

Comment ID	Page	Title	Comments	Commenter	Taseko's Response	MOE's Response
1	Vol.3. Section 9.3.1.1. Page 9,72	Reclamation Plan	Although the intention of the reclamation plan is to mitigate residual effects there will still be residual effects that are not mitigated such as the loss of over 400ha of wetland habitat and other lost values.	Roger Packham	The vegetation assessment conservatively estimates 403.5 ha of wetland loss in the maximum disturbance area whereas likely a much smaller area will be affected based on the actual mine design. Buffer areas included in the maximum disturbance area will not be disturbed. The mitigation proposed is: avoiding further vegetation loss, minimizing disturbance, mitigate against invasive species, maintaining natural drainage, and reclamation to include wetland ecosystems. Greater consideration towards wetland ecosystems can be incorporated into the reclamation plan during the permitting stage if input from First Nations and the public indicate that this is desired.	If the reclamation plan fails to address wetland loss then compensation for wetland loss should be provided. The TOR states a compensation strategy will need to be developed and implemented and MOE policy is the Ministry will seek compensation for lost values. Based on the TOR and MOE policy a compensation plan for lost values (and significant residual effects) is required and needs to be part of Taseko's table of commitments prior to project certification.
2	Vol.3. Section 9.3.2. Pages 9,72 - 73	Reclamation Plan Objectives	This section has conflicting statements. The objective to re-establish values that were present at baseline for species at risk and at-risk plant communities will certainly not be met with <i>the goal of establishing post-mine capability on an average site-wide basis equivalent to the average capability of the land prior to mining</i> . Species at risk and at-risk plant communities have very specific habitat requirements that are very unlikely to be recreated post closure, and therefore compensation for such values should be provided.	Roger Packham	The Project will result in a very small decline (-1.53%) in the availability of all ecological communities of conservation concern in the mine site RSA relative to baseline conditions. The rare plant species, other than Schistidium, occur in populations outside of the mine site and as there will be no project effect, no compensation is warranted/required. If compensation is warranted Taseko believes that this should best be discussed after the project has been approved and the actual extend of unavoidable losses has been confirmed.	The response does not specifically address the issue. The TOR states a compensation strategy will need to be developed and implemented and MOE policy is the Ministry will seek compensation for lost values. Based on the TOR and MOE policy a compensation plan for lost values (and significant residual effects) is required and needs to be part of Taseko's table of commitments prior to project certification. Taseko's apparent lack of formal commitment to compensation for lost values will increase the risk that the EIS will not be able to withstand Panel scrutiny nor respond to inevitable questions during the public hearing process.

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3	Vol.5b. Section 6.3.4.1. Page 6, 104	Grizzly Bear	The mine site LSA does not include Lower Fish Creek which according to provincial capability mapping has moderate grizzly bear capability. This is a deficiency in the assessment because there are anticipated impacts to Lower Fish Creek, which is potential grizzly bear habitat. Since this was not included in the spatial boundary for assessment, there is potential that the assessment of loss or alteration of habitat for grizzly bear is underestimated.	John Youds	The LSA for the project was established based on a consideration of those areas directly disturbed by the project plus a buffer. As the Lower Fish Creek area does not involve any direct disturbance it was not included in the LSA. There are no anticipated impacts to Lower Fish Creek except for a temporary reduction in MAD during the life of the mine.	This is a significant deficiency in the assessment. There needs to be an assessment as to how changes in streamflow (i.e. nil flow for 47 plus years) in Lower Fish Creek will affect other ecosystem values, including plant community structure and abundance and fish and wildlife species abundance and diversity. This is a very productive riparian ecosystem currently with high value for a large number of species. Cessation of streamflow could potentially affect wildlife habitat value for a number of wildlife species, including bears, moose, fish, and bald eagles. These potential losses need to be assessed in detail in the different sections of the EIS, including Vegetation, riparian ecosystems, wetlands and the affected wildlife species. This also raises another matter, and that is whether other fish stream habitat in other parts of the mine site LSA has been adequately assessed in terms of its ecosystems and species contributions over and above fish production. Taseko needs to provide an explanation of how they have evaluated the residual ecosystem effects associated with loss of fish stream habitat in the mine site LSA, as well as Lower Fish Creek.

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4	Vol.5b. Section 6.3.4.1. Page 6, 103	Grizzly Bear	The potential animal health effects of mine development, and resultant soil, vegetation, water and fish contaminants, on grizzly bear and black bear do not appear to have been examined in sufficient detail (p 6-103). I note that boron and copper toxicity potentials are examined but what about other contaminants? For example, what about the risk of arsenic in fish in the post-closure period? This is mentioned as a potential carcinogenic risk (p 6-34) however, fish was excluded from the exposure pathway in the analysis for grizzly bear (Figure 6-4). What about the potential for molybdenum poisoning? The discussion on changes to metal concentrations in soil refers to Vol 5, Section 4.9 for a description of the predicted effect of deposition of metals as a result of the Project but there is no Sec 4.9 in Vol 5 in the EIS. I note on p. 4-119 that arsenic, molybdenum, copper, chromium and selenium are at risk for CCME guideline exceedence, however it is stated that the total area at risk of metal deposition is not known because a spatial analysis was not done. This makes it difficult to interpret potential areas of impact and exposure for wildlife species.	John Youds	The actual reference should be Volume 6, Section 6.3.2.4 pg 6-36 There was heightened attention paid to the potential concern with First Nations with respect to fish ingestion. Therefore, this pathway was quantitatively assessed in the HHRA. Although ingestion of fish is a potential exposure pathway for bears and fish-eating birds there is little to no change expected in surface water concentrations or fish tissue throughout the project or during the Post-Closure period. In addition, Taseko has committed to a series of surface water monitoring programs to be conducted throughout the life of the mine and post-closure. In the event that surface water quality does not meet surface water quality guidelines at the time of discharge to the freshwater environment Taseko has committed to mitigation measures that would treat surface water prior to its discharge into the local environment. These measures would be sufficient to protect bears and fish eating birds. In terms of molybdenum, the Soils Team took a very conservative approach and adopted the Agricultural quality guidelines, whereas the more applicable guidelines for wildlife are the CCME residential parkland guidelines. The soil quality guideline for molybdenum is 10 mg/kg (not 5 mg/kg as in the agricultural landuse) and our assessment indicated that this guideline would not be surpassed and therefore no potential risk to wildlife from this exposure pathway would be expected. A similar rationale is applied for the other metals that were not carried forward in the quantitative risk assessment for wildlife. The deposition modeling that was completed was "worst-case" scenario and although it is not anticipated that a large area of the site would be impacted, these conservative worst-case scenario values were applied across the site and the home ranges of the wildlife species. Therefore, risk to receptors if anything would have been considerably overestimated in the report. As stated in the EIS post-closure water quality in Fish Creek and Taseko River will meet guidelines for protection of aquatic life (Volume 5, Section 2).Note, on page 6-44 Taseko has committed to considering a periodic monitoring program in the LSA for metal concentrations in soils, local surface water and vegetation throughout the Project.	No additional comment.
5	Vol.5b. Section 6.3.4.1. Page 6, 104	Grizzly Bear	Under measurable parameters, it states that there is no measurable parameter for increased direct mortality risk along the access road. How about bear sign observed per kilometre of road in the area - was this ever included in the assessment? Also, what about the increased mortality risk to bears in the mine site vicinity due to human-bear conflicts? - this isn't mentioned.	John Youds	To clarify it is understood that there are parameters that can be measured as indicators of bear presence/use of roads. However for this ESI as stated we use a qualitative assessment for road mortality risk because road mortality risk is a complex parameter to assess. Multiple factors affect road mortality risk (e.g. species, age, road type, habitat adjacent to road, time of day, traffic volume etc.) Given the complexity of the issue this assessment used a qualitative approach. ( See Section 6.3.4.5.) Increased mortality risk to bears as a result of human-bear conflicts associated with the mine site is discussed as part of the scoping for the overall wildlife EIS (see Section 6.1.2.1) and related mitigation measures are included in Table 6-67.	The mortality risk to bears using the road needs to be further assessed quantitatively through a monitoring program.
6	Vol.5b. Section 6.3.4.1. Page 6, 104	Grizzly Bear	The meaning of "the access road RSA is Region 5" is not clear. Please clarify what is meant here. This doesn't appear to be a useful scale for examining potential impacts to this threatened population.	John Youds	A RSA provides context for localized Project effects. A RSA may be defined based on ecological or administrative boundaries, depending on the effect under consideration. In this case, given the effect was road-related mortality risk Region 5 was considered a good choice as MOE has the mandate to manage wildlife populations (including mortality) within this region. For the determination of potential impacts for the EIS the RSA provides context for localized project effects while the GBPU provides context for the determination of significance (See Section 6.3.4.1).	Using the region 5 scale to examine the local project (road) effects is not appropriate.

