson, A.K., Waller, J.S., and Thornton, D.H. 2023. Partial COVID-19 closure of a national park reveals negative influence of low-impact recreation on wildlife spatiotemporal ecology. *Sci Rep* 13, 687. <a href="https://doi.org/10.1038/s41598-023-27670-9">https://doi.org/10.1038/s41598-023-27670-9</a>
- Andrews, K. M, and Gibbons, J. W. 2005. Dissimilarities in behavioral responses of snakes to roads and vehicles have implications for differential impacts across species. *UC Davis: Road Ecology Center*. Retrieved from https://escholarship.org/uc/item/9j69w675
- Burt, C.S., Kelly, J.F., Trankina, G. E., Silva, C.L., Khalighifar, A., Jenkins-Smith, H.C., Fox, A.S., Fristrup, K.M., and Horton, K.G. 2023. The effects of light pollution on migratory animal behavior. Trends in Ecology & Evolution, 38(4) 355-368, ISSN 0169-5347, <a href="https://doi.org/10.1016/j.tree.2022.12.006">https://doi.org/10.1016/j.tree.2022.12.006</a>
- Crozier, M. L., Seamans, M. E., GutiÉRrez, R. J., Loschl, P. J., Horn, R. B., Sovern, S. G., and Forsman, E. D. 2006. Does the presence of Barred Owls suppress the calling behavior of Spotted Owls?. *The Condor*, 108(4), 760-769.
- DeStefano, S., McGrath, ST.; Daw, Sonya K., and Desimone, S. M. 2006. Ecology and Habitat of Breeding Northern Goshawks in the Inland Pacific Northwest: a Summary of Research in the 1990s., Studies in Avian Biology 31(1), Article 7. https://digitalcommons.usf.edu/sab/vol31/iss1/7
- Escobar, M. A. H., Uribe, S.V., Chiappe, R., and Estades, C.F. 2015. Effect of clearcutting operations on the survival rate of a small mammal. PLoS ONE 10(3): e0118883.https://doi.org/10.1371/journal.pone.0118883
- Fletcher R.J. Jr., Reichert, B.E., and Holmes, K. 2018. The negative effects of habitat fragmentation operate at the scale of dispersal. Journal of Ecology, 99(10) 2176-2186, https://doi.org/10.1002/ecy.2467
- Gaines, W.L., Begley, J.S., Churchill, D., Harrod, R.J. 2019. Stemilt-Squilchuck Landscape Evaluation, Final Report. Washington Conservation Science Institute. Accessed:

  <u>Stemilt\_Squilchuck\_LandscapeEval\_finalJune2019(1).pdf</u>
- Gaines, W.L., A. L. Lyons, J. S. Begley. 2022. Stemilt-Squilchuck Elk Camera Study: Elk Movements, Calving and Time of Use. Washington Conservation Science Institute. Accessed: <a href="https://exameraStudy.ninalreport7"><u>ElkCameraStudy.ninalreport7</u></a> 22.pdf
- Hayes, G. and Wiles, G.J. 2013. Washington bat conservation plan. Washington Department of Fish and Wildlife, Olympia, Washington. 138+viii pp.
- Jensen, W. F., Bleich, V. C., and Whittaker, D. G. 2023. Historical trends in black-tailed deer, mule deer, and their habitats. Ecology and Management of Black-tailed and Mule Deer in North America. Chapter: 18 pp.
- Kochert, M. N., and Steenhof, K. 2002. Golden eagles in the U.S. and Canada: status, trends, and conservation challenges. Journal of Raptor Research 36:32-40.
- Larsen, E., Azerrad, J.M., and Nordstrom, N., editors. 2004. Management recommendations for Washington's priority species, Volume IV: Birds. Washington Department of Fish and Wildlife, Olympia, Washington, USA.

