Kevin Kane

Subject: Comments on Draft Environmental Impact Statement for Mission Ridge Expansion and Resort

Dear Chelan County Department of Natural Resources

I am writing to provide comments on the Draft Environmental Impact Statement (DEIS) for the Mission Ridge Expansion Master Planned Resort (MREDEIS,) located in Chelan County, Washington.]. After reviewing the document, I have the following concerns and recommendations:

- The Mission Ridge Expansion and Resort will greatly change the ecology and ecosystem functions of the project area, study areas, but also the Stemilt, Squilchuck and Naneum Basins. The analysis approach used in the MREDEIS is not representative of the overall true effects of the proposal on the ecosystem. The project analysis focuses on an individual species approach, highlighting locally important species, listed and other special status species, as well as invasive plants. It does not address how extensive "urban" development—including roads and infrastructure—has contributed to placing many of these species into special status categories. It is known, that the native species from microbiota found in soils and water, the varied plant life, to the large mammals that occur here all coevolved over thousands of years. There are complex interdependent relationships among all of the native species found within the impacted area that will be adversely altered by the proposed actions of the development. All of these relationships are important to the ecology of the affected watersheds. None of the resort constructions and operation impacts that will take place are within the range of what has happened historically and represent changes to the ecology, the the ecosystem has never experienced.

A reductionist individual species approach has been applied to the analysis of the effects of the development., Cutting down a single tree results in impacts to a multitude of interdependent species that are drastically changed by that single action. How did we arrive at this form of environmental analysis ? **I would suggest that the Analysis include analysis of effects for ecosystem functions for both of the proposed Alternatives and then a discussion of which alternative effectively protects ecosystem functions.**

The Public is forced to comment on a draft that is limited to what the developer (really his paid consultants) and County have deemed important. I have read most of the

entire document and appendices and there is little, if any analysis of effects on the ecology of the Stemilt, Squilchuck and none for the Naneum ecosystems. The question that needs to be answered is how will the establishment of a new city the size of Leavenworth (visualize that) will affect the ecology of the ecosystem processes of the affected Basins as well as the Wenatchee Valley ? Yet, ecosystem is mentioned only 6 times in the DEIS and all of these are misapplied uses of the term.

The DEIS was not ready for release, it is full of unreadable maps, poorly defined boundaries for analysis, insignificant analysis and really no mitigation beyond "boiler plate" that is associated with any project where soil is moved. Where is the analysis and mitigation for Effects ? You don't just present affected environment information in a DEIS, you analyze for effects saying So What ? -- and then offer mitigation for the effects. I suggest the proponent is looking to steal his resort and expansion at the expense of all natural resource values, rather than offer honest analysis and needed mitigation for effects. I find it insulting that the wildlife, vegetation (no environmental analysis uses *plant* when all plants function together and are linked together as vegetation communites), clean water, air and existing recreation do not get the respect of unbiased analysis, instead the consultants and authors have chosen to minimize, ignore, misrepresent or just plain lie about effects and their analysis. I worked as a botanist for the Forest Service and BLM for 21 years and I have written /reviewed Environmental documents from categorical exclusions to a Draft EIS for a new Bonneville powerline. This is the **worst effort** I have ever seen. It should not have been released at this time, to ask the public to review and suggest what analysis is needed in a DEIS is unethical, but to be expected from a proponent who filed three different development proposals and a lawsuit in an attempt to avoid doing an EIS.

The proponent stated that other alternatives could not be developed because they did not meet his objectives, as if he is the only thing that matters. His needs are not the only consideration here.

I suggested a third alternative be added in my scoping input. An alternative that would provide for wintertime use only is needed. This alternative would allow for the Road to Section 19 where a parking lot would be created and a beginner hill developed and at the end of the ski season the road would be gated and enforce as no entry the rest of the year. This would meet the stated needs of more beginner terrain and parking. Skiers could park a shuttle could bring them to the existing MR Ski area to ski.

This alternative would allow for distinguishing between environmental effects related to the resort portion of the current proposal and the stated need to increase ski terrain and parking. An economic evaluation that shows benefits under these two action alternatives could be done.

Then three alternatives could be evaluated and ranked on which one would result in the most stable ecosystem over time.

If the County will not add this third alternative, then the two existing alternatives should be analysed for ecosystem stability and ranked according to which one would result in the most stable ecosystem over time.

I suggest you develop a geographic analysis area boundary for each particular resource area considered as the US Forest Service did in their Draft EA (FSDEA) (United States Forest Service. 2020). Then do a comprehensive effects analysis.

There are sources of confusion created by differences in terminology within the County Draft Environmental Impact Statement (DEIS) (Chelan County 2025) and between what is in the FSDEA, DEIS and the various Natural Resource Reports included in the Appendix G of the DEIS. I recommend creating a glossary to clarify consistent, similar, and different terms across documents. Or better yet, do this over for the supplement and edit all documents so all terminology used has the same meaning.
Was this an attempt to avoid the work to remedy the inconsistencies and not fully evaluate effects or purposeful attempt to confuse commenters ?

APPENDIX G
Plants and Animals Reports Anchor Report
Appendix G page G-2 DEIS --"In addition to the study and project areas, some of the sources used for this report, including the 2020 USFS draft EA and several of the natural resource reports, reference an "assessment area". The *assessment area* is used **to assess cumulative effects and includes the entire Squilchuck Creek and Stemilt Creek subwatersheds,**

Chapter 3: Environmental Effects Section 3.1 "Mission Ridge Expansion Forest Service Draft EA says: Only those past, present and reasonably foreseeable actions (cumulative effects *that overlap* ***the geographic analysis area boundary*** *for each particular resource area a*re considered, and only if those other actions are expected to have overlapping effects with the Mission Ridge Expansion project. "

"assessment area is used **to assess cumulative effects and includes the entire Squilchuck Creek and Stemilt Creek subwatersheds" DEIS**

Only those past, present and reasonably foreseeable actions (cumulative effects *that overlap* ***the geographic analysis area boundary*** *for each particular resource area* are considered, and only if those other actions are expected to have overlapping effects with the Mission Ridge Expansion project. "**FSDEA**

This is not the equivalent of the assessment area in FSDEA which identifies area identified by a geographical area for each resource and then uses "assessment area" for cumulative effects analysis. This needs clarification. FSDEA 3.1 Identification of Assessment Area

The Assessment Area is clearly not being defined the same. I ought to charge for the time I spent trying to reconcile contradictive statements within the DEIS.

APPENDIX G
Plants and Animals Reports Anchor Report

DEIS 5.4 Plants and Animals From the MREDEIS, "For the purposes of this assessment we have defined a Project Area, which encompasses all areas of proposed construction and ground disturbance or habitat modification and includes a *100 foot buffer* (for analysis purposes)"
The 100 foot buffer is not mentioned in other defiintions of the study area.

Page 5-35 "As previously noted, the *study area* for the plants and animals impact analysis encompasses the project area, ***areas immediately*** adjacent to the project area, and any other *connected areas* that have the potential to be affected by construction or operation of the proposed expanded ski resort."
Immediately adjacent needs to be defined.
The definition for project area are not the same. This needs to corrected in the DEIS Supplement. It changes the commentors viewpoint for making comments, it needs to be resolved in the Supplemental DEIS.

Anchor Report Appendix G1 **INTRODUCTION** G-1 "throughout this report, the term **"study area"** includes both the project area and those areas where connected actions would occur."
Define a "connected action. Does this include a 100 foot "buffer zone" of does immediately adjacent apply.

So, what is the actual study area ? What is the Project Area ? I suggest you develop a geographic analysis area boundary for each particular resource area considered as the US Forest Service did in their Draft EA (FSDEA) (United States Forest Service. 2020).

DEIS Figure 5.4-1 says it is the *study area*, yet it includes what you define as the assessment area and the assessment area is not indicated. Please fix it.

Figure 5.4.2 **Elk and Mule Deer Range-Calving in Project Vicinity is inaccurate and does not include known elk calving and deer range. The Friends of Mission Ridge Camera Study (FOMR) Photo Study indicates cows with calves immediately adjacent the project area that would be using the project area. What are the sources for your map, how was it developed, what is the precision and accuracy of the data layer for the map and what on the ground truthing has been done to distinguish elk calving presence and deer winter range ? Washington Department of Fish and Wildlife (WDFW) admits that their PHS mapping is not complete, the DEIS does not disclose the imprecision of maps and studies they use.**

Figure 5.4.3 Elk Summer Habitat Project Vicinity Mission Ridge Ski Area Expansion Chelan County, Washington

The Musser study (Bracken, E., and J. L. Musser. 1993) identified that elk migrate through the Stemilt Basin to the lower Colockum winter range near the Columbia River and to summer range in the Teanaway of Kittitas County, the Blewett Pass Area ,including the Ingalls Creek area. A statement in a consultants report states that this is a *subherd* of the Colockum herd when in reality these are migrating Colockum elk. There may be some elk that stay in the basin during summer as shown on the summer range map, but this is not all of the elk that use

the Stemilt Basin, elk move through the Basin and and to Summer Range in the Peshastin Creek and Teanaway. A analysis for elk of effects is needed for the "subherd" as well as elk that utilize the migration route. There is not a recent Colockum Elk Study to base your opinions on. ***The Master Planned Resort (MPR) prooponent should fund and then then do the analysis and offer mitigation for effects on the Colockum herd. How do you do analysis without current data ? Satellite timber stand data just won't do it.***

Special Plant Features **(What is a special Plant Feature ?)**
in Project Vicinity Figure 5.4-6
This map needs to be done in a readable format. The map needs to show the white bark pine population as well as show the old growth along the proposed road across FS lands to the resort/expansion . Also, show the old growth area in the utility corridor. There are areas of bitterbrush that show in photos done in the county stream analysis these should be included. These should be mapped as a distinct type for the unique habitat type they provide. The identified overstory species are not representative of what is found on the ground areas with overstory trees (satellite data is top down and does not seen what is hidden under the canopy). Yet many species in the closed forest understory are very important for elk and all wildlife. The forest affected area needs to show what lichens, mosses, fungi and herbs are present and analyze the loss or changes to these attributes.