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7	Vol.5b. Section 6.3.4.3. Page 6, 105	Grizzly Bear	As this is one of only nine threatened grizzly bear populations in the province, and as acknowledged, any additional human induced GB mortality would be considered unsustainable, the EIS needs to fully explain how GB mortality associated with the mine will be completely prevented. I acknowledge that the EIS does refer to some preventative measures (eg speed control measures on the road), but I ask is this sufficient given the threatened status of this population?	John Youds	Taseko cannot guarantee that GB mortality associated with this project can be completely prevented. What Taseko can and has done is outline reasonable mitigation measures as shown in Table 6-67. This indicates that Taseko will be developing a problem wildlife prevention and response plan, managing bear attractants to eliminate concerns, and providing Bear Aware and bear safety training to staff. In addition, TML states the following (from Section 6.4.3.1): "Given its threatened status, any human-caused grizzly bear mortalities in the South Chilcotin Ranges Grizzly Bear Population Unit (GBPU) are a serious concern. As stated in Section 6.4.3.1 Taseko Mines Ltd. proposes that a "Grizzly Bear Mortality Investigation Program" be implemented under the direction of the BC Ministry of Environment. As part of this program, Taseko Mines Ltd. would be required to investigate any Project-related grizzly bear mortalities and report the findings to the BC Ministry of Environment. The findings would then be evaluated in the context of existing company policy, mitigation measures and plans, and any potential improvements would be discussed and implemented as required. In turn, the BC Ministry of Environment would be required to communicate to Taseko Mines Ltd. The occurrence and findings related to any non-Project-related human-caused grizzly bear mortalities in the GBPU. The BC Ministry of Environment would be responsible for ensuring any future industrial developers in the GBPU are included in the program."	Please refer to MOE response #118 (May 25, 2009).
8	Vol.5b. Section 6.3.4.3. Page 6, 106	Grizzly Bear	The habitat mapping referred to as developed in 1995 has been replaced and updated (see <a href="ftp://ftpwml.env.gov.bc.ca/pub/outgoing/dist/Cariboo-Chilcotin%20LUOR%20Order/maps/Map%2012%20Cariboo-Chilcotin%20Grizzly%20Bear%20Capability/">ftp://ftpwml.env.gov.bc.ca/pub/outgoing/dist/Cariboo-Chilcotin%20LUOR%20Order/maps/Map%2012%20Cariboo-Chilcotin%20Grizzly%20Bear%20Capability/</a> ). I disagree that the whole RSA is low capability, as there are pockets of moderate and high capability habitat as well. According to the 2007 mapping (ILMB), the 4500 Road travels near an area of moderate capability GB habitat. This elevates the importance of mitigation measures to prevent GB mortalities related to vehicle collisions.	John Youds	The 1995 mapping was just one of the information sources reviewed for the description of baseline conditions in the Project area (Section 6.3.4.3). In addition to the 1995 mapping, the baseline also refers to more recent BEI-based mapping developed for the Central Interior Ecoregion. This mapping was in draft form in July 2008 when it was reviewed for the EIS. The text states: "Habitat mapping developed as part of the Cariboo-Chilcotin Land Use Plan in 1995 <sup>1</sup> indicates that the RSA as a whole has low capability as grizzly bear habitat. Additionally, habitat mapping recently developed for the Nature Conservancy of Canada's Central Interior Eco-region indicates that the mine site LSA is in an area of moderate to very low grizzly bear habitat capability (Nature Conservancy of Canada and BCMOE, unpublished data)." It is important to note that the grizzly bear habitat mapping developed for the EIS is habitat suitability mapping and that it incorporates indirect effects from sensory disturbance into the model. That is, habitat value has been reduced adjacent to features such as active roads. This approach is described in Section 6.2.2.5. TML considers mitigation measures to prevent grizzly bear mortalities from any source to be highly important, regardless of the habitat value within the RSA. Unfortunately we were unable to open the referenced link. <sup>1</sup> Available at: <a href="http://www.ilmb.gov.bc.ca/slrp/lrmp/williamslake/cariboo_chilcotin/docs/frpa.html#grizzly">http://www.ilmb.gov.bc.ca/slrp/lrmp/williamslake/cariboo_chilcotin/docs/frpa.html#grizzly</a>	Please refer to MOE response #5 above.

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9	Vol.5b. Section 6.3.4.4. Page 6, 106	Grizzly Bear	The methodology for the GB habitat availability mapping is referenced as being in Sec. 6.2.3.5 but this section is about birds.	John Youds	This was a error and the reference should have referred to Section 6.2.2.5	No additional comment.
10	Vol.5b. Figures 6-15, 6-16	Grizzly Bear	When I examine the RSA GB mapping product, it appears that there are errors in the model. For example, refer to fall and summer feeding ratings near Nuntsi Prov Park. How reliable are these map products for predicting seasonal habitat values for grizzly bear? Was there any sort of validation testing done?	John Youds	Grizzly bear habitat in the RSA was mapped using satelliteimagery based models that are based on a much coarser vegetation classification system than the TEM-based models used for the LSA. The development of the satellite-imagery based models is described in Section 6.3.3.4 and Appendix 5- 6-I. The limitations of this coarser scale mapping are recognized in the description of prediction confidence: "model used to predict/map the value and availability of habitat in the RSA is not as reliable as that used for the mine site LSA and transmission line RSA."	No additional comment.
11	Vol.5b. Section 6.3.4.4. Page 6, 107	Grizzly Bear	In the description of the analysis for core secure habitat, the document states "useable habitat was defined as any habitat in the RSA rated as 1 to 3 for spring feeding". I'm wondering why only spring feeding habitat was used in this analysis or this an error?	John Youds	Spring feeding habitat was chosen for the core secure habitat analysis because this habitat was considered to be the most limited across the RSA (see footnote in Section 6.3.4.4). This is standard practice.	No additional comment.
12	Vol.5b. Section 6.3.4.4. Page 6, 107	Grizzly Bear	EIS states "the prediction of post-closure habitat conditions in the mine site LSA is as described for wildlife in general (Sec 6.2.3.5). Sec 6.2.3.5 is not about the post-closure habitat conditions for wildlife - where is this assessment information?"	John Youds	Should have referred to Section 6.2.2.5	No additional comment.
13	Vol.5b. Section 6.3.4.4. Page 6, 108	Grizzly Bear	"Project effects were assessed using a semi-qualitative analysis of the change in the available area of moderate and higher value ... feeding habitat" - I suggest that low capability areas (i.e. Areas supporting a lower density of bears) also need to be factored into this analysis - these are not nil value to bears and make up significant portions of GB home ranges in these areas. These values should be included in Tables 6-17 to 6-19.	John Youds	The area of low suitability habitat has been added to Tables 6-17, 6-18 and 6-19 and attached to this document for the reviewer's reference. Note that the detailed assessment for grizzly bear feeding habitat reports on habitat suitability not capability. 1 ATTACHMENT : file: Comment 13_grizzly bear tables with low value habitat added_May25_09.pdf	No additional comment.
14	Vol.5b. Section 6.3.4.4. Page 6, 109	Grizzly Bear	EIS states "the majority of the mine site LSA is low to nil value as GB feeding habitat" - however, in fact very little of this habitat has been rated nil (see Figure 6-16) and a large amount of it is rated as moderate in the RSA mapping. How reliable are these TEM interpretations for grizzly bear?	John Youds	The text quoted in the comment refers to the LSA . Figures 6-14 to 6-16 show grizzly bear feeding habitat availability at baseline for the RSA.. The mapping for the LSA and RSA are not directly comparable. The RSA-level habitat mapping was developed from satellite imagery and is acknowledged to be much coarser than the TEM-based habitat mapping used for the LSA (also see response to Comment 10). Figures 6-17 to 6-19 show grizzly bear feeding habitat availability at baseline for the LSA. Concerning the comment on reliability the species account and grizzly bear TEM-based habitat ratings were originally developed in the late 1990s (see Appendices 5-6-A and 5-6-H). These ratings were reviewed in 2007 and the ratings for some ecosystem units were modified. These TEM-based ratings were considered to be moderate in reliability as per definition in RIC 1999 (Section 6.3.4.4).	The reliability of the TEM based ratings should have been tested and refined using animal survey data for the area. The TEM based ratings for grizzly bear do not appear to be highly accurate based on limited MOE ground observations in spring 2009. Some areas that are shown to have very low habitat suitability as grizzly bear spring feeding habitat actually have abundant grizzly bear sign. This throws into question the moderate reliability ratings for these maps and the predictions of habitat losses that were based upon them.

