

Merritt BCTS – Copper Creek Operating Area ME9362.02 Stream Assessment for TA0729 July 2020

BCTS requires reactivation and extension of ME9362.02, a branch of the Copper Creek FSR to access blocks in TA0729. This watershed has potential for tailed frog and all of the streams associated with this cutting permit are tributaries to Copper Creek (WSC 310-367800-78300) which is known to be fish bearing (Rainbow Trout). The two streams crossing ME9362.02 were assessed on July 24 2020 by Karen Grainger RPBio with BCTS staff Lee Williams RPF, David Lishman RPF and Campbell Burwash.

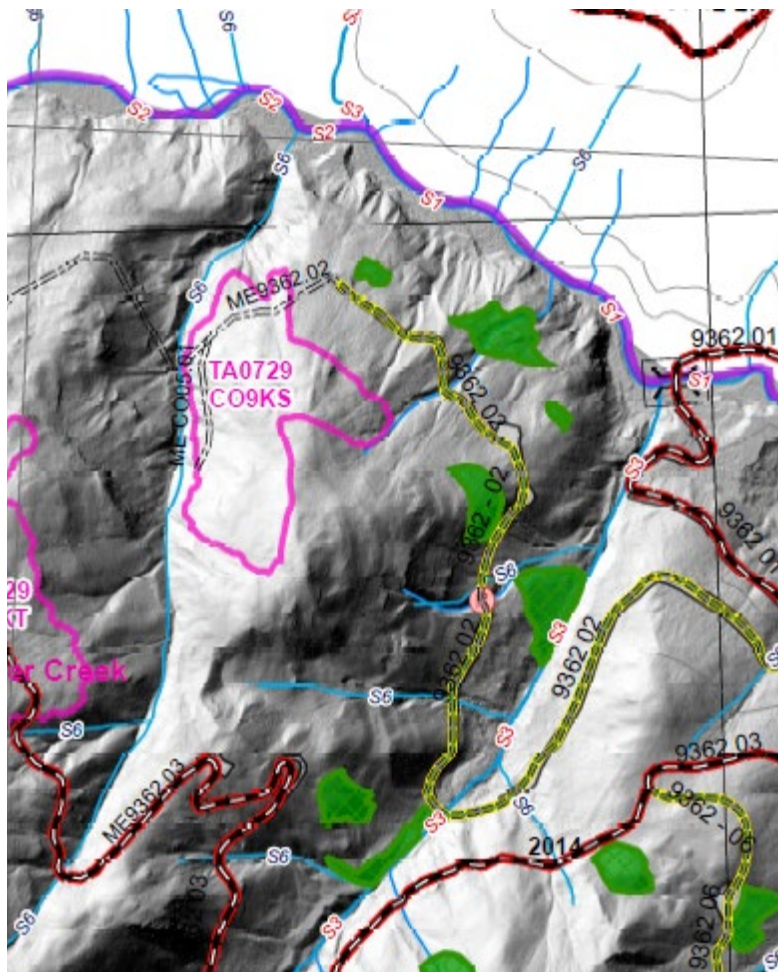


Figure 1. The streams assessed are shown on this figure as S3 crossing which is currently deactivated and S6 on the west boundary of proposed cutblock CO9KS.

Findings:

1. **Copper Creek tributary WSC 310-367800-78300-15100:** At the deactivated stream crossing (10U 673884 5452636) the stream has morphology appropriate for tailed frog (step pool morphology, cobble-dominated substrate) although it is suspected that this

stream may not provide perennial flows. A 30 minute time-constrained search of the reach at the crossing did not find any tailed frog tadpoles. Fish habitat is moderate but lack of deep pools for overwintering, and the probability that this stream dries up at times precludes it from providing perennial habitat. At the confluence with Copper Creek, the stream dissipates and goes underground with no channelized outlet preventing access for fish.

Conclusion: this stream is not fish-bearing and is not tailed frog habitat.



Photo 1. Deactivated crossing.



Photo 2. At the confluence with Copper Creek, the tributary has no channelized connection. The stream dissipates and goes underground before meeting Copper Creek.