The steam typing work done by Chelan County photos, shows unique plant communities that provide important habitat attributes for different plant and animal species. You need to do a on the ground vegetation inventory to know what is actually in the understory and not rely on a satellite vegetation exercise, which very likely has not been ground truthed.

SEPA Botany Existing Conditions
in Project Vicinity Mission Ridge Ski Area Expansion Figure 5.4-7
This map needs to show the entire project area with an affected zone. Ground disturbance affects much more vegetation than the areas indicated. This needs to be resolved in the Supplemental DEIS (SDEIS).

Proposed Transportation Infrastructure
Improvement in and Near Project Area 5.6-3
Map shows one above ground parking area for 593 cars, there is another one that is not on the map ?

"The USFS conducted plant surveys on National Forest and WDFW lands in the Project Area and documented 207 vascular plant taxa (USFS, 2020). Though not a complete census of flora, this species list is available in the USFS project record. " page 5-37 If you are going to cite this it needs to be available in the County project record. This needs to be included in an appendix and immediately available to the public in the SDEIS. The FS says it is in the project record, but it is not available without making a request and the FS is closed due the government shutdown . Since, there is limited time to comment the there is limited time to access it to provide comments to the DEIS. The proponent needs to provide a vegetation list for lands within the entire project area.

MREDEIS **5.4 Plants and Animals**
Page 5-40
"Other non-native and invasive species were also found" **These species need to be provided and included here or in an attachment" I should be provided with enough information to sit in my easy chair and analyze effects. There are too many omissions, misidentifications and a general lack of fieldwork effort (if it ever took place).**

"Fish are not documented in any of the stream segments crossing the Project Area or within the streams in or adjacent to the Utility Corridor as culverts, steep gradients, and human-created fish barriers in those areas preclude fish species from inhabiting them" **You need to go look for fish/amphbians and not depend on some old surveys that may or may not be well done, complete or accurate.**

The DEIS states that inspection and possible replacement is needed for culverts that cross the study area and proposes a road across FS lands to Swctuib 19, so these actions are connected to the project area and are within the study area, and impacts to Squilchuck and Lake Creeks should have been analysed in the DEIS.

It needs to be established if Lake Creek is a fish bearing stream. Fish or not, both streams need to analyzed as part of the SDEIS for effects on plants and terrestrial-aquatic animals. .

Page 5-41
"Native species are typically not present in sustainable numbers due to population isolation and habitat limitations"
You need to establish what are in the reaches of Squilchuck Creek, Stemilt Creek Orr Creek and Lake Creek, not hypothesize about what could be there. How do you do analysis when you don't know ? You need to be basing these statements on recent fieldwork, not some old surveys.

Page 5-41
"The Columbia River at the confluence of Squilchuck Creek is a migration corridor and for ESA listed Upper Columbia spring-run Chinook Salmon, Upper Columbia Steelhead Trout, Columbia Basin Bull Trout, as well as two federal Species of Concern, Pacific lamprey (*Lampetra tridentata*) and Pygmy Whitefish (*Prosopium coulteri*). In addition to the species with special Federal status, the Columbia River also provides habitat for the following State Candidate and Sensitive Species: leopard dace (*Rhinichthys falcatus*), mountain sucker, pygmy whitefish (*Prosopium coulteri*), and Umatilla dace (*Rhinichthys umatilla*)." **The same is true of Stemilt Creek, this needs discussion and analysis.**

"*Due to the limited extent of aquatic habitat, there are little to no aquatic plants present in the Project Area*. *Semi-aquatic* plants occur in one of the two small wetlands located on the privately-owned land and include common emergent species such as common spikerush (*Eleocharis palustris*) and various types of sedges (*Carex* spp.)." Those are not aquatic species, they were found growing in an area of seasonal ponding." **Define what an aquatic and semi aquatic plant are. There are acres of streamside and seasonal wetlands in the study and affected assessment area that could support special status species. *Delphinium viridescens* – a Federally listed species that is suspected of occurring here is a plant endemic to the Wenatchee Mountains of central Washington State. Its habitat includes *moist meadows, wet openings in forests and thickets, and riparian areas like springs and seeps, typically at elevations between 1,240 and 5,700 feet.* These sites have surface water or saturated soil into early summer, often with heavy clay soils". You need to go look for the species anywhere it is moist, not discount their presence throughout the assessment area. *You need to look for special status plants***

everywhere there Is habitat and all special status species that could be affected by the proposal. The DEIS has not established that ground and surface water removal will not affect spring, streamsides and other seasonal wet areas.
. You need to go do the fieldwork, there is plenty of aquatic habitat available. It shows up in photos in the attempt by Chelan County to stream type Section 30 and this area needs to have field work done for ALL Special Status Plants.

Analysis for all effected areas with surface water that lasts long enough for use by amphibians is needed. Ecosystem functions depends on all native species, not your biased selections. You need to do field work to find out what is present in the reaches of Squilchuck and Orr/Stemilt Creeks and then do analysis for the effects water removal can have on special status species that are found here and offer mitigation for adverse effects.

Who was involved in developing the scope of the affected environment for wildlife and plants to be addressed in the EIS ? What was the County role ? What was considered in this decision ? Who defined what resource values were important ? This needs to be explained in the SDEIS or EIS.
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5.4 Plants and Animals

Scope of Analysis for Effects on Wildlife and Plants

The area designated for analyzing the effects on wildlife and plants is too limited. It is not sufficient to restrict the assessment solely to the project area and the locations of connected action. The analysis must consider the full extent of the plant and animal resources at risk and the entire zone where impacts on these resources may occur.
The study area, as described in the Mission Ridge Draft Environmental Impact Statement (MREDEIS) on page 5-35, is defined as follows:
"This section summarizes the potential impacts of the Proposed Project on plants and animals in the study area, which encompasses both the *Project Area and other areas where connected actions would be performed.*"
However, this definition does not accurately represent the true environment affected by all impacts to animals and plants. The assessment should be revised to ensure that the analysis includes not only the project footprint and directly connected activities, but also the broader geographical area—the entire zone of effect—where plant and animal resources may be impacted. This approach is necessary to capture the full scope of potential ecological consequences resulting

from the proposed development.

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Effects of Increased Vehicle Traffic and Mitigation for Wildlife and Vegetation

The Mission Ridge Draft Environmental Impact Statement (DEIS) acknowledges that the proposed Expansion and Resort will result in increased vehicle traffic on Squilchuck Road, Mission Ridge Road, and roads branching off from these primary routes. *However, the MRDEIS does not address the adverse impacts that this increased traffic may have on local wildlife and plant communities.*
The Mission Ridge proposal will generate higher volumes of traffic not only on Squilchuck Road and Mission Ridge Road, but also on Wenatchee Heights Road, Lower Stemilt Loop Road, and all connected off-pavement roads. This anticipated rise in vehicle usage compared to existing conditions necessitates a broader scope for the assessment of traffic-related effects on wildlife and vegetation.
To ensure a comprehensive evaluation, the area analyzed for increased traffic impacts on wildlife should extend beyond just Squilchuck Road and Mission Ridge Road. It must also encompass Wenatchee Heights Road, Lower Stemilt Loop Road, and all roads that branch from these corridors. Including this wider network of roadways in the analysis is essential for accurately capturing the full extent of potential impacts on wildlife populations and vegetation (plants).

Effects of Persistent Human Activity on Wildlife and Vegetation

Increased and sustained human activity in areas with roads in road areas affected by the Mission Ridge proposal can result in wildlife abandoning or reducing use of their traditional habitats. The increased presence of vehicles and associated human activity and noise will disrupt normal wildlife behavior, causing species to avoid previously utilized habitat and can result in reductions in reproduction (Peterson, C. 2019, August 27). This loss of habitat exacerbates the pressure on local wildlife populations, contributing to habitat fragmentation, negative edge effects and reducing overall habitat quality for all wildllife within the affected area (zone of effects). Impacts on elk use for the Wheeler Ridge LLC Orchard Habitat Mitigation and Management Plans was identifited as "within 250 meters of an open road" As a reference, in the Wheeler Ridge LLC Habitat Mitigation and Management Plan Chelan County and the Washington Department of Fish and Wildlife identified the noise effects zone for effects on elk as a 0.8-mile radius from the orchard. (Washington Department of Fish and Wildlife 2021). There is no pre-project data available to quantify elk use, or timing and duration of use, within the area of the proposal. There are anecdotal observations of elk, but data is not available to quantify the level of use within the zone of effect of this proposal for elk or any other species. (Chelan County, 2020), . These examples underscore the importance of delineating a clear area of influence when evaluating traffic-related impacts on wildlife and their habitats.