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15	Vol.5b. Section 6.3.4.4. Page 6, 109 Table 6-19	Grizzly Bear	This table indicates that the post-closure areas for summer and fall feeding will be greater than the baseline. Can you explain how this is expected to be achieved? Note that pg 6-122 identifies a residual loss of grizzly bear feeding habitat as a result of the project.	John Youds	Table 6-19 is an area summary for the LSA. The increase in moderate and higher value summer and fall feeding habitat at Post-closure in the LSA is the result of the following: <ul style="list-style-type: none"> <li>• At Post-closure there is no longer an indirect loss of habitat because of sensory disturbance. Thus, habitat that was reduced in value during operations 'recovers' its value at Post-closure. As indicated in Section 6.3.4.4 the indirect loss of habitat during operations is relatively large: "These reductions are due primarily to direct habitat loss, but there is also a relatively large decrease in habitat value associated with sensory disturbance around the mine site. This is particularly evident in Table 6-19—the availability of moderate or higher suitability grizzly bear habitat in the mine site LSA is reduced to almost zero in all seasons at maximum disturbance since the boundary of the mine site LSA corresponds to the grizzly bear sensory disturbance buffer around the maximum disturbance area."</li> <li>• The Post-closure scenario is projected for 70-years post-mine and incorporates succession (see Section 6.2.2.5); therefore, some ecosystem units may have higher value for bears as they mature over time.</li> <li>• The Post-closure scenario includes reclaimed areas that will have some bear value. From Section 6.3.4.4: "Most of the predicted summer and fall foraging habitat presumes the successful reclamation of the beach around TSF Lake".</li> <li>• In the Maximum Disturbance scenario the entire 'maximum disturbance area' is considered to be nil value for wildlife. However, as per Section 6.3.2.4: "the actual habitat loss will be less than predicted as only 52% of the "maximum disturbance area" used to determine the peak Project effect on habitat is likely to be physically disturbed<sup>2</sup>." The Post-closure scenario presents a more accurate picture as the undisturbed areas within the maximum disturbance area are now reflected in the area summaries. This can be clearly seen in the Post-closure figures. It is correct that, even with the implementation of reclamation and other mitigation measures, there is a residual loss of grizzly bear feeding habitat in all seasons. Our EIS concluded that this loss was not significant. This is discussed in detail in the EIS. <sup>2</sup>Only 2276.9 of the 4379.8 ha within the maximum disturbance area are planned for reclamation or inundation at post-closure.</li> </ul>	No additional comment.
16	Vol.5b. Section 6.3.4.4. Page 6, 109	Grizzly Bear	The characterization of the transmission line LSA as "poor grizzly bear habitat" is not accurate. While much of this area is rated as low capability, there are pockets of high and moderate capability habitats, particularly associated with some of the larger wetland areas.	John Youds	The transmission line LSA was characterized "as generally poor grizzly bear habitat"; however, the habitat mapping did identify some areas of moderate and higher value habitat within the LSA (Table 6-20). The EIS discusses the effect of the transmission line route on these habitats (Section 6.3.4.4). With respect to wetlands, note that the effect of the transmission line on wetlands is addressed in Volume 5, Section 5.	No additional comment.
17	6, 110	Grizzly Bear	Under project effects, the EIS states "the indirect effects during operation are likely to be more pronounced". I'd like to see a more detailed characterization of the direct and indirect effects on GB - this will be important when it comes to mitigation and/or compensation.	John Youds	Full text for quote: "The indirect effects during operations are likely to be more pronounced than those during construction and decommissioning given the larger scale and more prolonged time frame." It is not clear what further information is of interest to the reviewer with respect to direct and indirect effects. The habitat effects assessment uses sensory disturbance buffers and reductions in habitat suitability to address the indirect effects of the Project on habitat availability (Section 6.2.2.5).	No additional comment.

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18	Vol.5b. Section 6.3.4.5. Page 6, 126	Grizzly Bear	The traffic speed mitigation work needs to include MOE as well. In addition to traffic speed, a plan needs to be developed to reduce the risk of wildlife mortalities, particularly grizzly bear, on this high volume traffic road. Have studies been done to examine wildlife movement across the road and key wildlife crossing points?	John Youds	No specific studies were done to identify key wildlife crossing points or examine wildlife movement along the entire access route (which includes Highway 20). However, potential risk areas were discussed for multiple Is (e.g., bighorn sheep [Section 6.3.1.1], mule deer [Section 6.3.2.5], moose [Section 6.3.3.5], grizzly bear [Section 6.3.4.5], American badger [Section 6.3.7.1]). No site-specific areas of concern were identified by MOE during consultation for this EIS, although the topic was discussed (e.g., with respect to badgers, sheep, feral horses). TML intends to work with MOE on a variety of fronts including minimization of road mortality risk. In this regard, Section 6.4.3.1 states the following: "Taseko Mines Ltd. will record all Project-related wildlife-vehicle collisions or near misses. These data will be regularly reviewed by the environmental site monitor. If a problem area is identified appropriate actions will be taken (e.g., warning signs, sitespecific speed limits). In addition, Taseko Mines Ltd. will report any wildlife mortalities resulting from Project vehicles to the BC Ministry of Environment regional office and the BC Ministry of Transportation."	No additional comment.
19	Vol.5b. Section 6.3.4.5. Page 6, 127	Grizzly Bear	Under Access Road, this section acknowledges that "there is already a high traffic volume along these sections of road" - in my view, this elevates the need for a cumulative effects assessment. Have quantitative data been gathered on these other road uses? Has a detailed analysis of projected cumulative traffic volume and flow been completed? Will there be regular opportunities for wildlife movement across this road?	John Youds	A detailed assessment of the effect of the Project on traffic volumes is provided in Volume 6, Section 3 ('Social Issues'). Note that apart from the 2.8 km new road the 'Access Road' consists of roads that are not under TML's control (e.g., Highway 20, Hwy 97, Taseko Lake Road and 4500 Road). However, as indicated in Table 6-69, TML will work cooperatively with all road users to minimize wildlife mortality risk along these roads. Also see response to Comment 18.	Please refer to MOE Response #80 (May 25, 2009). Roads should be assessed as part of a cumulative effects analysis for grizzly bear.
20	Vol.5b. Section 6.3.4.7. Page 6, 130	Grizzly Bear	MOE does not agree with the conclusion of no significant residual effect on grizzly bears in this area. There is permanent loss of habitat at the mine site and there is considerable risk that more than 1 bear will be lost to human-caused mortality related to the mine operations, road use and increased access along the transmission line. In our view, mitigation and/or compensation should be enhanced to address these residual effects and help ensure that the mine development does not increase risk to this already threatened GB population.	John Youds	As stated in the EIS Taseko concludes that with the implementation of the suggested mitigation measures there is no significant effect on Grizzly Bear.	Please refer to MOE Response #80 (May 25, 2009). Taseko needs to commit to undertake a complete Cumulative Effects Analysis for grizzly bear. MOE observations in June 2009 in the mine site LSA suggest a minimum of two grizzly bears (likely more because only a portion of the area was visited) using the area in the spring. There needs to be a better pre-development assessment of grizzly bear use in the area, possibly through DNA hair snagging techniques so that there is a baseline estimate of minimum numbers of bears using the area. Then DNA hair snagging for grizzly bear needs to be a part of an ongoing monitoring program done by Taseko during the life of the mine.

