CANFOR LOGGING PLAN FOR WEST TROPHIES: PUBLIC MEETING 5 OF 9
NOTE: MINUTES APPROVED BY PARTICIPANTS

UPPER CLEARWATER REFERRAL GROUP

Minutes from meeting on 15 January 2016, 1:00 PM, Ministry of Forests, Clearwater

Canfor: Al Andersen (AA), Stefan Borge (SB)
Ministry: Rob Schweitzer (RS)
Referral Group: Tay Briggs (TB), George Briggs (GB), Tom Dickinson (TD), Trevor Goward (TG), Roland Neave (RN) [Tom and Roland both link in via video from Kamloops Forestry Office]. Apologies: Frank Smith

1: Business:

Minutes taking

RS: Transcribing audio recordings is extreme; Canfor to take minutes and have audio as a back up.

Call from Steve Webb, BCTS

TG: Steve called to express interest in Upper Clearwater Valley, will see shortly more logging on the other side of the valley. TG suggests there is no advantage to getting together until logging is finished then meet.

RN/AA: Outside our scope of discussion; one thing at a time

Article from Vernon Morning Star (Jan 10), attached.

TG: our situation with BCTS is not an isolated incident.

Directors upset with timber process

RICHARD ROLKE
Morning Star Staff

Rural politicians continue to lash out at a provincial agency.

Much of Thursday's Electoral Area Advisory Committee meeting was dominated by B.C. Timber Sales' process for putting cutblocks up for sale.

"The process is, 'Here is what we're doing and that's it.' We want more communication with the communities," said Mike Macnabb, BX-Silver Star director.

Macnabb added that elected officials and residents should have a role in how areas are harvested before logging rights are put up for bid.

"People have water licenses on creeks and wells downstream. What certainty do people have that their water won't be affected (from logging)?"

In December, EAAC was upset with BCTS not making it aware of cutblock sales near Cosens Bay and on Vernon Mountain.

2: Cathie Hickson's letter to Rick Sommer

TG: Dr Hickson expresses concern about areas within Area G underlain by volcanic materials.

Highlight Cathie's point: points of weakness due to extreme steep slopes

Potential for road wash outs

RS: reads letter to group; attached and summarized below:

Area G forms part of a proposal for UNESCO Geopark status for Wells Gray and surrounding area.

Area G contains provincially unique geological features not found in Wells Gray.

Volcanics need specific geotechnical consideration before road and other structures are made.

Some areas are susceptible to debris flow and slope failure.

Mapping was last done in the 1980s and should be redone.
Buck Hill is especially noteworthy: unique in British Columbia.
Geopark Proposal advocates for a trail system here accessible from Trophy Mtn Road:

- Will bring park experience within ready reach of Clearwater, now establishing itself as gateway to Wells Gray.
- Will increase local tourism at the same time as it extends duration of average visit.
- Will extend tourist season by about two months each year.

Logging this area is likely to have a significant negative impact on the WG Geopark Proposal, and hence on the local economy.
Canfor should take these tangible values into consideration when making decision re logging.

SB: Example of failure and flooding is referenced in Figure 6, but not included in handout.
TG: **Maybe Cathie should be engaged to look at actual risk**.
SB: Terrain stability researched was done recently, Cathie's letter was noted.
TB: Obviously Tourism is important, contributes $21 million per year with potential to increase. When forest industry ebbs, there's a dramatic shift towards tourism. That's why we've got the Geopark proposal with massive potential, especially for shoulder season. Need to have two strong industries to balance for long term economics. Town can survive during gap years IF we foster this industry.
TG: This is only one of many perspectives that need to be brought to bear on Canfor's proposal.

3: Questions for research and future discussion

TG: We have accumulated several questions that still need to be answered. Let's now review those and try to add others toward a comprehensive list that can be discussed thematically at future meetings.
RS: We need to clearly understand what we're looking for with each of the questions:

A) Who is legally responsible post-logging for downstream damages to life or property?
Rob to look into.

TD: Yes Rob should take this questions because government's responsibility so has to be government who answers it. Who is responsible for any future failure of results?

B) Should the Wells Gray Action Committee be invited to attend meetings?
Prefer No.

TG: We've lost a member over this question. Canfor's maps will eventually be made public. The purpose of the Referral Group is information gathering and dissemination. We're not negotiators for the process. Once we've reviewed the maps, I think it would be in everybody's best interests to involve the Action Committee.
SB: Given that it's the role of the Referral Group to bring information back to the public, have there been conversations?
TG: There's no information to bring back; we're still waiting for Canfor's maps.