Requirement for Analysis and Mitigation in the MRDEIS

The Mission Ridge Supplement to the DEIS (SDEIS) or EIS should include an

analysis of how higher traffic volumes and related human activity impact wildlife habitat and vegetation within a defined affected zone along all effected roads. Once the boundaries of this effects zone are established, and the effects analyzed, the MRDEIS should propose *mitigation measures* that address adverse effects on wildlife and vegetation including loss of habitat quality and quantity resulting from the increased traffic generated by the proposal.

New Road Across Forest Service Land to Section 19

No analysis of effects has been done for the construction and operation phase effects of this road. A zone of effect (geographical print) for wildlife (both terrestrial and aquatic) and vegetation needs to be established and effects analyzed for this zone. It is known that roads lead to stream pollution, tree deaths and affect roadside vegetation. All you have to do is drive over local passes to see dead trees next to the highway, likely due to deicers or car pollutants. Roads also result in increased dust that is linked to scale infections. "Two situations in which black pineleaf scale have been noted in varying degrees of outbreak in Washington State are 1) along dusty gravel roads and 2) near or among fruit orchards where spraying occurs. The reasons are thought to be a reduction in populations of scale predators due to either a heavy accumulation *of dust settling on foliage along roadsides* or the effects of insecticides near orchards due to drift Brennan's email.pdf .

"Heavy scale infestations can lead to the death of conifers, as the scale insects weaken the tree by sucking sap. All the effects of construction of this road and resort operation need to be analyzed and mitigation offered. I suggest a baseline vegetation study within the zone of effects to determine present conditions and an ongoing monitoring program to determine needed mitigation or possible adaptive management.

Of course, analysis for effects on all wildlife within a identified zone of effect needs to be done for wildlife and adverse effects will need mitigation,

Impacts on Migration Patterns and Ecological Interactions

The proposed project will alter the migration, movement patterns and habitat use of various species, including elk, deer, wolves, lynx, bear, and other wide-ranging carnivores. Disruption caused by the resort and increased human presence is expected to force these animals to modify their traditional routes and areas of use. As a result, the natural movement corridors essential for seasonal migrations and daily activities may be compromised, leading to changes in availability and accessibility of critical habitats.

Additionally, the project is likely to disrupt complex, co-evolved interactions among wildlife species, as well as between wildlife and plant communities. These interactions have developed over long periods and are integral to ecosystem stability. Alterations in species movement and behavior could therefore have cascading effects, potentially impacting vegetation, predator-prey dynamics, and overall ecosystem health. **These impacts require further analysis and *mitigation.***

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John Musser, co-author of Colockum Elk Study. Washington Department of Fish and Wildlife, (Bracken, E., and J. L. Musser. 1993) confirmed that the elk migrating through the Stemilt Basin and the Mission Ridge area, traveling to summer ranges and lower winter ranges to the southeast, are part of the larger Colockum herd. He characterized

this as "very defensible" and noted that these elk are also present in summer ranges in the Blewett Pass area, including Peshastin Creek and Ingalls Creek.
Musser further shared details about "Elk 13," an individual captured and radio-collared in the Park Creek-Whiskey Dick area, located in the southeast portion of the Colockum Wildlife Area. Elk 13 required multiple recaptures throughout his life to replace radio collars as he outgrew them. During summer, Elk 13 was tracked in the Teanaway and Blewett areas, but was ultimately killed in the fall on the Peshastin side of the mountain by a muzzleloader hunter. So, your effects zone and analysis area for elk needs to be enlarged to include these areas.
Analysis and mitigation for impacts on the Colockum elk herd should also include effects on co-dependent species and nutrient cycling throughout the herds range.

Expanded Wildlife Study Area and Migration Patterns

The affected area for wildlife in the MRDEIS must be broadened to encompass regions beyond the immediate project area and connected action zones. This expansion is necessary to ensure a comprehensive understanding of the potential impacts of the project. Friends of Mission Ridge (FOMR) did a trail camera photo study that identified the presence of species and habitat written off as not being present in the project area. These species, include both golden eagle and goshawk, both special status species. The FOMR study found the presence of cow elk with calves and deer fawns, this requires analysis of effects of the proposal on both elk calving and deer fawning areas. The Wheeler Ridge LLC Orchard studies identified the presence of a flammulated owl adjacent to this proposal. All of these species need analysis of effects *and mitigation in* the DEIS.

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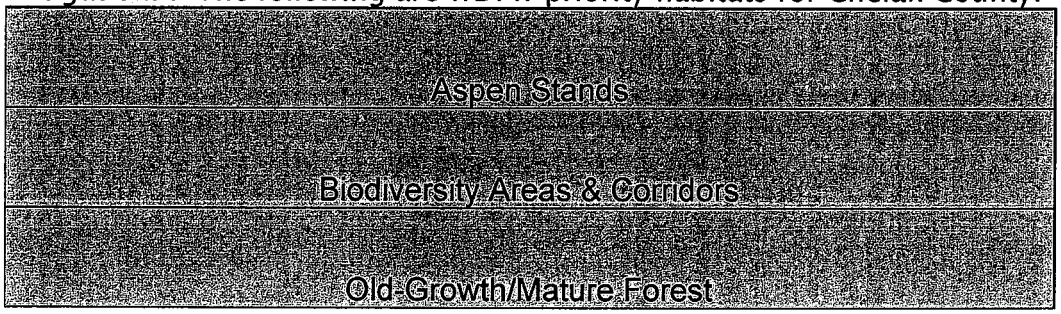
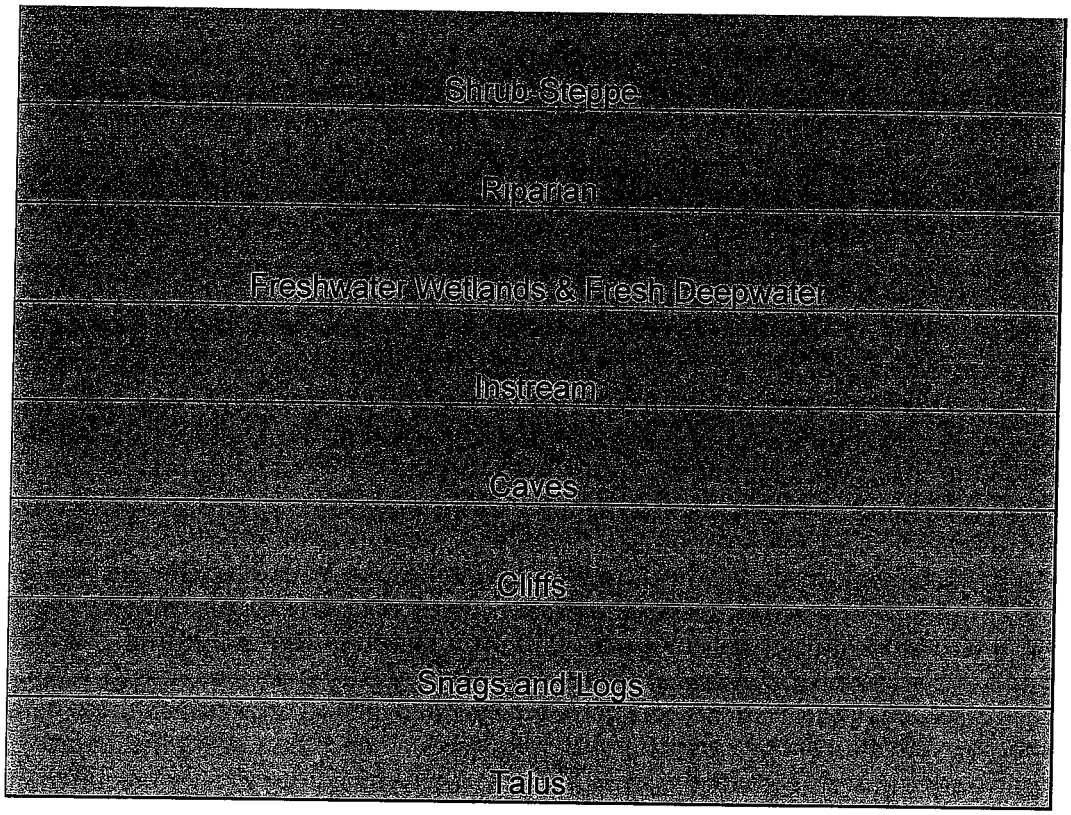
Survey Limitations and Implications for Species and Habitat Assessments

You need to include a table showing all fieldwork that has been done for special status plant and animal species as well as priority habitats. This should include: dates of survey, intensity of survey, surveyors names and maps showing routes of survey and findings. Without this, there is no evidence that fieldwork has ever been done. At this time, your fieldwork seems to be an office exercise based on models (which have not necessarily been ground-truthed , show no confidence level and interval---margin of error). There is very little indication that any fieldwork for Wildlife and Plants has been done.

A clear sign that plant fieldwork has been conducted is mapping vegetation, plant communities, and unique habitats—an essential step for any conservation area used in mitigation. . The following are WDFW priority habitats for Chelan County:





Field Inventory and Mapping of Key Habitat Features

As part of the field inventory process, it is necessary to conduct systematic surveys for important habitat features, including snags and logs, cliffs, caves, talus, and shrub-steppe. Special attention must be given to forested areas that contain unique inclusions of bitterbrush (Purshia tridentata) within forested regions, as these have not yet been mapped, yet they appear in Chelan County stream typing photos,.
All of these features should be carefully mapped during the field inventory activities. To ensure that claims regarding habitat conditions are accurate and well-supported, the field inventory must provide comprehensive and meaningful coverage of the surveyed area. It is important to document the type and extent of inventory efforts undertaken to establish that the coverage is sufficient for identifying and analyzing priority habitats.