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21	Vol.5b. Section 6.3.4.5. Page 6, 126	Grizzly Bear	The TOR says that a management strategy for dealing with potential human-bear conflicts will be developed - the only reference that I've found to this in the EIS is in Vol 3, Sec 9 (9.2.1.8) where it states that "controls and procedures to be developed prior to initiation of work on the site may include...development of a problem wildlife prevention and response plan and initiate Bear Aware and Safety training". In my view this falls short of the requirement specified in the TOR.	John Youds	In the EIS Taseko has proposed the following strategies for dealing with potential human-bear conflicts: a. The development of a problem wildlife prevention and response plan and Bear Aware and Safety training in the Vegetation and Wildlife Management Plan for dealing with potential human-bear conflicts, b. Integrate the waste management and recycling program with the Vegetation and Wildlife Management Plan to decrease the attractions for bears and other scavengers, and c. The development of policies and strategies in the Transportation and Access Management Plan for reducing wildlife impacts from collision with vehicles. However, details of a 'management strategy for dealing with potential human-bear conflicts' have not yet been developed. It is anticipated that these would be developed at the design and permitting stage.	Please refer to MOE response #118 (May 25, 2009).
22	Vol.5b. Table 6-26. Page 6, 138	Black Bear	The potential loss of black bear feeding habitat is not accounted for in the EIS.	John Youds	The selection of black bear denning habitat for detailed assessment was the approach originally identified in the late 1990s (as per Appendix 5-6-H), and the results of this assessment are presented in full in the EIS. The assumption of a general linkage between grizzly bear habitat models for spring, summer and fall feeding and black bear feeding habitat requirements is indicated in Section 17.6.3 of Appendix 5-6-H. The EIS presumes that based on the stated linkages between black and grizzly bear feeding habitat that the reader will infer the effect on black bear feeding habitat from the grizzly bear habitat assessment. This linkage should have been re-stated in Section 6.3.5 ('Black Bear') of the EIS as an aid to the reader.	No additional comment.
23	Vol.5b. Section 6.1.2.1 & TOR. Page 6,8	General: Wildlife Migration Corridors	The TOR states "The EIS must describe any wildlife corridors and physical barriers to movement that exist within the Project Area." The EIS then follows to say "...There are certainly wildlife trails in and around the mine site (e.g., Figures 8A and 8B in Appendix 5-6-J), and any that fall within the clearing boundary for the mine development (i.e. within the mine footprint) will be destroyed. Further, riparian zones are often used as movement corridors and the Fish Creek riparian zone will be permanently disrupted by the mine development. The effect of the Project on wildlife movement patterns in and around the mine site will not be assessed in detail, but will be discussed generally as part of the assessment of loss or alteration of habitat for a number of KIs (i.e., mule deer, moose, grizzly bear, black bear, and fisher)." Movement corridors were identified for mule deer and moose with no further discussion of the impacts of the Project. Grizzly bear movement patterns were dismissed under an upcoming study, while no reference was made to black bear movement corridors. Why were these not considered further in the EIS?	Cheryl Williston	Movement corridors were considered in the EIS. Two migration corridors were specifically identified in the EIS: the mule deer migration corridor north of Taseko Lake (Section 6.3.2.3); and the West Saddle Dam moose travel corridor (Section 6.3.3.3). The Fish Creek drainage was also assumed to be a movement corridor based on a general consensus in the literature that wildlife will use riparian corridors for travel. This assumption is supported by the observations of wildlife trails in the LSA (e.g., Appendix 5-6-J). The effect of the Project on wildlife movement patterns is discussed generally in Section 6.1.2.1 and also generally for a number of KIs (i.e., mule deer, moose, grizzly bear, black bear and fisher).	The response does not specifically address the issue. Taseko should commit to assessing impacts to animal movement corridors in their assessment of Project residual effects. Any significant movement corridors that are impacted or eliminated by the Project should be addressed through a mitigation or compensation strategy.



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24	Vol.5b. Section 6.3.2 & 6.33 & TOR. Page 6,49	General: Moose & Mule Deer Summer Habitat	The TOR states that ungulate data will be collected on the relative abundance and distribution of moose and mule deer by season (winter, summer). The EIS is lacking an assessment of summer habitat loss for these two species.	Cheryl Williston	The baseline descriptions for moose and mule deer describes the relative abundance and distribution in the Project area, but with an emphasis on winter conditions as winter habitat was considered to be a critical habitat requirement for both species. The use of critical habitat for wildlife habitat modeling is consistent with RIC guidance. The selection of moose winter feeding and shelter habitat for detailed assessment was the approach originally identified in the late 1990s (as per Appendix 5-6-H). In addition to the winter habitat availability analyses, this EIS considered Project effects to important wetlands identified by MOE. Also, the vegetation component of the EIS assessed the effect of the Project on wetlands in general - the results of this assessment are applicable to moose habitat requirements year-round. The selection of mule deer winter feeding and shelter habitat for detailed assessment was the approach originally identified in the late 1990s (as per Appendix 5-6-H). In addition, this EIS considered Project effects to identified UWR.	The response does not specifically address the issue. Taseko should commit to including impacts to summer habitat for moose and mule deer into their assessment of residual Project effects.
25	Vol.5b.	General Wildlife Comment: Key Indicator Species	At the April 29th, 2009 Terrestrial Ecosystems Working Group meeting, it was discussed that many wildlife species are not directly inventoried or assessed and instead are covered by one of the 21 KIs. It is recommended a table listing all species known to occur in the Project area and the Key Indicators that apply to each species be included in the EIS. If this table identifies gaps in species coverage by the EIS, then follow-up may be required.	John Youds	The Terms of Reference for the EIS require us to address listed species. This information was provided for all listed species known or likely to occur in the Project area in Table 6-4 of Volume 5, Section 6. Potential Project environmental effects on wildlife groups not represented by KIs (e.g., reptiles, small mammals, terrestrial invertebrates) are discussed generally in this assessment. Additionally, feral horses ( <i>Equus caballus</i> ), while not defined as wildlife under the BC Wildlife Act, are also discussed generally with respect to potential Project effects.	Taseko needs to develop the suggested table in order to document how species other than the KI's have been accounted for in the impact assessment. This is very important because there are a number of species using the area that have not been accounted for directly by the 21 KI's. One example is the regionally significant concentration of bald eagles using the area (estimated at from 50 to 100) in the spring during trout spawning in the streams. Species that are not KI's but are significant occurrences in the area need to be factored into the residual effects calculations and mitigation/compensation plans need to be developed.
26	Vol.5b. Section 6.3.21. Pages 6,335 to 6,342	Amphibians	<i>Batrachochytrium dendrobatidis</i> is a fungus that is thought to be negatively affecting amphibian populations world wide. It doesn't appear that the baseline assessment for amphibians included sampling to determine the presence of <i>Chytrid</i> fungus. Given translocation of fish from Fish Lake to other lakes could also result in the translocation of <i>Chytrid</i> fungus, Fish Lake and any recipient lakes for translocated fish should be sampled for the presence of <i>Chytrid</i> prior to translocation. The results and implications of Chytrid sampling will need to be discussed with the fisheries compensation working group.	Roger Packham	Details of all aspects related to the transfer of fish from Fish Lake to compensation lakes will be the subject of ongoing discussions with MOE and DFO. Approvals from the federal/provincial transplant committee will be required.	The presence/absence of Chytrid fungus in Fish Lake and tributaries and in recipient lakes could be significant in deciding suitability of sites for compensation. Failure to sample for Chytrid fungus in a timely fashion could delay decision making around acceptable recipient lakes.