TB: Originally we got a map (from Dave Dobi), which we took to two public meetings. We gathered feedback and summarize it in a letter.
TG: We have been taking heat in the valley. The Referral Group is seen as not doing anything. We could have a meeting, but there's nothing to say: Canfor hasn't yet decided what it wants to do (in Area G).
RN: There's very little to take back to the community if we're not allowed to keep your map.
SB: I'm concerned that including the Action Committee will bring a different dynamic. It would be more productive to keep things as they are.
AA: It's a good point: we've got maps but we can't take them anywhere. I'm clear on role of this committee. I'd prefer not to have the Action Committee at our meetings.
TD: Let it be noted that the Referral Group doesn't see itself as providing social license to Canfor. Nothing we say should be construed as either positive or negative with regard to providing social license.

C) Will the Referral Group have access to professional reports commissioned by Canfor? (hydrology, slope stability, caribou, others)
Yes

SB: We have a preliminary report for hydrology which we can go over today. It's not a formal report but gives a guideline; same with slope stability report, which is still only a draft. When we have final reports, we will share them.

D) Should consultants to Canfor be invited to Referral Group meetings? Which ones?
Yes, Mike Milne, hydrologist

SB: We're open to concept: nothing to hide.
AA: Mike (hydrologist) would do a better job explaining than we will.
*****NOTE: FURTHER DISCUSSION REQUIRED: DO WE WISH TO HAVE OTHER CONSULTANTS BESIDES MIKE?**

E) How will the outcome of our deliberations be decided in the event of an impasse?
TG: Should we think about this ahead of time or invent the end point as we go?
RS: Are you asking whether our original terms of reference and dispute resolution are still valid?
TG: Not really. Just asking whether we're bound to the dispute resolution mechanism, or whether we can be more creative? This can be discussed at a future meeting.
F) TG: Let's add further questions as we look at Canfor's map.

4: Canfor's Cutting Plans for Area G
SB: I've brought a preliminary report from hydrologist Mike Milne, dated 25 November 2014.
- Fundamental changes in size and shape of watersheds (as mapped by Canfor)
- Much field work has been done: a great improvement over government TRIM map
- We should use Rita Winkler's new recovery curve. She's the regional hydrologist.

GB: Have you checked regen?

SB: These are estimates, but we'll check in the spring.

T125 (second growth, 44.1 ha)

> "...my level of concern with this block is low and has always been low. This is probably the most dead pine we have on the slope and maybe the only one I would recommend using salvage as a rationale for development at this time. This block is tributary to North Duncan, the removal of timber (dead or otherwise) is expected to increase water yield but have limited effect on damaging peak flows as a result of attenuation through bedrock. There are no streams in the block so snowmelt from this area going into the bedrock and emerges in the draws below. That takes time and helps to disconnect the melt from the peak and reduce potential effects. ...The size of the channel behind Jim's place is small S6 so we're dealing with fairly low energy and limited ability to do damage. That means fairly low consequence which when combined with limited incremental effect gives us fairly low risk for T125."

- Low level of concern.
  - This is the only block I'd recommend using salvage as a rationale at this time.
  - This is tributary to Duncan Creek, but should have little effect on damaging peak flow.
  - No tributary creeks.
  - The creek behind Jim (Blueschke's) is small with limited potential to do damage.

TG: Do we know the areas of block?

Al: get areas of blocks.

TG: **Does volcanic rock underlie this area? That is, is it subject to concerns raised by Cathie Hickson?**

SB: The green patches are dispersed retention based on recommendations by the biologists to leave dispersed patches for caribou.

TG: ccc **The designated retention areas are too small and too scattered to benefit caribou.**

T157 (oldgrowth, 23.8 ha), T160 (second growth, 9.1 ha)

> "These are joined so will be discussed together. The new GPS'd stream network shows that the area upslope/upstream of T157 actually goes south and likely into what we're calling Face Unit 15. That means that T157 andT160 cover a significant portion of the source area for North Duncan Creek. These are ESSF block, there might be some dead spruce and balsam in there but the mortality will no create conditions even remotely similar to a clearcut so salvage should no be your rationale here. From a hydrologic perspective these are essentially green wood blocks and the removal of timber in this area will increase water yield more than T125 and will probably ramp up the peak because at least a portion is directly or at least better connected to the main North Duncan channel. When we just had T160 on the map and we thought that North Duncan was sourced above, my level of concern was low. That situation has changed: these blocks will affect North Duncan and could increase the likelihood of some channel change, increase in erosion and sediment delivery, and ultimately an avulsion (i.e., '*a change in channel course that occurs on an alluvial fan or floodplain as a result of sediment and debris*

accumulation, or flows that exceed bankfull resulting in erosion of a bank(s) and change in flow pattern'). That's an incremental effect but as mentioned above the consequence is fairly low. Combine those and you're getting close to moderate risk – your phone might ring, there may need to be some light instream work to control the channel, but things like public safety shouldn't be affected."