2. **Copper Creek tributary WSC 310-367800-78300-18900:** This small stream on the west boundary of CO9KS also appears to be seasonal. No tailed frog tadpoles were observed walking the length from the proposed crossing to the confluence with Copper Creek. There are several gradient barriers to fish passage (sections up to 37%) with no perennial fish habitat available. The stream dissipates and goes underground approximately 40m before meeting Copper Creek, with no channelized connection for fish passage.

Conclusion: this stream is not fish-bearing and is not tailed frog habitat.



Photo 3. In the area of the proposed crossing, the stream is small and steep (29%).



Photo 4. Lowest documented gradient barrier is 37% over 15m at 10U 673639 5452238.

Date & Time: Fri, Jul 24, 2020, 13:44:43 PDT
Position: 10 N 673632 5452238 (Error)
Altitude: 1198m (Error)
Datum: WGS-84
Azimuth/Bearing: 054° N54E 0960mils Magnetic ($\pm 20^\circ$)
Elevation Grade: -015%
Horizon Grade: +003%
Zoom: 1.0X
copper creek no outlet



Photo 5. There is no channelized outlet at the confluence with Copper Creek and no potential for fish to access this stream.

Outstanding Issues: There are 2 more small streams associated with this cutting permit to the east at proposed blocks CO9KU and CO9KV. These are suspected to also be seasonal which would preclude tailed frog core habitat. The access to these blocks should be finalized as the stream crossing on the west side of CO9KS looks to be difficult. If access from the west (off of ME9397-10) is considered, note that the new stream crossing immediately off the end of that road has confirmed tailed frog occurrence (a core habitat stream requiring an open-bottomed structure).

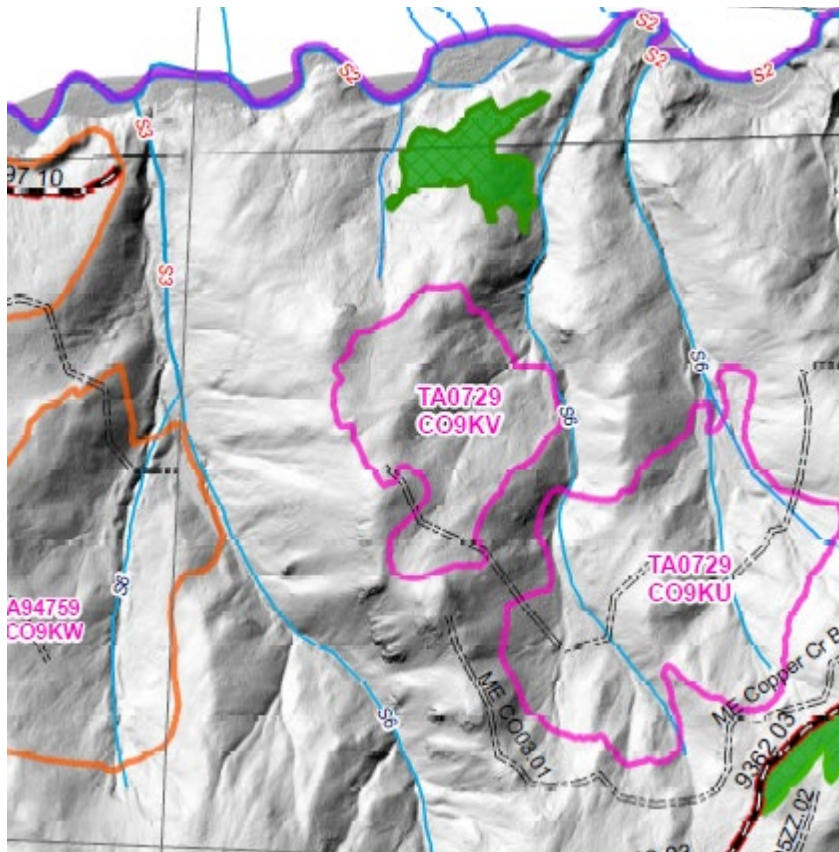


Figure 2. Access to CO9KV and CO9KU should be finalized. The 2 streams labelled S6 are likely seasonal but need to be assessed for fish and tailed frog potential. The stream labelled S3 has known tailed frog core habitat.