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27	Vol.5b. Section 6.3.9. Pages 6,181-197	Great Blue-heronherodias (GBHE)	<p>Background: Blue-listed; interior subspecies not ranked by COSEWIC. Migratory Bird Convention Act (MBCA) bird. Conservation Framework (CF) highest rank is a 2 under goal 2 (preventing species becoming at risk), though also pretty high with a 3 under goal 3 (for preserving native species). Nests/nest trees protected under the Wildlife Act - protect nests year-round whether active/occupied or not. This is a high profile species and a rare breeder that far north, so any known breeding/foraging areas warrant consideration. Were surveys specifically done to look for heron rookeries and if so, what time of year?</p>	Myke Chutter	<p>No specific surveys for heron rookeries were conducted for the EIS because existing information indicates it is very unlikely that Heron rookeries occur within the Project area (See below). However, Table 6-68 indicates the following: - Prior to and during ROW clearing, any wildlife habitat features (e.g., nest trees) that are identified will be evaluated for potential mitigation measures (e.g., avoidance). - Retain actual or potential wildlife trees (i.e., dead or dying trees and snags, and living or dead deciduous trees) wherever possible and safe to do so (as per provincial guidelines) From Section 6.3.9.3: "Gebauer and Moul (2001) listed seven colonies (105 active nests) for the Central Interior, all on the east side of Fraser River, and none within the transmission line RSA. Individual herons do appear in the Project area during migration and, to a lesser extent, over the winter. The great blue heron is considered fairly common<sup>3</sup> in the Cariboo from early May to late September and rare<sup>4</sup> to uncommon<sup>5</sup> the rest of the year (Roberts and Gebauer 1992). Appendix 5-6-J and Appendix 5-6-A) recorded small numbers of herons (one to six birds) on or near Fish Lake from late July into the fall (as late as the end of November) in the 1990s. No herons were seen in the mine site RSA during any of the 2006 field programs (Appendix 5-6-C). During 2006 fall aerial surveys for migratory birds, three herons were detected outside the transmission line LSA but within the transmission line RSA (two in Wetland 1 [Brigham Lake area] and one in Wetland 19 [Willan Lake area]; see Appendix 5-6-C). There are winter records of herons for Chilko Lake, Hanceville, and Williams Lake (Campbell et al. 1990a)." <sup>3</sup> 7-20 individuals per day per locality <sup>4</sup> 1-6 individuals per season <sup>5</sup> 1-6 individuals per day per locality</p>	<p>Point remains that if any wildlife habitat features (in particular for this species, heron rookeries) are discovered during the project, they are to be protected year-round whether active or not, which may effect the Proponent's planning if features are not discovered until the project is underway.</p>
28	Vol.5b. Section 5.3.2.8. Page 5,100		<p>As stated above. The permanent loss of approximately 400+ ha of wetland ecosystems is locally significant and as per the Ministry of Environment's Deputy Minister's letter dated May 19, 2006, compensation should be addressed. What is the reason for not proposing compensation?</p>	Roger Packham	<p>The assessment indicates that the area of wetlands in the minsitesite RSA will be reduced by 403.5 ha as a result of the Project. The approach taken to generate this prediction was conservative, incorporating buffer areas in the mine footprint that are not anticipated to be affected by disturbance. In addition, there are large areas of similar wetland habitats within the SBPSxc and MSxv in nearby drainages that will not be affected by the Project. Also, the fish compensation plan will result in the creation of marginal or shoreline wetlands in several areas. If compensation is warranted Taseko believes that this would best be discussed after the project has been approved and the actual extent of unavoidable losses has been confirmed.</p>	<p>The response does not specifically address the issue. The TOR states a compensation strategy will need to be developed and implemented and MOE policy is the Ministry will seek compensation for lost values. Based on the TOR and MOE policy a compensation plan for lost values (and significant residual effects) is required and needs to be part of Taseko's table of commitments prior to project certification. Taseko's apparent lack of formal commitment to compensation for lost values will increase the risk that the EIS will not be able to withstand Panel scrutiny nor respond to inevitable questions during the public hearing process.</p>

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29	Vol.5b.	General Comment: Wildlife	What about picking up toxins from feeding on prey from contaminated waters/wetlands? The EIS does not adequately address potential health effects associated with mine development on Great Blue Heron and other species, especially those using aquatic habitats.	Myke Chutter	Again the actual reference should be Volume 6, Section 6.3.2 pg 6-36 Again impacts are not predicted for waters / wetlands in the Project study area. Impacts are not expected on fish-eating birds, such as the Great Blue Heron, as water quality is not anticipated to be degraded significantly throughout the life of the project or during the post-closure phases. Again the proposed surface water monitoring programs and mitigation measures will serve to ensure the protection of these species.	Will there not be open tailings ponds that birds could access (NB recent mortalities of ducks on tailing pit in Alberta)? Could not large scale natural disturbance (e.g., earthquake) breach these pits and cause the effluent to get into the water system?
30	Vol.5b. Section 6.3.12. Page 6,237-249	Sandhill Crane (SACR)	Background: Recently dropped to Yellow list; COSEWIC ranked as Not at Risk. MBCA bird. CF highest rank = 2 under goal 2 and 3 under goal 3 (same as GBHE above). This is a fairly high profile species that nests somewhat colonially –nesting areas are important to protect and monitor. Were surveys specifically done to look for sandhill crane nests and if so, at what time of year? Similar comments to GBHE regarding toxins.	Myke Chutter	Tables 6-67 and 6-68 indicate that TML recognizes breeding bird timing windows as best practice, and that timing dates and any alternatives to best practices will be discussed with regulatory agencies. No specific surveys to look for sandhill crane nests were undertaken for the EIS.	Refer to Response #27. Point remains that it would likely effect the project if nesting SACR were not discovered until the project is underway. A survey needs to be conducted - Sandhill Cranes were heard in the vicinity of the wetlands near Fish Lake in June 2009 by MOE biologists.
31	Vol.5b. Section 6.3.10. Pages 6,196-217	Mallard (MALL)	Background: Yellow, not listed by COSEWIC. CF highest rank = 5 under goal 3, so a low priority for us. However this is an MBCA species. To reduce impact need to ensure that habitat destruction/alteration activities occur outside of breeding season.	Myke Chutter	Tables 6-67 and 6-68 indicate that TML recognizes breeding bird timing windows as best practice, and that timing dates and any alternatives to best practices will be discussed with regulatory agencies.	No additional comment.
32	Vol.5b. Section 6.3.11. Pages 6,215-237	Barrow's Goldeneye (BAGO)	Background: Yellow, not ranked by COSEWIC, MBCA bird; however CF highest rank of 1 for the 2 <sup>nd</sup> goal of preventing species from coming at risk. BC has a significant portion of the world's breeding population of BAGO. Major concern is loss of nesting trees/snags near water/wetlands. It's unclear how the EIS came to the conclusion that there would be a nest habitat gain of 318 ha after the project... are they going to plant old-growth snags?	Myke Chutter	The 318 ha gain in moderate or higher value BAGO nesting habitat at Post-closure is predicted for the RSA. As per Section 6.3.11.4, the mere availability of this nesting habitat in the future does not imply use, particularly if suitable foraging habitat is not available. The 318 ha gain is the result of the following: • The Post-closure scenario is projected for 70-years post-mine and incorporates succession (see Section 6.2.2.5); therefore, an increase in the area that may support suitability BAGO nest trees is predicted (since the area of mature forest will increase over time). • In the Maximum Disturbance scenario the entire 'maximum disturbance area' is considered to be nil value for wildlife. However, as per Section 6.3.2.4: "the actual habitat loss will be less than predicted as only 52% of the "maximum disturbance area" used to determine the peak Project effect on habitat is likely to be physically disturbed6." The Post-closure scenario presents a more accurate picture as the undisturbed areas within the maximum disturbance area are now reflected in the area summaries. This can be clearly seen in the Post-closure figure. • To a small extent, the increase in potential nesting habitat Post-closure is a related to the presence of Prosperity Lake (because the model for BAGO nesting habitat incorporates a 500-m buffer to water [see Section 6.2.2.5]) • Reclamation of forested area may eventually result in some availability of BAGO nesting trees but for the 70- year post-mine scenario used in the EIS the value of these reclaimed areas is nil.	The response does not specifically address the issue. It seems to be implying that the gain will be due to natural forest succession - which is hardly a result of the project as it would occur without the project. It also implies that this natural succession outweighs the amount of suitable habitat lost - which is a direct result of the project occurring - this seems misleading. However, it appears that there is a 500 m buffer zone established around a particular lake - this is good. Does such a buffer exist for other lakes/wetlands?

