



### **Information Request 37**

Information Request 37

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### **Response to Information Request 37**

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## **IR 37 – Wildlife Maximum Disturbance Area**

### **References:**

**EIS Guidelines, Section 2.3.6**  
**EIS, Sections 2.7; 2.7.2.7, and 2.7.2.8**

### **Related Comments:**

CEAR # 276 (BC Ministry of Forests, Lands and Natural Resources Operations)

### **Rationale:**

In Section 2.3.6 (p. 22), the EIS Guidelines require the Proponent to define “new local and regional boundaries for those aspects of the Project that have changed or are new from the previous project proposal”. The Guidelines state that these boundaries shall be based on the extent of the potential effects of the Project.

In the EIS (Section 2.7 p. 1067), the Proponent indicates that “the wildlife MDA is the same as the 2012 vegetation mine site local study area (LSA), except that the boundary has been modified to exclude Fish Lake and Wasp Lake which will not be physically disturbed.”

The BC Ministry of Forestry, Lands and Natural Resources Operations noted that some potentially impacted wildlife habitat had been excluded from the study area. These areas include the habitat contiguous with the Fish Creek drainage between the north end of Fish Lake and the main embankment of the TSF as well as a portion of all of the Beece Creek drainage. The Proponent has also excluded the area between the TSF and the existing road on the east valley wall. It was also noted that Middle Fish Creek habitat would be impacted by the potential post-closure scenarios identified after the 2009 EIS was submitted.

The Ministry stated that wildlife using habitats of Beece Creek and its wetlands (including the margins of Wasp Lake) may be impacted and modeled changes to water quality as a result of planned discharge have not been discussed with respect to wildlife. It was also noted that the wildlife and vegetation habitats excluded from the analysis may be impacted by removing the seepage and stream drainage inputs as a result of constructing the ditch adjacent to the road.

**Information Requested:**

With regards to the assessment of effects of the Project on wildlife and their habitats, the Panel requests that Taseko:

- a. Complete, for the areas discussed above, complete an assessment on wildlife and their habitats, with a focus on the possible impacts identified such as impacts from changes to water quality as a result of planned discharge and the removal of seepage and stream drainage inputs as a result of constructing the ditch adjacent to the road.
- b. Complete an assessment on Middle Fish Creek habitat that may be impacted by the potential post-closure scenarios.

**Information Request #37a**

With regards to the assessment of effects of the Project on wildlife and their habitats, the Panel requests that Taseko:

Complete, for the areas discussed above, complete an assessment on wildlife and their habitats, with a focus on the possible impacts identified such as impacts from changes to water quality as a result of planned discharge and the removal of seepage and stream drainage inputs as a result of constructing the ditch adjacent to the road.

**Response**Effect of planned discharge of mine water from the “south seepage collection pond” on wildlife and wildlife habitat in Beece Creek and Wasp Lake

No adverse effects on wildlife, wildlife health or wildlife habitat are predicted as the result of any planned discharges from the South Embankment (SE) Seepage Collection Pond.

During operations the SE Seepage Collection Pond is pumped back to the TSF (Pages 597 and 599 [2012 EIS]). At closure (Year 21) a channel will be constructed to discharge water from the SE Seepage Collection Pond to Wasp Lake and from there to Beece Creek (Page 1444 [2012 EIS]); however, this planned discharge will only occur if and when water quality is suitable for release (Page 79 [2012 EIS]). Specifically the following mitigation measure from Table 2.7.2.4B-40 (Page 796 [2012 EIS]) applies:

“To the extent possible, seepage from the TSF will be collected in seepage collection ponds and in groundwater wells. All seepage water collected will be pumped back into the TSF or into the open pit, depending on the phase. The Proponent has committed to ensuring that the water quality in the adjacent streams and rivers will meet either generic WQ guidelines or site-specific WQ objectives that may be developed. Alert and action levels for water quality will be developed and, through monitoring outlined in the adaptive management plan (AMP), will identify if levels are changing. In the event that monitoring indicates predicted action levels are reached, mitigation in the form of active water treatment will be implemented. No adverse residual effects are anticipated following the implementation of the proposed adaptive management plan.”