The SDEIS or EIS needs to address these features directly, not just note if they exist in the area. After gathering information, your analysis should cover how these features are affected. .

To analyze and mitigate for any loss of or reduced habitat value for old growth-mature trees and the whitebark pine in the project, and the broader affected area wildlife tree features need to be collected: broken tops, ramiform branches, cat faces, cavities etc.

The DEIS hhas broadly mapped the talus, you need to go out on the ground and look for pika presence not dismiss the species by saying the affected area is too high for the species. FOMR has documented the species as being present and I have mapped

two locations for the species at 5300 feet (The map is in my project file and will be provided upon request) No species should be omitted from analysis as unimportant to needed ecological functions. . I would suggest collecting data for talus in the project area and the existing ski area and then comparing for an analysis of effects. What are the differences in plant communities and wildlife dependent on talus ? Mitigation could include fencing out areas to maintained as natural (no man made snow or grooming). T
The DEIS Appendix G discounts the potential presence of the Larch Mountain Salamander. Yet it occurs in the north as far as Snoqualimie Pass. The SDEIS needs to include more information as to the completeness, accuracy and precision of inventory in the region before discounting the potential for the species occurring in the local talus before saying it is not present. It is interesting, but not surprising to me that the species is not even mentioned in the DEIS.

No recent surveys have been indicated in the MRDEIS as having been completed in the affected areas for the spotted owl, flammulated owl, western toad, or Columbia spotted frog. US Fish and Wildlife protocol was to be followed for the owl in the Wheeler Ridge LLC Orchard and was never done. For the spotted owl, USFWS requirements are two seasons of survey prior to ground disturbing activities. This will need to be done so analysis can be completed in this DEIS. The old studies indicated in the DEIS are not adequate for analysis. Additonally, the lynx and grizzly bear have been dismissed as not needing analysis consideration. When was fieldwork done for the lynx in winter ? There is habitat in the affected area. If snowshoe rabbits are present and horizontal habitat are present then lynx could be using the area and there is plenty of both in the Naneum Ridge area just southeast of the project area. When did anyone go out to look for lynx and for grizzly sign ? The area affected by the proposal has potential for both species. The last confirmed grizzly in the area was only 20 miles away and they can cover 50 miles in a day, so they are likely to use this area now, but haven't done the fieldwork to know if lynx or grizzly recently use the area . Due to this lack of fieldwork, the potential impacts of the project on these species cannot be adequately assessed. It is not possible to conclude that these species are absent from the area without conducting thorough surveys to determine their presence. With an increasing number of fires in the region displacing wildlife to new locations these studies are *especially necessary*, and any impacts on these species, if present, will require careful *analysis and mitigation.*
While wildlife sound recorders could serve as useful tools for conducting survey/inventory, there have been no recent studies by the proponent employing this methodology in the zone of effects for wildlife.

Field Inventory and Survey Requirements for Key Habitat Features and Species

Survey Protocols for Special Status Species

The MRDEIS does not indicate that recent surveys have been completed in the affected areas for several key species, including the spotted owl, flammulated owl, western toad, and Columbia spotted frog. Established U.S. Fish and Wildlife Service protocols require two seasons of survey for the spotted owl prior to any ground-disturbing

5.4 Plants and Animals page 5-40

"Other non-native and invasive species were also found." A list of these plants need to be provided. I could not get the plant list from the Forest Service because the government shut down. If the proponent botanist Rossman report has a species list please include it. *You need to analyze the presence and potential spread of these species that alter the ecology of the area including how these species affect pollinators and native plant communities. Mitigation needs to be offered.*

Aquatic Plants and Animals

5-41 *"The Columbia River at the confluence of Squilchuck Creek is a migration corridor and for ESA listed Upper Columbia spring-run Chinook Salmon, Upper Columbia Steelhead Trout, Columbia Basin Bull Trout, as well as two federal Species of Concern, Pacific lamprey (*Lampetra tridentata*)and Pygmy Whitefish (*Prosopium coulteri*). In addition to the species with special Federal status,the Columbia River also provides habitat for the following State Candidate and Sensitive Species: leopard dace (*Rhinichthys falcatus*), mountain sucker, pygmy whitefish (*Prosopium coulteri*), and Umatilla dace (*Rhinichthys umatilla*)"

Analysis is needed to assess how project-related groundwater use and alterations to surface water flows may affect the species present in the Columbia River at the confluence of Squilchuck Creek, *Stemilt Creek* and the Columbia River. These species include ESA-listed Upper Columbia spring-run Chinook Salmon, Upper Columbia Steelhead Trout, Columbia Basin Bull Trout, as well as federal Species of Concern such as Pacific lamprey and Pygmy Whitefish. Additional state candidate and sensitive species, including leopard dace, mountain sucker, pygmy whitefish, and Umatilla dace, also inhabit this area and need effects analysis.
It is established that fish tend to congregate in the cooler waters found at these stream outlets. However, with climate change leading to increased water temperatures in the Columbia River, conditions have reached levels that can result in fish kills. Therefore, you need to analyse effects of the MPR on these stream mouths as well as the cooling areas these areas provide and to the greater river. Mitigation measures are necessary to address these impacts and support the continued viability of these aquatic populations.

Construction Impacts on Terrestrial Habitats and Species

5-43 "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 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 comprised of ski runs (38acres), undesignated open space (44 acres), dedicated conservation areas (530 acres), and managed open space (8 acres) (LDC, 2022). (LDC,

2022). This means that over 75% of the site isdedicated as open space. *This vastly exceeds the requirements in CCC 11.89.050(2), which requires 40% of the site be left as open space. Leaving 75% of the site in open space also translates to permanent preservation of existing vegetation."*

The DEIS proposes mitigation without fully addressing how increased human activity—vehicles, noise, events, recreation, and greater human presence— reduce the value of open space and conservation value for wildlife, plants and all ecology. *All impacts should be analyzed, mitigation must account for habitat loss, and its true effectiveness needs to be evaluated.*

Construction Impacts on Terrestrial Habitats and Species 5-44
"Amphibians are closely associated with aquatic habitat and therefore would be most affected by impacts on wetlands and stream channels. Because the Project Area and Utility Corridor contain limited aquatic habitat, the Proposed Project is likely to have fewer impacts on amphibians relative to other animal groups"

Both Western toads and the Columbia spotted-frog, classified as a state priority species, are born in wetland habitats, the adult toads and frogs also reside in upland habitats. Their eggs are deposited in aquatic environments, and after reaching maturity, juveniles migrate back to the uplands. Four wetlands have been identified in the DEIS study , many areas of Section 19 have streams that contain water for these species and three streams have been identified within both the project area and related zones as potentially suitable amphibian habitats. However, this strategy seems to reduce impacts on amphibians without adequate explanation. It is recommended that a comprehensive analysis be performed and *meaningful mitigation* measures be proposed. The DEIS does not show any evidence that surveys of the species were conducted.
**Both Western toads and the Columbia spotted frog are classified as state priority species and rely on wetland habitats for reproduction. Western toads also utilize upland habitats. The life cycle of these amphibians begins with egg deposition in aquatic environments; after maturing, juveniles migrate to upland areas.
Within the DEIS study area, four wetlands have been identified, and several areas in Section 19 feature streams that provide suitable conditions for these species. Additionally, three streams have been recognized within the study area and adjacent zones and these are potentially suitable amphibian habitats.
Despite these findings, the DEIS appears to minimize potential impacts on amphibians without sufficient explanation. It is recommended that a intensive amphibian field study be completed and comprehensive analysis be conducted to better understand the effects of the MPR and to develop *meaningful mitigation* measures. Notably, the DEIS does not provide evidence that surveys of these species were performed.**

DEIS 5-45 "Overall, construction impacts on commonly occurring terrestrial animal species are expected to occur. However, as noted previously, many animals will leave the construction area to avoid the disturbance and occupy similar adjacent habitats, which are relatively abundant in the study area and surrounding lands."
This statement lacks support and does not address key issues. Where will the displaced animals go, and what impact will this have on them, neighboring

wildlife, and habitats ? ***The alteration of this habitat during construction and operation needs to analyzed and mitigation offered. I suggest the purchase of private lands to offset the altered habitat.***

Table 5.4-2. Potential Construction Impacts on Special Status Terrestrial Species and Habitat

"Whitebark Pine Assessment focus: Potential for 1) impact to individual whitebark pine and 2) impact to whitebark pine population.
Findings: 1) The Proposed Project would also have long-term adverse impacts on whitebark pine as the proposed footprint of construction activities would potentially be in conflict with 45 of the 167 (27%) documented whitebark pine stems in the Project Area (USFS 2020). The Applicant has made efforts to promote the conservation of whitebark pine including adjusting the footprint of soil contouring for alpine ski runs to protect documented whitebark pine trees. Additionally, project implementation would require *compensatory planting* to mitigate for both construction and operations impacts on existing whitebark pine. And 2) construction impacts on the entire local population of whitebark pine would be *minor*" (USFS 2020)

Whitebark pine is currently listed as Federally Threatened. To protect whitebark pine on FS, WDFW, and private lands; do not damage and kill trees. Buffer the trees to prevent harm, relocate infrastructure and use temporary fences during ski season to shield populations from groomer and skier damage.