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33	Vol.5b. Section 6.3.14. Pages 6,265-273	Lewis' Woodpecker (LEWO)	Background: Red-listed provincially and Special Concern under COSEWIC. MBCA species with a highest CF ranking of 2 highest under the goal of maintaining native species. This species appears to be in decline, at least partly due to loss of nest trees. Were surveys done in order that any active nesting areas can be protected? As with other cavity nesters, mitigation could include creating wildlife trees.	Myke Chutter	The only LEWO recorded during Project-related field programs was seen in 1999 within the transmission line RSA; however, a review of existing information suggests this species may occur in the transmission line RSA (Section 6.3.14.3). Relevant mitigation measures (Section 6.4.1) are: <ul style="list-style-type: none"> <li>• Site-specific routing of the transmission line to avoid high value nesting habitat for Lewis's woodpecker and flammulated owl identified in this assessment</li> <li>• Prior to and during ROW clearing, any wildlife habitat features (e.g., nest trees) that are identified will be evaluated for potential mitigation measures (e.g., avoidance).</li> <li>• Retain actual or potential wildlife trees (i.e., dead or dying trees and snags, and living or dead deciduous trees) wherever possible and safe to do so (as per provincial guidelines)</li> <li>• In grasslands areas, tree removal will be specifically avoided. Further, Tables 6-67 and 6-68 indicate that TML recognizes breeding bird timing windows as best practice, and that timing dates and any alternatives to best practices will be discussed with regulatory agencies.</li> </ul>	Mitigation seems reasonable - what would proponent do if discovered an active breeding site/colony during the construction phase that conflicted with their plans?
34	Vol.5b. Section 6.3.15. Pages 6,271-279	Yellow Breasted Chat (YBCH)	Background: Red listed in BC and Endangered under COSEWIC. MBCA species with a CF highest ranking 1 under the 3 <sup>rd</sup> goal (maintaining BC's native species). Very low breeding population. Need to survey for nest areas prior to construction of TL ROW. All nesting areas discovered need to be protected. Need to protect as much riparian shrubland on the TL ROW as possible.	Myke Chutter	Tables 6-67 and 6-68 indicate that TML recognizes breeding bird timing windows as best practice, and that timing dates and any alternatives to best practices will be discussed with regulatory agencies. Also see response to Comment 33.	The response does not specifically address the issue. This seems only to avoid destruction of active nests; given the status of the species, while unlikely to occur, any nest areas/habitat discovered should be protected year-round.
35	Vol.5b. Section 6.3.17. Pages 6,287-303	Sharptailed Grouse - columbianus (STGR)	Background: Blue-listed subspecies with highest CF ranks of 2 under goals 1 and 3 (global responsibility as BC has a major proportion of the remaining world population; as well as maintaining native species -due to declines in range and population in BC). Grasslands and cutovers in Region 5 are the last strongholds for this taxa in BC. Surveys to identify leks prior to construction should be completed and every effort to protect existing leks should be made.	Myke Chutter	Tables 6-67 and 6-68 indicate that TML recognizes breeding bird timing windows as best practice, and that timing dates and any alternatives to best practices will be discussed with regulatory agencies.	The response does not specifically address the issue. This seems only to avoid destruction of active nests; given the status of the species, while unlikely to occur, any nest areas/habitat discovered should be protected year-round
36	Vol.5b. Section 6.3.18. Pages 6,303-309	Prairie Falcon (PRFA)	Background: Red listed in BC but considered Not-at-Risk nationally by COSEWIC. CF highest rank of 2 under goal 3 for maintaining BC native species (due to its at-risk status). There are very few known nests for this species remaining in BC. Not certain that specific surveys were done at the right time of the year, please clarify. Any known or found sites should be protected.	Myke Chutter	A raptor survey was flown in the spring 2006 and the known PRFA nest site west of the mine site LSA was re-visited several times that summer but there was no evidence of activity (see Section 6.3.18.3). TML will work with MOE to ensure that the known site is buffered from any activities associated with the Project. Note that the known nest site is outside a 300 m buffered area around the maximum disturbance area (Section 6.3.18.4).	No additional comment.
37	Vol.5b. Section 6.3.19. Pages 6,310-325	Shorteared Owl (SEOW)	Background: Blue listed in BC and Special Concern under COSEWIC. CF highest rank of 2 under goal 2 for preventing species becoming at risk. Recently this species is coming of concern across Canada. Nest are hard to find. Recommended mitigation: Best action would be to avoid clearing grassland habitat during breeding season.	Myke Chutter	Tables 6-67 and 6-68 indicate that TML recognizes breeding bird timing windows as best practice, and that timing dates and any alternatives to best practices will be discussed with regulatory agencies.	Note, as with other listed species, all records should be submitted to MoE/CDC

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38	Vol.5b. Section 6.3.20. Pages 6,324-334	Flammulated Owl (FLOW)	Background: Blue listed in BC and Special Concern under COSEWIC. CF highest rank of 2 under goal 2 for preventing species becoming at risk. A cavity-nester, for mitigation: protection/creation of snags/cavities is important. Did nocturnal owl surveys pick up any FLOW in the TL corridor, please clarify. Note: Dick Cannings (Penticton #250-493-3393) does annual Owl Inventories around the province and may have information and inventory for the Project Area. Suggest the proponent contacts him for potential inventory data.	Myke Chutter	There were no FLOW detections during either 1997 or 2006 breeding bird surveys. A review of existing information did not indicate any FLOW records within the transmission line RSA (6.3.20.3).	Did proponent check with Dick Cannings to see if there are nocturnal owl surveys in the vicinity?
39	Vol.5b.	General Bird Comment: Collision Mortalities	Lots of stuff in the EIS about potential mortalities from collisions with vehicles, wires. MOE recommends that mortalities are documented/tracked and reported, to get an idea of what species are most susceptible and where to enable potential mitigation.	Myke Chutter	With respect to potential Project-related wildlife mortalities Section 6.4.3.1 states the following: • Taseko Mines Ltd. will record all Project-related wildlife vehicle collisions or near misses. These data will be regularly reviewed by the environmental site monitor. If a problem area is identified appropriate actions will be taken (e.g., warning signs, site-specific speed limits). In addition, Taseko Mines Ltd. will report any wildlife mortalities resulting from Project vehicles to the BC Ministry of Environment regional office and the BC Ministry of Transportation. • Taseko Mines Ltd. will conduct bird carcass surveys along segments of the transmission line identified as having high collision risk potential (e.g., where the ROW crosses or is adjacent to notable wetlands, the Fraser River crossing and associated grassland areas). The program will be developed in collaboration with the BC Ministry of Environment and other interested parties (e.g., universities). The results of these carcass surveys could be used to Project mortality levels over the life of the mine and/or as indicators for any additional mitigation measures that may be required. • Given its threatened status, any human-caused grizzly bear mortalities in the South Chilcotin Ranges Grizzly Bear Population Unit (GBPU) are a serious concern. Taseko Mines Ltd. proposes that a "Grizzly Bear Mortality Investigation Program" be implemented under the direction of the BC Ministry of Environment. As part of this program, Taseko Mines Ltd. would be required to investigate any Project-related grizzly bear mortalities and report the findings to the BC Ministry of Environment. The findings would then be evaluated in the context of existing company policy, mitigation measures and plans, and any potential improvements would be discussed and implemented as required. In turn, the BC Ministry of Environment would be required to communicate to Taseko Mines Ltd. the occurrence and findings related to any non- Project-related human-caused grizzly bear mortalities in the GBPU. The BC Ministry of Environment would be responsible for ensuring any future industrial developers in the GBPU are included in the program.	Recommend supplying MoE with an annual report listing species and locations of bird mortalities.
40	Vol.5b.	General Bird Comment: Toxins	Is there a potential for carnivorous/piscivorous birds to get poisoned by feeding on prey from toxic areas? Has the EIS examined this?	Myke Chutter	Again the actual reference should be Volume 6, Section 6.3.2 pg 6-36 Similar to Comment #29 above there is no indication that carnivorous/piscivorous birds would be at increased risk from a risk of the Project. The Short-eared Owl was quantitatively assessed, where applicable in the EIS from exposure to metal loading in the environment.	Again, see response to #29 above.

