

**From:** Michael Milne [mailto:mjmilne@telus.net]  
**Sent:** Wednesday, September 26, 2012 10:40 PM  
**To:** Michael Bragg  
**Subject:** Re: Re: RE: Summary of findings - Anderson and Hackett Creeks

Mike,

Please feel free to distribute the following note regarding Anderson and Hackett Creeks.

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The following is a summary of findings from my field review of the Anderson and Hackett Creek watersheds along with points raised by the water users at our informal meeting with them two weeks back. A few key points up front:

- 1 Hackett Creek is a designated community watershed with no intake and water users do not intend to use surface water from Hackett Creek at any time in the future. They are currently on wells with good water quality and sufficient supply. Use of surface water from Hackett Creek would require expensive treatment for which there is no infrastructure in place. Hackett Creek has been in-appropriately designated in my opinion and based on information from the water users it should be de-listed to avoid any confusion in the future.
- 2 Local water users are primarily concerned with water supply on the larger Allison Creek system within which Anderson and Hackett Creeks are located. These two small watersheds make up a small portion of the larger Allison Creek system (< 5%). Based on the size differential forest development in Anderson and Hackett is unlikely to affect water supply on the larger Allison Creek system in any detectable way.
- 3 There is an active intake on Anderson Creek and it was used as the primary domestic source for residential and recreational properties located along the west side of Allison Lake until Interior Health raised the bar with respect to treatment. Now the users are on wells with good water quality and they do not intend to use surface water from Anderson Creek unless required for some unknown reason. If they divert flows from Anderson Creek into their distribution system they are required to issue a boil water notice so they're preference is to stick to the well(s) if possible. This doesn't mean that water quality and quantity on Anderson Creek are not important but it does mean that the users are protected through their primary source.

From a "hydrologic effects of planned development perspective," BCTS and Tolko have proposals in each small watershed that amount to approximately 18% of the drainage area. The effect of development will be a minor increase in water yield (read water supply) over the short term returning to pre-logging condition with recovery in old blocks, advanced runoff in the spring by a few days to a week, and a potential increase in peak flow that might result in a few extra shovel loads of sediment at the intake head pond on Anderson Creek. None of those effects are considered significant in my opinion and the degree to which they are realized will be dependent upon natural snow accumulation and snow melt patterns.

There has been past harvesting in low and mid-elevation fir stands in each drainage but these areas have recovered hydrologically with 10+ m regeneration. With that the current ECA in each is effectively 0% - we're starting over. In small watersheds like Anderson and Hackett I recommend the "reasonable bite with recovery" approach which means development should occur in passes involving portions of the watershed that make sense operationally up to approximately 25% of the drainage (distributed by aspect and elevation if possible). Roads should be permanently deactivated after development where possible and the system should then be left to recover until the next pass is planned (7+ m regeneration in old blocks at a minimum). In this area that would put the drainages on an 80 year rotation +/- Worst case in small systems like these involves the "picking away" approach whereby little bites are taken often that require lots of road and ongoing maintenance. The "tiny bite" approach is not good for water in small systems like these.

The combined BCTS/Tolko plan, which is targeting mixed stands with a dead pine component, is consistent with my recommended approach – more or less. You could continue with some additional development at this time up to the 25% level provided it was at low to mid-elevation. I recommend some variability in aspect and elevation in the first pass. Development beyond what's already planned in the upper third of these drainages is not recommended at this time.

I don't see any issues with planned road access. Most of the roads are built, there are no significant stream crossings, and you plan to haul up and away from the channels and down through other adjacent watersheds. I do recommend prompt deactivation of any and all roads required for development with ATV access in mind. The recreational users are abundant and they are damaging the environment.

The most significant water related concern in Anderson and Hackett Creeks at this time is uncontrolled drainage on old non-status roads and trails that lead up from Allison Lake to the headwater areas and Stringer Lake. ATV use of these old roads and trails has compromised most of the limited water management effort that was applied (some old water bars are visible). The result is widespread erosion and site-specific diversion into unconditioned slope areas with the potential for landslides. A landslide that impacts on Anderson Creek in particular could carry to the highway and pose a threat to public safety, private property and infrastructure. An event on Hackett is less likely to reach the people and there is some potential in intervening areas for an open slope event. I'm actually surprised that we haven't seen a valley sidewall or open slope slide of some sort related to the NSR's in this area. I think the well drained nature of the slopes and relatively low precipitation levels have minimized potential effects so far but I would suggest that there will be one or more slides of some size in the future if effort is not applied to these non-status routes ASAP to get the drainage under control.

At the site level I do have some concern with potential windthrow post harvest in areas around and downstream of Stringer Lake. The "Code" reserves planned for the lake are narrow and could be damaged if not either removed or buffered through increased retention. As this is a recreational lake I suspect buffering would be most appropriate. I would be in support of such a move, particularly downstream of the lake where windthrow has the potential to affect water quality. My recommendation is to beef up the reserve downstream of the lake in particular for water quality reasons.

That's all I have to say about planned development in the Anderson and Hackett Creek community watersheds. Essentially this is a green-light from me for both BCTS and Tolko with some special considerations. I have not commented on the larger Allison Creek system for which users have the most concern, other than to say that plans in Anderson and Hackett will not affect it in a measurable way. Based on what we heard at the meeting I would recommend an overview of the Allison Creek drainage at some point to develop a long term strategy that addresses their key concern involving water supply to the lake.

Please call or email with any questions.

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