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Role of Mycorrhizal Networks in Whitebark Pine Ecosystems

The mycorrhizal network associated with whitebark pine plays an essential ecological role within the soil-tree environment. This network not only facilitates the transfer of nutrients from the tree to fungi and other soil organisms. In return, the fungi confer beneficial effects to the trees, including providing an antibody-like effect that helps protect or ameliorate tree disease. This symbiotic relationship is a critical component of the health and resilience of whitebark pine populations in their native habitats.

To kill one tree and disturb soils in the area during construction and operation is to jeopardize the very life of other trees and vegetation and their complex interspecies relationships and whitebark pine ecology of the area. ***These effects on vegetation need analysis and mitigation.***

Whitebark Pine Presence on Private Parcel

"Analysis of topography, vegetation patterns, and drone footage suggests a high likelihood of whitebark pine occurring on the private parcel. Drone imagery reveals the presence of what appear to be relatively large five-needle pine trees situated within vegetated patches among talus, particularly along the northwest-oriented shoulder and slopes of a 5,130-foot summit (see Figure 3-6) (FS Draft EA). Although the footage lacks sufficient detail to confirm the species with certainty, these locations closely mirror those of documented stems elsewhere, albeit at slightly lower elevations. The observed stems seem to be medium to large trees, and it is probable that smaller

trees, saplings, and seedlings also exist in these areas. The whitebark pine stems appear sparse and localized, with *estimates ranging from 20 to 60 individuals.* Notably, specimens were found in exposed sites at elevations lower than those typically reported in the literature. For comparison, in the nearby Stuart Range, whitebark pine commonly occur between 5,300 and 8,000 feet according to Arno and Hoff (1989)." (FSDEA)

In 2022, Rossman a proponent Botanist cited in the DEIS, documented six small stems on the private lands. The difference in population size between the FS estimate and the proponent's botanist should to be verified analyzed and included in the updated Draft EIS to ensure accurate analysis and effective *mitigation.* Survey routes, dates, times, intensity, and precise tree locations in relation to the development must be confirmed. Futhermore, the few trees reported are not indicative of the damage or loss of suitable habitat that could be occupied by whitebark pine in the future. *I suggest mapping and determining an effects zone for any disturbance and buffering the trees and habitat so they are not disturbed avoiding all ground disturbances to the buffered area.*

Limitations and Risks of Compensatory Whitebark Pine Planting

Compensatory planting of whitebark pine as mitigation for whitebark pine that are removed is not a straightforward or impact free and effective mitigation strategy. Seeds grown in greenhouses can produce trees with genetics and adaptive traits that differ from those in their natural habitat. This genetic divergence can lead to trees that are not well-suited to the specific conditions of the replant location and can change interdependent ecological relationships. Any selection by humans is not natural selection under which these species naturally evolve.

Whitebark pine typically grows in cold moist habitats with shallow, and rocky soils—conditions that the Forest Service generally avoids for tree harvest because of problems of replant tree survival. The process of greenhouse propagation, combined with planting in non-native soils, may alter the trees adaptive traits through epigenetic changes, resulting in individuals that are not well-adapted to the conditions of the intended site.

Critical traits such as cold hardiness, drought tolerance, blister rust resistance, and adaptation to the specific elevation band could all be compromised in greenhouse-grown trees. Furthermore, there is the risk of introducing new diseases into these sensitive environments. Presenting greenhouse-grown planting as a *mitigation measure* is inadequate; it is comparable to relying on hatchery-raised salmon stocks, which generally display diminished vigor and survival compared to their wild, naturally adapted counterparts.

I noted that the US Fish and Wildlife Service had not responded to the Forest Service request to discuss the whitebark pine situation for the development in over a year. (this was several years ago). So, anything provided for mitigation in the DEIS has not been approved by the USFWS, the agency responsible for Federally Listed Species. Whitebark pine mitigation is far more complex—and potentially risky to current populations—than simply collecting seeds, growing trees, and planting them on site.

This issue should have been addressed before the DEIS was released. What have you been doing since the species was listed almost three years ago ?

Significance of Lower Elevation Whitebark Pine Stands

The lower elevation whitebark pine stands observed in the area may hold unique ecological significance when compared to their higher elevation counterparts. As indicated in the DEIS, these stands possess greater resistance to whitebark pine blister rust, a disease that poses a serious threat to the species. In addition, the adaptive traits found in these lower elevation populations may be particularly valuable for coping with hotter and drier environmental conditions as a result of a future of hotter and drier climate due to climate change. Such adaptations are increasingly important in the context of climate change, as they may enable whitebark pine to migrate upslope and persist and allow the species and ecological connections to survive over time. *Therefore, a detailed analysis is needed to fully understand the comparative value of these lower elevation stands, their disease resistance, and their potential contributions to the resilience and future survival of whitebark pine in the local area.*

Development of Effective Mitigation Strategies

Mitigation strategies must prioritize the avoidance of actions that would result in the destruction of whitebark pine trees or the disturbance of their natural habitat. This requires changes in the project design and implementation operation strategies to ensure that whitebark pine populations are not directly harmed and that the unique environmental conditions they depend on remain intact. By focusing on prevention and protection, rather than compensatory planting, the integrity and resilience of existing whitebark pine stands may be maintained.

Comprehensive Consideration of Impacts on plants and wildlife for construction and operation

All forms of human disturbance within a determined zone of effects must be thoroughly analyzed. These disturbances include noise, various types of traffic, walking, bicycle riding, shooting, motorbiking, fishing in the Upper Reservoir and Squilchuck and Orr Creeks, hunting, and plant collecting. Additionally, the impacts of human waste (defecation) as well as littering, need to be considered. *The cumulative effects of these activities on wildlife and habitat as well as vegetation within the affected environment zone should be systematically addressed to understand the full scope of potential impacts.*

Consideration of Property Value Effects and Future Development

In addition to direct environmental impacts, the cumulative effects analysis should account for secondary effects such as changes in property values resulting from the

resort and ski area expansion. This economic factor may drive further land development, particularly in the Squilchuck and Stemilt Basins. It is important to address how the resort may alter the pace and pattern of development in these areas, and how such changes could further impact wildlife/ habitats and vegetation.

Mitigation Strategies for Wildlife and Habitat

To reduce adverse effects on wildlife and habitat, appropriate mitigation measures should be identified and implemented. *One recommended strategy is the acquisition of lands for management specifically for wildlife conservation.* By designating and managing these areas, it may be possible to offset the negative impacts of habitat loss or degradation, thereby supporting long-term ecological balance and wildlife viability within your Assessment area.

WDFW and DNR Land Exchange

Page 4-67

"In 2020, the Washington state legislature directed WDFW to explore a land exchange *"for near- and long-term facility replacement and expansion of the mission ridge ski and board resort"*(Engrossed Substitute Senate Bill 6168; effective date April 3, 2020). WDFW has indicated that the elk habitat value of its land in the Colockum Wildlife Area adjacent to the *Mission Ridge resort is degraded*, and that an expanded, year-round ski resort is not an allowable use of the land under the U.S. Fish and Wildlife Service (USFWS) contract that funded WDFW's purchase of the property. WDFW identified 780 acres within the Colockum Wildlife Area proposed for exchange with parcels of equivalent value owned by DNR (Figure 4.4-1; WDFW 2021). The eastern WDFW parcel proposed for exchange overlaps with the Proposed Project Area. Consultation with WDFW concluded that coordination between WDFW and USFWS would seek clarification for the requirements on this property.
The land swap is not part of the current Proposed Project and this legislative directive is included here for reference / continuity with past planning efforts. There may be some longer-term potential for this effort to still move forward, but that would be a later phase or separate project evaluation."

Over the past five years, there appears to have been limited progress related to the land exchange, which is a crucial element of the Mission Ridge Expansion and Resort proposal. Excluding this land exchange from the current proposal raises concerns about the adequacy of public disclosure. This omission could be perceived as an attempt to bypass meaningful public participation in decisions about the land exchange process. There is a risk that, once the Environmental Impact Statement (EIS) is finalized, many members of the public may assume the remainder of the project is finalized as well, leading to diminished engagement and fewer opportunities for public comment on subsequent phases of the project. I've grown accustomed to developers and their consultants engaging in deceit, downplaying issues, failing to do required analysis and resorting to manipulation.

It is "degraded as a result of the existing Mission Ridge Ski Area. It would not have been purchased if it was not originally good wildlife land. This proposal is asking to degrade more Colockum Wildlife Area Land and the WDFW is working on

a potential trade for DNR Lands. At no point should WDFW trade for lands already in conservation status. The only way to do this is for replacement lands of equal habitat value or better be found to replace the value of these degraded wildlife habitat lands.

Analysis of Construction and Operational Impacts on Recreation Uses

The current analysis of construction and operational impacts on recreation is insufficient, as it fails to provide a comprehensive assessment and analysis of existing conditions for all recreational uses on public lands and private lands suggested for conservation easement. This area has a longstanding history of attracting local hunters, fisher people and recreational activities that have occurred for generations of local citizens.