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41	Vol.5b.	General Bird Comment: Timing	To reduce impacts schedule habitat alteration/destruction activities outside of the breeding season to avoid damaging/destroying active nests. Especially important for MBCA birds (see below).	Myke Chutter	Tables 6-67 and 6-68 indicate that TML recognizes breeding bird timing windows as best practice, and that timing dates and any alternatives to best practices will be discussed with regulatory agencies.	No additional comment.
42	Vol.5b.	General Bird Comment: Snags	The EIS indicates they will try to limit loss of wildlife trees/snags – however, MOE recommends a part of the mitigation for cavity-nesting species could include snag creation during the clearing for the powerlines, i.e., instead of cutting the trees off at the base, leave as many tall larger diameter stumps as possible; also try to leave existing snags standing where possible.	Myke Chutter	Thank-you for this suggestion re: stub/snag creation.	No additional comment.
43	Vol.5b.	General Bird Comment: Nest Boxes	Suggested mitigation: Nest Boxes are a potential mitigative tool for cavity nesters that could be added to stumps, snags in the ROWs, or adjacent forest.	Myke Chutter	Thank-you for this suggestion re: nest boxes.	No additional comment.
44	Vol.5b.	General Bird Comment: Surveys	Several species need to be specifically surveyed for, including GBHE, SACR, LEWO, STGR and PRFA, please confirm or clarify if this has been done. PRFA should have been caught by the raptor surveys, not sure about the others. Surveys for GB Herons and large raptors could be done by air in the winter after a snowfall when their nests usually stand out. Presumably the songbirds were covered by the breeding bird surveys, but special attention should be focussed on YBCH. Loons and grebes presumably would have been covered during waterfowl surveys however, some grebes nest colonially and we recommend any colonial nest areas should be protected.	Myke Chutter/Roger Packham	No additional surveys need to be undertaken as Taseko feels that the review of existing baseline information (which included consultation with MOE), data from the Projects specific bird surveys, and the habitat availability analyses used in the effects assessment are sufficient for these species. In addition, Taseko proposes a suite of mitigation measures that are intended to minimize the Project effect on birds (summarized in Section 6.4.1).	Baseline information only covers what's known and tries to project suitable habitat; however - new breeding sites and range extensions are discovered constantly - One would think that the proponent would prefer to survey in advance to locate potential breeding sites of high profile Species at Risk; rather than have to stop work and adjust their plans to work around any that are found once construction is underway. Further to the need for additional surveys, the information presented in the EIS in regards to bald eagles is inadequate. The Fish Creek drainage provides a regionally significant spring foraging site for between 50-100 bald eagles. Given the significance of Fish Creek for bald eagle spring foraging a detailed assessment on the potential impacts to bald eagles as a result of lost foraging opportunities should have been conducted. Up to date bald eagle nest surveys also need to be completed prior to commencement of construction activities.

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45	Vol.5b.	General Bird Comment: Surveys	<b>Breeding Bird Atlas</b> – We recommend that all data collected on birds in this Project be shared with BC Atlas project – contact Peter Davidson @ p davidson@bsc-eoc.org . Can also use the existing Atlas species maps that have made it on-line already to check for species in the area at <a href="http://www.birdatlas.bc.ca/english/index.jsp">http://www.birdatlas.bc.ca/english/index.jsp</a> . <b><u>NB one potential mitigation/compensation action that would be beneficial for BC birds in general would be for the company to consider becoming a corporate sponsor for the Atlas project – see website for details.</u></b>	Myke Chutter	All the data collected for this project is a matter of public record and can be shared with the BC Atlas Project.	Excellent; but "can be" and "will be" are different things - Still recommend contacting Peter Davidson to discuss further, including potential sponsorship
46	Vol.5b.	General Bird Comment: CDC	All sightings/records of Provincially Red and Blue-listed species should be reported to Conservation Data Centre (CDC).	Myke Chutter	All the data collected for this project is a matter of public record and can be shared with CDC.	Again, "can be" and "will be" are different, for Species at Risk reporting occurrences to CDC is especially important.
47	Vol.5b.	General Bird Comment: Powerlines	MOE recommends that the following be investigated further for mitigation for potential powerline collisions: At a Pacific Flyway meeting in 2006, we heard about an item called a Firefly – it was reportedly extremely effective at reducing swan collisions with powerlines in a known problem area. I'm attaching an email I sent out about it... the website is still accurate: "While at the Pacific Flyway meetings last week (March 2006) , I became aware of a promising product being used in the states to prevent bird collisions with power lines. So far, its use seems to have been largely restricted to waterfowl collision areas especially for swans, but it might be useful for other species and it was suggested that it might also be useful for wind power turbines, though I'm not sure what it would affix to. I thought this might be useful info for any of you dealing with power companies and bird collision issues. The item is called a Firefly - its quite small and in fact looks like some sort of fishing gizmo. When attached to a power line, it spins, and flashes reflected light - apparently even at night. It seems to be much more durable than the usual flags etc I've seen used in the past. Seems to me that companies would be interested in purchasing and trying these items in problem areas. I was told they cost \$25-30 each and you need 3-4 between poles (depending on how far apart the poles are). If any of you have contacts with local power companies that might be interested, please pass this on. Contact info on how to acquire them are in the Newsletter blurb below and the email further below."	Myke Chutter	Thank-you for this information. Table 6-68 indicates the postcertification TML will develop a detailed plan to minimize bird strike mortality risk. TML will develop this plan in consultation with regulatory agencies.	No additional comment.

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48	Vol.5b.	General Bird Comment: Powerlines	<p>From the Trumpeter Swan Society Newsletter November 2005: NEW FIREFLY BIRD FLAPPER/DIVERTER – Collisions with power lines continue to be a major source of mortality for Trumpeter Swans as the human population continues to develop rural landscapes inhabited by swans and other waterfowl. Over the last several years, there have been several types of devices designed to mitigate bird collisions. TTSS was recently sent a sample of a newly designed flapper that has a clamp that will not vibrate out of place and is relatively easy to install. It is made of a tri-colored reflective material that glows in the dark and rotates in the wind at 3-5 mph to greatly increase visibility. For a product brochure and or digital photos, please contact Tim Chervick at Swift Creek Consulting, at (801) 652-7212 or "timothychervick@comcast.net" Most power companies are concerned about the taking of migratory birds and should be interested in pursuing preventative options. If you are aware of power line swan issues in your area, you might want to contact your local utility company and educate them about marking options. Check it out at the following website: <a href="http://www.pr-tech.com/products/birds/firefly.htm">http://www.pr-tech.com/products/birds/firefly.htm</a></p>	Myke Chutter	Thank-you for this information. Table 6-68 indicates the postcertification TML will develop a detailed plan to minimize bird strike mortality risk. TML will develop this plan in consultation with regulatory agencies.	No additional comment.