- Lovich, J. E. and Ennen, J. R. 2013. Assessing the state of knowledge of utility-scale wind energy development and operation on non-volant terrestrial and marine wildlife. Applied Energy, 103: 52-60. https://doi.org/10.1016/j.apenergy.2012.10.001.
- Machowicz, A., Vanbianchi C., and Windell R. 2022. Recreation and Wildlife in Washington: Considerations for Conservation. Conservation Northwest.
- Miller, R., Wallace, Z., Skorkowsky, R., Blakesley, J., Mika, M. Buchanan, J., Carlisle, J., and Green, M. 2024. Flammulated owl distribution and habitat associations during the breeding season in the western United States. Forest Ecology and Management. 558. 121798. 10.1016/j.foreco.2024.121798.
- Millhouser, P. 2019. Evaluating Landscape Connectivity and Habitat Fragmentation Effects on Elk in the Roaring Fork and Eagle Valleys. Capstone Project Report submitted in partial fulfillment of the requirements for Master of Geographic Information Systems at Pennsylvania State University.
- Montgomery, R. A., Roloff, G. J., and Millspaugh, J. J. 2013., Variation in elk response to roads by season, sex, and road type. The Journal of Wildlife Management, 77: 313–325.
- Morrison, J.R., de Vergie, W.J., Alldredge, A.W., Byrne A. E., and Andree, W.W. 1995. The Effects of Ski Area Expansion on Elk. *Wildlife Society Bulletin (1973-2006)* 23, (3): 481–89. http://www.jstor.org/stable/3782958.
- Reynolds, R. T., Wiens, D. J., and Salafsky, S. 2006. A review and evaluation of factors limiting northern goshawk populations. Studies in Avian Biology. 31:260-273.
- Riginos, C. 2022. Impact of roadways on wildlife in Wyoming: long-term and recent trends. The Nature Conservancy, Lander, WY.
- Rowland, M. M., Wisdom, M. J., Johnson, B. K., and Penninger, M. A. 2004. Effects of roads on elk: implications for management in forested ecosystems. Transactions of the 69thNorth American Wildlife and Natural Resources Conference.

  <a href="https://www.fs.usda.gov/pnw/pubs/journals/pnw\_2004\_rowland001.pdf">https://www.fs.usda.gov/pnw/pubs/journals/pnw\_2004\_rowland001.pdf</a>Semlitsch, R. D. 2010. Differentiating Migration and Dispersal Processes for Pond-Breeding Amphibians. Journal of Wildlife Management, 72(1): 260-267. <a href="https://doi.org/10.2193/2007-082">https://doi.org/10.2193/2007-082</a>.
- Smith, L. L., Hinderliter, M., Taylor, R. S., and Howze, J. M. 2015. Recommendation for gopher tortoise burrow buffer to avoid collapse from heavy equipment. Journal of Fish and Wildlife Management 6(2): 456-463. https://doi.org/10.3996/062015-JFWM-055
- Spaul, R.J., and Heath, J.A. 2017. Flushing responses of golden eagles (*Aquila chrysaetos*) in response to recreation. The Wilson Journal of Ornithology, 129(4):834-845.
- Upper Columbia Salmon Recover Board. 2008. Bull Trout Intrinsic Potential (NOAA 2008). <u>Bull Trout Intrinsic Potential (NOAA 2008)</u> | <u>Upper Columbia Salmon Recovery Board</u>
- Upper Columbia Salmon Recover Board. 2008. Steelhead Intrinsic Potential (NOAA 2008). <u>Steelhead Intrinsic Potential (NOAA 2008) | Upper Columbia Salmon Recovery Board</u>
- Van den Broek, K., Leahy, C., Griep, S., and Schwarz, S. August2025. Chinook and Steelhead Assessment in Squilchuck, Stemilt, and Colokum Creeks. *Summer Sampling Report to Chelan County Natural Resources Department*.
- Washington Department of Natural Resources. 2025. Current Wildfire Incident Information: Investigations. <a href="https://dnr.wa.gov/wildfire-resources/current-wildfire-incident-information/investigations">https://dnr.wa.gov/wildfire-resources/current-wildfire-incident-information/investigations</a>
- Washington Department of Fish and Wildlife. 2024. 2024 Status and Trend Report. WDFW. https://wdfw.wa.gov/publications

- Washington Department of Fish and Wildlife. 2015. Washington's State Wildlife Action Plan: 2015 Update. Washington Department of Fish and Wildlife, Olympia, Washington, USA.
- Wisdom, M.J., Preisler, H. K., Naylor, L. M., Anthony, R. G., Johnson, B. K., and Rowland, M. M. 2018. Elk responses to trail-based recreation on public forests. Forest Ecology and Management. 411: 223-233. https://doi.org/10.1016/j.foreco.2018.01.032.
- Wisdom, M. J., Ager, A. A., Preisler, H. K., Cimon, N. J., and Johnson, B. K. 2004. Effects of off-road recreation on mule deer and elk. In: Transactions of the 69th North American Wildlife and Natural Resources Conference: 531-550
- White, A. M., Zipkin, E.F., Manley, P.N., and Schlesinger, M.D. 2013. Simulating avian species and foraging group responses to fuel reduction treatments in coniferous forests. Forest Ecology and Management, 304, Pages 261-274, http://dx.doi.org/10.1016/j.foreco.2013.04.039
- Zeller, K. A., Ditmer, M. A., Squires J. R., Rice, W. L., Wilder, J., DeLong, D., Egan, A., Pennington, N, Wang, C. A., Plucinski, J., and Barber, J. R.2024. Temporal coordination signals coalition quality. Current Biology, 34, (13), 2997 3004.e3