Effect of removing seepage and stream drainage on wildlife and wildlife habitat downslope of the 4500 road

No adverse effects on wildlife, wildlife health or wildlife habitat are predicted as the result of removing seepage and stream drainage inputs downslope of the 4500 Road.

Figure 2.7.2.4A-1 (Page 598 [2012 EIS]) shows the area of the concern identified in this IR—it is the “white area” adjacent to the east side of the TSF and downslope of the 4500 Road (which

forms the boundary of the catchment area shown in pink). At baseline, the culverts along the existing road are already diverting some flow and some changes in site conditions may have already occurred in this area due to construction of this section of road. The drainages through this area eventually reach Fish Lake.

During operations and Phase 1 of closure, these flows will be captured by a ditch and diverted to meet the water inlet requirements for Fish Lake. This diversion will occur for approximately 30 years. During the period when the ditch is in place, a 15% leakage is predicted; thus, not all flow to the downslope areas will cease and the area will continue to receive inputs from other sources (i.e., precipitation). The wetlands and riparian areas within the white area are limited in extent and diversity<sup>1</sup> (see Figures 2.7.2.7-8 [Page 1004] and 2.7.2.7-9 [Page 1017], respectively [2012 EIS]).

In response to reduced flows during operations, wetland and riparian vegetation composition may shift and dry, no longer supporting hydrophytic vegetation. Given that some flows will persist and that the wetlands and riparian habitat is limited in extent and diversity in this area, the effect on wildlife is unlikely to be substantive.

At closure, the ditch will be breached and the drainages will be allowed to resume their natural flow patterns downslope to the TSF.

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<sup>1</sup> Only fens are present within the white area (see Figure 2.7.2.7-8, Page 1004 [2012 EIS])

**Information Request #37b**

With regards to the assessment of effects of the Project on wildlife and their habitats, the Panel requests that Taseko:

Complete an assessment on Middle Fish Creek habitat that may be impacted by the potential post-closure scenarios

**Response**

The location referred to as “Middle Fish Creek” in IR37b is not the same as the stream reach known as “Middle Fish Creek” in the fisheries assessment (Page 287 and Figure 2.6.1.5-1 [2012 EIS]). In CEAR #276 the BC Ministry of Forests, Lands and Natural Resource Operations refers to the “aquatic, riparian and wetlands contiguous with the Fish Creek drainage between the north end of Fish Lake and the main embankment of the TSF” as “middle Fish Creek”. The area identified as “middle Fish Creek” in this IR is the same as the area identified as “Upper Fish Creek in the 2009 EIS and 2012 EIS; therefore, in order to address this information request, information is provided for “Upper Fish Creek below the TSF”.

The effect of three potential post-closure scenarios on wildlife and wildlife habitat in Upper Fish Creek below the TSF is provided below.

Changes in Water Quantity

There will be increased flow (above baseline) to the Upper Fish Creek below the TSF area in all phases of the Project (see Table 2.7.2.4A-7 [2012 EIS]). This is true regardless of which of the three post-closure water management scenarios is in place at any given time. This increase in water quantity is not predicted to have an adverse effect on the aquatic, riparian and wetland habitats in the Upper Fish Creek below the TSF area; therefore, no adverse indirect effects on wildlife and wildlife habitat are anticipated.

Changes in Water Quality

The effect of potential changes in water quality in Upper Fish Creek below the TSF on wildlife and wildlife habitat is discussed in detail in Section 2.7.2.8 (Pages 1099 to 1106) of the 2012 EIS. At post-closure, if TSF water quality does not meet either generic WQ guidelines or site-specific WQ objectives that may be developed, discharge will either be directed to the pit or treated before release to Fish Lake; therefore, no residual adverse effect on water quality in the middle Fish Creek area is predicted (See IR15a).