Potential Adverse Effects from Construction and Operation

There is significant risk that both construction and ongoing operation will result in extensive adverse effects on recreation, not only within the immediate project site but also extending well beyond its boundaries. **A thorough analysis is required for all existing activities taking place on public lands.**

Impact on Recreational Activities

The evaluation must consider the effects of a variety of construction and operation on current activities, including:

- Vehicular and non-vehicular traffic
- Walking
- Bicycle riding
- Shooting
- Motorbiking
- Fishing activities in the Upper Reservoir, Squilchuck Creek, and Orr Creek
- Hunting
- Wildlife viewing (much greater area than Squilchuck State Park)
- Winter Camping
- Mushroom picking

Access to Public and Adjacent Private Lands

The analysis should address whether the public will continue to have access for hunting within public and private lands adjacent to the project area. Additionally, it is necessary to clarify if recreational users will be able to utilize existing MR lands and adjacent lands Will the parking lot within the project area be available to the public at all times of the year ? Can I park my car in the lot and go camping in the area ? Can the public park overnight in the parking area and sleep in their car ? Can I park and go hunting from the parking lot ? Public Access and Recreational Use Considerations such as riding the lift to access public lands for hunting in the area.

Define how the proposal will affect existing recreation and suggest mitigation for reduced recreation opportunities on Public Lands. *I suggest the purchase of private lands in the area as mitigation for loss of current recreation opportunities.*

Aquatic Plants and Animals
Page 5-41
"Native fish species that are State Priority Species, and likely use the mainstem of Squilchuck Creek, include resident rainbow trout (*Oncorhynchus mykiss*), west slope cutthroat trout (*Oncorhynchus clarkii lewisi*), and mountain sucker (*Catostomus platyrhynchus*), which ***may occur in the upper reaches.*** *However, their presence in the Project Area and proposed Utility Corridor expansion area has not* ***been confirmed.*** *Habitat degradation has occurred to the extent that exotic aquatic species may now be dominant. Native species are typically not present in sustainable numbers due to population isolation and habitat limitations."*

A thorough field survey must be conducted to identify the presence of State Priority Species within Squilchuck Creek, Stemilt Creek, Orr Creek and Lake Creek. It is essential not to selectively choose survey locations and past surveys, as incomplete analysis could contribute to the potential extinction of species within the watersheds. If these priority species are potentially present in Squilchuck Creek, the same diligence should be applied to Stemilt Creek, ensuring that no assumptions are made without direct surveys and data collection.
All survey activities must be clearly documented, including the specific dates, times, and personnel involved in the fieldwork. The transparency of these records is vital to validate the analysis and *support mitigation* strategies.

Mitigation Based on Survey Analysis

Mitigation recommendations should be based on the findings from these comprehensive surveys. Only after confirming the presence or absence of the targeted species can appropriate measures be proposed to protect aquatic populations and their habitats within Squilchuck and Stemilt Creeks.

Valid Survey Time Period

It is important to address the validity period of field surveys conducted by both the project team and government agencies. Much of the work referenced was carried out by the Washington Department of Fish and Wildlife (WDFW) or other agencies years ago and there is limited information regarding the comprehensiveness, precision and accuracy of the previous survey efforts. Without clarity on how exhaustive earlier surveys were, it is difficult to rely solely on their findings for current analysis.
To ensure that the analysis remains relevant, the question arises: How long do field surveys—both those conducted for this proposal and those performed by agencies—remain valid for use in an EIS ? Changes in habitat, population, and environmental conditions over time can diminish the accuracy of older data. *Therefore, it is necessary to evaluate which surveys require updating or repetition due to the passage of time, ensuring that current conditions are accurately reflected in the data used for mitigation and planning.*

5.1 Air

Air Inversion and Air Quality Considerations

Air inversion occurs when a stable layer of warm air settles above cooler air near the

ground. This phenomenon traps the cooler air below, preventing vertical circulation and resulting in stagnant atmospheric conditions. At the proposed resort location, temperatures are frequently higher than those found at lower elevations and in the valleys. These inversions are especially common during the winter months.
During winter, air quality in the valley is often compromised by agricultural burns and wood burning for heating purposes. The poor air quality is further exacerbated by inversions, which restricts the dispersion of pollutants and causes them to accumulate at ground level.
In considering the air quality impacts of the proposed resort, it is necessary to evaluate the effects of increased vehicle travel and the presence of air inversion. Additionally, it is important to determine whether wood-burning stoves and fireplaces will be used at the resort, as these appliances contribute to particulate emissions and may further impact air quality under inversion conditions.
Mitigation should include a year of baseline air monitoring to determine existing air quality and then continuous monitoring over time to determine needs for further mitigation or adaptive management. I suggest the Resort shall be responsible for all costs related to monitoring and reporting.

5.1.33
"the continuous operation of the Proposed Project in the future could result in *minor* long-term impacts to regional air quality. Trees and shrubs in the surrounding forested area would reduce localized impacts to air quality."

This section does not focus on evaluating the impacts of the proposed resort on local air quality, both at the resort site and in surrounding areas, including lower elevations.. Trees and shrubs do not play a role in amelioration of particulate matter from stoves and various noxious and poisionous compounds in vehicle exhaust at the time they occur.

5.1.33 Summary of Impacts from Operation
"Therefore, with proper operation-related mitigating conditions, there would not be probable significant adverse operation-related impacts on air quality or GHG emissions from the Proposed Project." **(DEIS)**

Recommended Air Quality Analysis and Mitigation Measures

The conclusion that there would not be probable significant adverse operation-related impacts on air quality or greenhouse gas (GHG) emissions from the proposed project is not supported by any data or analysis. A comprehensive assessment addressing the specific effects of resort construction and operations and increased vehicle travel on local and regional air quality is necessary. This analysis should include the following steps:

- **Baseline Air Quality Monitoring at Resort Site: Establish baseline air quality conditions at the resort site prior to the commencement of operations. This will provide a reference point against which any future changes in air quality can be measured.**

- **Ongoing Operational Monitoring: Continue to monitor air quality during resort operations. This ongoing data collection will help identify any deviations from the established baseline and enable timely detection of air quality standard violations.**
- **Lower Elevation and Valley Monitoring: Collect baseline air quality data at lower elevations and in the valley. During resort operation, compare these data points to pre-operational results to assess whether emissions and pollutants from the resort are affecting air quality in these adjacent areas.**
- **Mitigation Actions: If monitoring indicates that air quality standards are being violated, implement appropriate mitigation measures. These could include operational changes, additional pollution controls, or other responsive strategies to reduce emissions and improve air quality.**

Resort Viability due to warming temperatures due to climate change

5-5
"Variability in temperatures and increased warming due to climate change may affect Mission Ridge's capacity to make artificial snow. Changes in the timing, duration, intensity, and frequency of precipitation may alter the amount of natural snow, artificial snowmaking capacity,and timing of snowmelt each spring. Climate change may also affect the duration, timing, andnature of visitation to the resort, which in turn may affect the types of operations and amenities provided. Overall, the impacts from additional visitation and use of the MPR are anticipated tobe minor at the scale of the project.."
The effects of climate change on resort operations needs analysis. What is the projected time that skiing will be existent at the resort ? What are the possible effects on meeting financial obligations as part of future construction and operation phases ? It is ludricous to even think about permitting a ski resort and expansion with all kinds of adverse impacts on so many resources if skiing will end in 20 years. This should have been a county scoping requirement--- I suggested it but it of course. it was not included.

Greenhouse Gas Emissions

5-5
"However, because climate change is a global phenomenon, the impacts of the Proposed Project on climate change would likely be imperceptible at the project scale."
Skiing overall, is a very intensive greenhouse gas sport. There no mention of increased travel due to the resort. Skiers will drive, fly, take the bus and train to Wenatchee to stay at the resort .. They will need transporation to/from the resort. This needs to be analyzed in terms of air pollution and greenhouse gas emissions.
The effects of privileged people affecting the lives of others of lesser means needs to analysed. What mitigation is being offered ?

5.1.1
"Most climate model projections of precipitation predict less precipitation in summer and more

in winter, spring, and autumn (Chelan County 2020). Snowpack has declined, on average, in the past several decades primarily due to rising temperatures. In Chelan County, average spring snowpack is projected to decline 26.9% and 33.5% by the 2050s and 36.2% and 53.5% by the 2080s under a low and high GHG scenario, respectively (Chelan County 2020). Less snowpack can also contribute to lower streamflows in summer months. Mission Ridge currently receives approximately 200 inches of snowfall annually (Mission Ridge, 2023)."

The effects of decreasing snowfall needs to be analysed for effects on the future viability of the ski area, as well as effects on ground water availability and use of PUD water for the resort.

5.2 Groundwater and Surface Water
Construction

"Full use of the Applicant's existing right is already authorized and cannot impair other existing rights. Any change in point of withdrawal would only be authorized if the new well location does not impair existing rights. No increase in quantity is allowed through a change application, only the location of the withdrawal. See "Water Supply/Rights" in Section 5.2.3.3 for further discussion of potential groundwater pumping impacts on water supply/rights."

There are unanswered scientific questions about the geology and groundwater storage that will be affected by new well development to provide for construction and early phases of operation of the development. Water within the watershed is already over allocated. There are over 100 downstream private wells. Groundwater surfaces as springs and contributes to surface waters and Squilchuck Creek. The MR water allocation does not consider a decrease in water availability due to increasing *drought* frequency, duration and intensity due to climate change. It is happening now as indicated by increased fire frequency in all landscape types of local area and the world.