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49	11	Amphibians	Seems whole area is excellent amphibian habitat. The report gives it less importance because back then these species were not listed. However, Columbia Spotted Frog is CF1 and Western Toad is CF2 and SARA Special Concern. (CF = Conservation Framework). Western Toad is declining rapidly in southern British Columbia and hence populations in the north will become more and more important as a global refuge for this species. Western Toads are one of two BC amphibians that are globally red listed by the IUCN and hence, our global responsibility for managing this species is very high. It is suggested that wetlands with breeding amphibian populations, especially Western Toads, be protected with buffers and avoided where ever possible from construction impacts. Also, efforts to prevent contaminants, tailings, leachates or other pollutants entering the pond is strongly recommended.	Purnima Govindarajulu	Mitigation measures for wetland ecosystems in the transmission line corridor are described in section 5.3.2.6. An excerpt from this section is included below: Most of the potential wetland losses in the transmission corridor can be avoided or mitigated. The potential for the Project to negatively affect wetlands and other sensitive ecosystems was identified very early in the Project planning process. As a result, a constraints analysis was completed for the transmission corridor prior to initial route selection and efforts were made to avoid wetlands and the area of overlap was minimized. Because the wetland area directly affected by the Project is small overall, and will be localized to the transmission pole placement sites and any required ancillary roads, the Project specific mitigation measures will be limited to small areas. In addition to mitigation measures prescribed to avoid Project specific environmental effects to wetlands, mitigation measures are recommended to protect wetland ecosystems elsewhere within the transmission corridor RSA. Prescribed mitigation measures for wetland ecosystems largely reflect those already described for the mine site. Incremental mitigations prescribed for the transmission line include the following measures to minimize disturbance: 1) timing construction to avoid activity in or adjacent to wetlands until ground is frozen to minimize soil compaction and damage to wetland vegetation 2) transmission pole delivery to wetland areas is to be completed by helicopter drop minimize the area of excavation for placement of the pole foundation and area of footprint of the sidecast material	Be specific about the number of wetlands affected by mine site and transmission line and access roads. What exactly are the mitigation measures that you speak of? Regardless of the season that the construction is completed (talk of avoiding activity until ground is frozen), the wetland areas will be damaged come spring. Taseko should commit that when construction happens close to a wetland, the wetland is protected from sedimentation and pollution impacts. Also, should commit that wherever possible, construction will not impact a wetland. With regards to the recipient lakes for the Fisheries Compensation Plan: Fishless lakes are excellent amphibian habitat. Salamanders and ranid frogs are negatively affected by introduction of fish into fishless lakes. Provincial fish stocking policy states that prior to a lake being stocked with a new fish species (either a fishless lake or lake being stocked with a new species of fish) a lake survey to the relevant Resource Information Standards Committee (RISC) standard to address concerns regarding native fish, amphibians and relevant listed species must be conducted. Taseko should commit to conducting these lake surveys.
50	Vol.5b. Appendix 5-6-D. Page D-1	Amphibians	Results state that "A total of 66 wetland sites were surveyed..." It would be good to know 66 out of a total of how many wetlands.	Purnima Govindarajulu	An actual tally of the number of individual wetlands in the study area is not within the scope of this project. Instead, based on the TEM and SEI ecosystem mapping 685.9 ha of wetlands were identified in the mine site LSA at baseline and 290.1 ha of wetlands were identified in the transmission line LSA at baseline.	See response #49 above.
51	Vol.5b. Appendix 5-6-D. Page D-2	Amphibians	Last paragraph of the page summarizes sites where Columbia Spotted Frogs and Western toads were present. What about long-toed salamanders, were they surveyed for? Minnow traps would have been a good way to detect breeding ponds for this species (higher detection probability)	Purnima Govindarajulu	Twenty-six long-toed salamanders were detected during the 2006 survey. This information is presented in Appendix 5-6- D. Regarding minnow traps, Section D.1 states that: "Due to time constraints and the low return for effort experience that Madrone encountered during their surveys (Madrone 1999), minnow traps and pitfall arrays were not used for this study."	See response #49 above.
52	Vol.5b. Appendix 5-6-A. Page 28	Bats	Note that almost all bat species here are Conservation Framework (CF) 2 high priority CF species.	Purnima Govindarajulu	Thank you for the comment.	No additional comment.

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53	Vol.5b. Appendix 5-6- A. Page 29	Bats	Second paragraph says that "Because of the relatively high elevations of the proposed development area, bat diversity is unlikely to be very high, and many of the potential species (based on range) were predicted to be unlikely to occur." It is unclear if both studies covered the same area. The second study suggests that the Western areas of the development region may have lower densities.	Purnima Govindarajulu	The bat survey work reported in Appendix 5-6-A was conducted in 1997 and occurred in and around the proposed mine site. The 2006 bat survey work described in Appendix 5-6-B covered both the mine site area and the transmission line corridor. The highest number of captures and greatest species diversity was along the eastern portion of the transmission line (specifically in the IDFXm and BGxw2).	No additional comment.
54	Vol.5b. Appendix 5-6- A. Page 30	Bats	Section 5.2.3 states "Nine bats were captured over nine nights in June". This is a much lower rate than what was found in later study.	Purnima Govindarajulu	Thank-you for the comment. See response to Comment 53.	No additional comment.
55	Vol.5b. Appendix 5-6- A. Page 85	Bats	Section 4 states "No detailed bat inventory was proposed or deemed necessary." I disagree with this statement because further surveys for bats could potentially highlight the important bat use areas. If these areas are identified, then mitigative measures could be taken to avoid construction in these areas. This information will also enable proponents to avoid important bat habitats such as roost sites and hibernation sites. Destruction of roost sites and hibernation sites (which are usually limited in the landscape) can have strong negative impacts at the population levels of bats.	Purnima Govindarajulu	This statement comes from Section 4 of the 1999 data report and refers to the transmission line corridor. A gap analysis conducted in 2006 indicated that a bat inventory was necessary (see Section 6.2.1.2). The need for bat inventory was supported by MOE. Hence, the bat inventory described and reported on in Appendix 5-6-B was undertaken in 2006.	No additional comment.
56	Vol.5b. Appendix 5-6- B. Page B-9	Bat Field Survey	The study done in 2006 captured high proportions of lactating and post-lactating female bats. The authors suggest "This data suggests that a maternity colony may be nearby". It is very important that more effort is expended to verify whether there is a maternity colony for bats within or in close proximity to the construction areas for the mine and transmission corridor. If this maternity colony is identified, it should be left undisturbed. The destruction of a maternity colony habitat may cause very dramatic population declines. Maternity colony habitats may be very limited in the environment. It is recommended that more surveys are conducted to ensure that the development footprint does not overlap the maternity colony for bats.	Purnima Govindarajulu	The survey site with the high proportion of lactating bats is along the proposed Transmission Line corridor. As identified in Table 6-68, the following measures are already proposed to protect wildlife trees: • Prior to and during ROW clearing, any wildlife habitat features (e.g., roost trees) that are identified will be evaluated for potential mitigation measures (e.g., avoidance). • Retain actual or potential wildlife trees (i.e., dead or dying trees and snags, and living or dead deciduous trees) wherever possible and safe to do so (as per provincial guidelines) • In grasslands areas, tree removal will be specifically avoided.	Taseko should commit to conducting surveys for identification of maternity colony prior to any ROW construction or clearing. If maternity colony is identified, Taseko should commit to avoidance.
57	Vol.5b. Appendix 5-6- B. Page B-9	Bat Field Survey	This high diversity site was detected even with such low effort. Therefore, it should be identified as a very productive site and effort to preserve the roosting site is essential. Also recommend further surveys to identify hibernating sites and ensure their protection.	Purnima Govindarajulu	See response to Comment 56	No additional comment.
58	Vol.5b. Appendix 5-6- A. Page 32	Other Small Mammals	Section 6.1.1 Spring and Summer Surveys (small mammal): The effort of these surveys is very low.	Purnima Govindarajulu	Thank-you for the comment	Small mammal surveys were below RISC protocol recommended minimum effort. An explanation is needed as to why RISC standards were not followed.

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59	Vol.5b. Appendix 5-6- A. Page 32	Other Small Mammals	Section 6.2 Results/Baseline Conditions: There is a good diversity of small mammals in the study area, but again not listed or high on the CF.	Purnima Govindarajulu	Thank-you for the comment	See response #58 above.