When groundwater recharge no longer meets the demands of the resort, what if anything can be *done in time* to not adversely affect all life downslope of the development ? *Analysis is needed and mitigation needs to be developed for the possibility of not enough water being available for people with wells downslope and for wildlife and plants. It needs to be clearly stated in your analysis who loses when there is not enough water. Whose water rights will be jeopardized ? What effects will it have on terrestrial and aquatic plants and animals ? Mitigation for effects of not enough water for downslope wells, wildlife and plants needs to be offered.*

Contamination of groundwater

Soil infiltration: "The wastewater treatment alternatives under consideration

(OSS/LOSS/WWTP) were assessed and dismissed as not practicable in the FEIS for the Mission Ridge/Constellation Ridge Resort (1986). At that time, it was determined that the soils in the area contained high clay content and were relatively impermeable, so a subsurface disposal system would require a large absorption area (approximately 16 acres) and would therefore not be suitable. Instead, the Mission Ridge/Constellation Ridge Resort FEIS encouraged an underground pipeline to convey raw sewage to lagoons for treatment and storage during the winters and land application (spray irrigation) during the summer months.

Since that time, wastewater treatment technology for OSS and LOSS has improved, particularly when coupled with advanced treatment (e.g., via bioreactor or membrane filtration) to treat effluent prior to discharge. Additional field work and design is necessary to determine whether the proposal can be fully met through LOSS, or whether a parallel or replacement surface water discharge system is required. Assuming that OSS/LOSS systems are appropriately sized and sited, particularly avoiding areas of geologic instability (See Section 4.1), potential impacts on soil infiltration from modern OSS and LOSS systems would be expected to be minimal because appropriate state agency approvals would Trequire informed design, permitting, and monitoring."

Rather than offer analysis for effects you offer-- advancements in technology, and changes in contamination levels, you need to answer the question of will this proposal contaminate ground water or surface water and how will it be known when it does ? People, plants and animals depend on this water downslope of the proposal. Squilchuck and Stemilt Creeks (Orr Creek) provide domestic water for people. Can you ensure that " their "water will not be contaminated ?. A water well downslope of a composting facility on the Wenatchee Heights Road was contamined by the composting facility and the water is no longer safe to use—the owner lost the use of his well and as far as I know was never compensated for the loss.

The only way to know if you are reducing downslope ground and surface water quality and quantity is to put in groundwater monitoring wells and surface quality and quantity measurement sites. This *must* be offered as mitigation. Generally, a year of baseline data is needed to establish existing conditions and then online monitoring for the life of resort operation and a time TBD after the resort fails.

Water from PUD Water System

If it is found water needs of phase one or later phases cannot met with existing ground water rights the proposal will rely on Chelan County PUD water. A local orchardist had to purchase land and close out upriver water rights to have rights to pump irrigation water out of the Columbia. How is it that PUD water is readily

available for what amounts to a new city when the PUD aquifer is contiguous with the Columbia River ? The PUD Aquifer water is river water. How is the PUD able to make these waters available considering the warming Columbia River effects on all aquatic life including listed anadromous species? *This needs to be clarified and needs analysis and mitigation by the MPR applicant.*

If the water needs for phase one or subsequent phases of the proposal cannot be met through existing groundwater rights, the plan will shift to utilizing water supplied by the Chelan County Public Utility District (PUD). This approach raises several questions and considerations regarding water availability and rights.

Given these uncertainties, further analysis is necessary to determine the full implications of relying on PUD water for the proposal. The Mission Ridge Project (MPR) applicant needs to be required to provide additional information and analysis and propose mitigation measures to address any potential impacts associated with the use of PUD water resources.

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"One wetland area on National Forest was documented during field surveys near the center of the Project Area (Figure 3-5). This palustrine (i.e., inland and shrubby) emergent wetland (identified based on preliminary observations because a formal wetland delineation was not conducted; Federal Geographic Data Committee 2013) exists in a broad depression around a stream flowing down a north-facing, forested slope. *There are two small elk wallows* and signs of previous human activity including two cut stumps and an old fence post. Herbaceous vegetation such as *Equisetum arvense* (field horsetail), *Senecio triangularis* (arrowleaf ragwort), and *Dodecatheon dentatum* (white shootingstar) dominates, while some woody species are present in lower abundance, including *Rhododendron albiflorum* (Cascade azalea), *Ribes lacustre* (prickly currant), and *Salix* sp. (willow). Two orchid species, *Platanthera dilatata* var. *dilatata* (scentbottle) and *Platanthera stricta* (slender bog orchid) were observed. A list of all observed species can be found in the Project Record."

Elk wallows play a significant role in the environment. These areas are essential for elk reproduction, serving as critical sites where elk engage in behaviors necessary for mating and territory marking. In addition to their importance for elk, wallows contribute to the creation of unique wildlife and plant habitats within the ecosystem.

By disturbing soil and vegetation, elk wallows foster specialized conditions that can support a variety of plants and insects not found in surrounding areas. This habitat diversity encourages the presence of herbaceous and woody vegetation, as well as invertebrate species that rely on moist, disturbed environments.

Ecosystem Benefits

Elk wallows provide notable benefits to the ecosystem. They support biodiversity by creating microhabitats and contribute to the ecological complexity of their surroundings. Their role in supporting reproduction and habitat diversity underscores their importance in natural systems. The presence of the two orchid species found during project fieldwork is an indication of microsite habitat diversity provided by wallows. The greater the number of habitats present the greater the biodiversity and the more stable the ecosystem.

There is no mention of these wallows in the DEIS. Two orchid species, *Platanthera dilatata* var. *dilatata* (scentbottle) and *Platanthera stricta* (slender bog orchid) were observed. The presence of these two species underlines the importance of these wallows and warrants a return visit for other species that may not have been present during this visit. The location of these wallows need to be mapped. Analysis of effects on this wetland and the two elk wallows needs analysis and mitigation needs to be offered. I suggest an analysis of effects for the wallows during construction and operation is needed and effects be mitigated. *I suggest no direct disturbance to the wallows, buffering from construction activities and fencing these wallows from groomers and skiiers during ski season.*

(FSDEA)
Table 3-33. Region 6 Sensitive Wildlife Species, Management Indicator Species, Survey and Manage Species, and State Listed Wildlife Species that are likely to occur or may occur in the Mission Ridge Expansion Assessment Area. Species are placed into habitat groups based on their habitat associations, and indicators used to assess the effects are shown. Survey and Manage Species

Survey and Manage Species (SMS) The DEIS doesn't mention any fieldwork or provide analysis for these species. Yet the Project area includes FS Land where these species could occur. The FS botanist attempted to write off the presence of these species by saying: "The Northwest Forest Plan requires pre-disturbance surveys and protection of certain plant, bryophyte, lichen, and fungi taxa known as Survey and Manage taxa. These species are largely dependent on old-growth or late-successional forest stands. *The Stemilt-Squilchuck Landscape Evaluation (Gaines et al. 2019) and field surveys found no potential habitat for these species in areas planned for ground disturbance,* so *Survey and Manage taxa were not further considered in this analysis.*" The expansion is not happening without the Forest Service Lands, so analysis for these species needs to done for FS lands. I see a problem in that Gaines' consulting firm did work under contract with the the project proponent and the FS in order to avoid conflict of interest would normally do this evaluation. This leaves this evaluation in question and I would suggest that this evaluation be based on actual FS fieldwork and evaluation and not a consultants judgement that works for the proponent of the proposal. Once again, DEIS relies on information in the FSDEA that has not had public or agency comment--- so how do I as a commenter know the validity of this information ? The DEIS at this time needs to rely on it's own analysis, the Forest Service is not under contract to do consulting work for the proponent.

Fire—after fire come the landslides.

The DEIS recognizes that the analysis area is ripe for futre landslide and erosion events. If future fires do not destroy the new city, post-fire landslides might. There is a long history of burn then wash events in central washingtion. " In 1972, an area-wide flood event resulted from a large frontal storm combined with the late melt of a record snow pack. The Preston Creek debris torrent that occurred during this event originated from lands burned in1970".Chelan County. (2024)

Year Location Type Fatalities

1942 Tenas George Mud 8
1965 Leavenworth Mud 1
1973 Preston Creek Mud 4
1995 SR 97A Rock 2
Chelan County. (2024)

Historical Flash Flooding Events

The following flash flood events in Chelan County have resulted in fatalities:

- 1925, Squilchuck Creek—16 fatalities
- 1942, Tenas Gorge—8 fatalities
- 1972, Preston Creek/Entiat River—4 fatalities.

Chelan County. (2024)

DEIS Analysis needs to include the potential for construction and operation of the Resort/Expansion contributing to these types of events and identify mitigation.

This 2016 landslide occurred one week after the MR ski area had closed. Had the ski area been open, it could have led to deaths and injury. It is known that man made snow and grooming can contribute to greater landslide potential. The potential for increased landslide potential needs analysis and potentially mitigation.

In the 1971 Yodelin avalanche tragedy, four people died when a massive snow slide hit two cabins near the Yodelin Ski Resort in the Cascade Mountains of

Washington. Chelan county had permitted the development and was named in several lawsuits. The DEIS should include analysis for landslides, avalanche and flooding (due to extreme rain on snow events) and needs to include climate change effects in this analysis..

DEIS TABLE ES-3 Identified Construction and Operation Impacts from the Proposed Project
"Further geotechnical investigation to classify hazards is required. Studies include global slope stability analysis,project-wide landslide risk assessment, transportation and utilities geotechnical evaluation, rockfall/avalanche hazard, slope setbacks, structure foundation and stability analysis, roadway design including slope creep evaluation at stream crossings and positive drainage review, and runoff review in relation to snow stacking "

These admittedly needed studies should be done and the information gained included as a supplement to the DEIS. How can the county approve the proposal without accepting liability for fire, landslides and erosion caused events that kill people at the resort or downslope of the resort ? This needs to be discussed in the supplementary DEIS. I suggest a disclaimer be provided in all advertising and promotional materials for the resort. "Chelan County will not be held responsible for your death from fire, flood, avalanche and landslides while you are at the resort.

Light

DEIS ES-14

"Visual: Night ski operations will introduce new light and glare sources that cannot be mitigated. " (Chelan County 2025).

4.3 Visual
"The safety needs to have a well-lit ski run as well as increased overall development on the mountain will necessarily create greater ambient light conditions that will affect other values (e.g. stargazing, light pollution). In this EIS, mitigation measures focused primarily on construction-related mitigation for light/glare, while additional measures are proposed for operation of the project for other aesthetic values. "

When I look up at the existing lights for night skiing it repulses me. It is a serious breach of

what I consider acceptable. An Aesthetics factor needs to be developed to quantify and qualify the effects of even more increased light on the psyche of people. *A reasonable mitigation would be to have no night skiing.* I will be doing a public records request with the Forest Service and WDFW to find out if current lighting at the existing ski area is consistent with documented approval. ***Effects on migrating birds, local wildlife and night sky viewing all need to be analyzed and included in the DEISSupplement.*** *It is nott* enough to say it will happen, the question is SO WHAT ? How does the MR lighting fall under current Chelan County guidance for signs ? I know the county has concerns about selective enforcement of reguations and lawsuits. ***So when I light up my yard in Chelan County with MR style lights this is acceptable under current code ? What are the MPR requirements for lighting ? This needs to be included in the supplementary DEIS.***

GROUND AND SURFACE WATER AND THE COMMON ENEMY DOCTRINE

In Washington State, the common enemy doctrine allows landowners to manage surface water, such as by altering its flow, without liability to neighbors. However, this right is limited by exceptions: landowners cannot block natural watercourses or drainways, must avoid intentionally increasing the volume or changing the manner of water flow onto a neighbor's property, and must act in good faith without causing unnecessary damage. It needs to be determined how this doctrine affects resort construction and operation. There have been recent cases in the general area of the proposal in which earth work caused ground water/springs to be exposed (opened up to the surface) and water runs downslope which is a problem, but a greater problem is when it affects neighboring lands. This release can exacerbate slide potential and result in other lands being condemned as in the case of Whispering Ridge homes in the Squilchuck. Whispering Ridge caused a fear of landslides in the real estate market and people in the area could not sell their homes. The proponent needs to be held totally accountable for actions that cause a release of surface water that damages other lands.

DEIS
5.12.2.6 Plants and Animals—Cumulative Effects
Page 5-123
The DEIS avoids any cumulative effects analysis (—past, present, and reasonably foreseeable future effects —on wildlife and plants) while falsely saying, "As discussed in Section 5.4, there are no significant and unavoidable impacts related to plants and animals." I have written a lot of environmental analysis and could not use the word significant without the support of studies and statistical based science to support the statement. Significant needs to be qualitatively and quantifiably defined. What data or studies do you have to support a statement of non-significance ? The Forest Service Draft EA lists the following cumulative effects:

The following lists summarize information known about the project and Assessment Areas.

Past Actions

- · Mission Ridge Ski Area development
- · Road construction and maintenance
- · Wildfire suppression
- · Residential development on Forest Ridge
- · Land purchases east of Project Area
- · Timber harvest and fuels reduction
- · Recreation – alpine skiing, Nordic skiing, snowshoeing, horseback riding, mountain biking, hiking, trail running, hunting, functions at Hampton Lodge.

Present Actions

- · Mission Ridge Ski Area operations and maintenance
- · County road maintenance, mountain service road maintenance
- · Noxious weed treatments under the current Forest-wide Noxious Weed EA
- · Recreation – alpine skiing, Nordic skiing, snowshoeing, horseback riding, mountain biking, hiking, trail running, hunting, driving for pleasure, functions at Hampton Lodge.
- · Pipeline/Clara Lake trail maintenance
- · Vegetation and fuels reduction treatments on state and county lands

Reasonably Foreseeable Activities

- · County/Forest road and trail maintenance
- · Noxious weed treatments
- · Timber harvest on adjacent commercial timber lands
- · Trail construction on adjacent lands
- · Firewood collection along Forest Service roads; including cutting of snags
- · Recreation – alpine skiing, Nordic skiing, snowshoeing, horseback riding, mountain biking, hiking, trail running, hunting, driving for pleasure, functions at Hampton Lodge, and, on the private parcel, summer motorized use of trails.
- · Travel Management (TM) Plan for motorized recreation on the Okanogan-Wenatchee National Forest
- · County/DNR hazardous fuels reduction plans

To this list I would add:

- Development that has and may take place in Squilchuck and Stemilt Basins including orchards
- Increased and increasing population in the local area and region
- Wheeler Ridge Orchard Development, 0.8 miles away to the northeast on Wheeler Ridge
- Potential development under current zoning regulations in the Squilchuck and Stemilt Basins
- Recent purchase of 538 acres of Section 13 T21N R19E by the owner of Mission Ridge
- Effects on elk and all animal migration and movement due to Orchard Development in Section 10 T2N R20E
- Orchard wildlife exclusion leads to elk and other animals not able to find their way to winter range and back to summer range and blocks movements throughout the year; at this time, some get hung up in fences and die or they are considered problem

animals when they damage private property and are killed .

Cumulative effects analysis for wildlife and plants must be done and included in a supplemental DEIS and mitigation offered.

Stemilt Squilchuck Recreation Plan

The *Stemilt-Squilchuck Recreation Plan* (Chelan County, 2019) is a planning effort that addresses the future of recreation in the upper Stemilt and Squilchuck Basins. This plan was written for and under the guidance of the Stemilt Partnership, in collaboration with WDFW and DNR. This plan takes a Mission Ridge Expansion Project Draft EA comprehensive look at the existing and potential recreation opportunities in the planning area and seeks to balance these with wildlife habitat needs, agricultural infrastructure needs, and community protection elements. Recommendations in the plan are strictly voluntary and are not legally binding in any way to landowners and managers, but are meant to provide informed guidance on how lands in the Stemilt-Squilchuck basins can be managed to meet both recreational and conservation goals. The plan identified desired conditions for the Expansion Project in Zone 2, which includes Squilchuck State Park, the Forest Ridge community, Mission Ridge Ski and Board Resort, Upper Wheeler Road and Upper Wheeler Reservoir. These desired conditions are:

* Recreation expansion on private land (Sections 19 and 30) leading to higher concentrations of use in those areas and on adjacent public lands with recreation being primarily non-motorized.
o Creation of designated trail linkages to adjacent trails and areas.
o Non-motorized recreation including: hiking, mountain biking, horseback riding, wildlife viewing, hunting, fishing, Nordic skiing, backcountry skiing and snowshoeing.
o *Providing groomed Nordic trails in Sections 19 and 30.*
o Improving the Clara Lake Trailhead at the Mission Ridge parking lot.
o *Closing some trails seasonally to protect wildlife.*
o Linking the Expansion Area with Squilchuck State Park and Scout-a-Vista Boy Scout Camp with non-motorized trails for summer and winter use.
o Designate non-motorized winter play areas in the Clara/Marion Lakes Area and south and west of Upper Wheeler Reservoir.

Recommended strategies for the Expansion Project in Zone 2 were identified as

follows:

** Providing groomed Nordic trails in Sections 19 and 30.*
o Improving the Clara Lake Trailhead at the Mission Ridge parking lot.
o *Closing some trails seasonally to protect wildlife.*
o Linking the Expansion Area with Squilchuck State Park and Scout-a-Vista Boy Scout Camp with non-motorized trails for summer and winter use.
o Designate non-motorized winter play areas in the Clara/Marion Lakes Area and south and west of Upper Wheeler Reservoir. (United States Forest Service. 2020)

The *Stemilt Partnership* is a coalition in Chelan County, Washington, that manages the Stemilt-Squilchuck Community Forest, which includes hunting as a key recreational activity. The partnership's goals include managing the forest for ***hunting***, *wildlife viewing*, water resource protection, and wildfire resiliency.
Both the Recreation Plan and Stemilt Partnership list hunting as a management goal. MPR effects on hunting and other recreational activities quality and quantity needs analysis and mitigation,
The DEIS needs to *provide analysis* for the effects of the MPR on hunting opportunities and hunting quality. *Mitigation* needs to be offered.

Vegetation Effects analysis for the MPR
Removing trees and paving nearby areas dramatically changes the local ecosystem, It is known that logging and other forest disturbance often cause trees and snags to windfall, vegetation to become diseased and a loss of vegetation-wildlife interdependent interactions. The DEIS must analyze effects on vegetation for tree removal for an established effects zone on vegetation.

Disturbance-tolerant species (Synanthropic species)::
Wildlife that can persist or even flourish in habitats disturbed by human activities. The effects on native wildlife of crows, starlings, sparrows, cowbirds, non-native squirrels and other wildlife that will move into the area due to the proposed city must be analyzed and mitigation offered for adverse effects.

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Thank you for the opportunity to comment. I hope these concerns will be considered in the DEIS Supplement or Final Environmental Impact Statement.

Sincerely,

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