SB: We've separated these blocks for permitting purposes. T160 is pine salvage.

- GB: **What do you mean by 'light instream work'?**
- SB: That's a good question for the hydrologist.
- TG: ccc **Once again, the islands of habitat set aside for caribou are too small and scattered.** Also, **given that this is oldgrowth, I think you should establish how well developed the moss layer is**. The moss has tremendous absorptive capacity but dies after cutting. When living it absorbs a lot of water and releases it slowly. Clearly this is something your hydrologists aren't thinking about; and though it may not be important in drier areas like Penticton Creek, I believe it's a very important consideration in some settings on the Trophies. Any logging planned in oldgrowth needs to be looked from that perspective.
- RS: This is **a question for Mike Milne or Rita Winkler: how is the moss cushion factored into your assessment**? If it is, then fine. But if it isn't, then that's something that's a whole different concern.
- TD: These two blocks may have considerable visual impact, right? It would be nice to see a model of what it would look like.
- SB: **We've had the visual terrain modeling done. It's not very visible at all. I can bring that to the next meeting**.
- TG: ccc The caribou corridors should be as wide as possible. We know from your map that there will be blowdown along the edges.
- SB: We would address this at harvest time, and we'd discuss options to mitigate windthrow events. That's something we would look at on the permitting side of things.
- TG: ccc At our last meeting, you showed us the discrepancy between the cut and what got blown down later. **Some of the past blow down strips are quite large. If you extrapolate those to your planned caribou corridors, you don't have very much left**. These corridors connect with what will eventually become the heaviest mid-elevation hair lichen loadings along the top of the escarpment to the west. For caribou, this will constitute prime mid-elevation winter habitat. **It's important to maintain corridors of oldgrowth against the day when caribou finally return to this area**. It's my view that we already know what will happen when you create cutblocks in oldgrowth ESSF stands: the experiment has already taken place. It's recorded on your map.
- TB: Blowdown was a major issue on Big Bertha, where at first the Ministry left leave strips. Probably 30% additional forest was harvested there because of windthrow.
- TG: It wasn't just windthrow. Later the spruce bark beetles came in. So they removed the leave strips – which until then they'd been bragging about as a prime example of 'modern forestry'.
- TB: Maybe look at sheltered topographic areas as boundaries?
- SB: Yea.

T147 and T167 (oldgrowth, area not given)

> "Discussed together because they both drain to Shook Brook, or at least it appears that way based on ... line work and my stumbling around out there. Shook Brook had essentially no development in it before and now most of the remaining mature in the ESSF is laid out. Even with the Wildlife Tree Retention Areas these two blocks will have a measurable effect on peak flows and probably low flows in Shook Brook. The block below T147 is essentially recovered with 12-15 m trees but the other two are not with 5-7 + m regen. That's only getting us 30% recovery so these two should be expected to ramp things up. The result will likely be an increase in channel erosion and sediment delivery to downstream areas with possible reduction in low flow volume during the irrigation season. I think Shook Brook is the one with ... [the] Pelton wheel on it so both increases in peak and reductions in low flow (water supply) would have consequences there. Before calling it moderate or high risk I suggest we see what [we] come up with ECA wise and take it from there. Right now you're looking at an increase in hazard levels and some consequence. ..."

SB: We've got two blocks: T147 and T167. These blocks have been deferred due to hydrological constraints. They are still in the harvest plan and will be revisited in five to ten years.

TG: **The Wildlife Tree Retention Areas are too small.**

TG: You say you'll return in five to ten years. But remember that we're currently engaged in two separate processes, as agreed at our earlier meeting. Process 1 concerns your present cutting plans. Process 2 concerns the need for long term resolution in light of government's original commitment to the Guiding Principles document. You shouldn't need to be here again in ten years, nor should I. We need resolution.

SB: Agreed.

GB: But isn't there a conflict here with the Guiding Principles, which stipulate that there should be no major effects on flow?

SB: That's why we're deferring these blocks: to avoid impacts on downstream users.

TG: **We need to know how the hydrologist determines the worst case scenario. What does he actually mean by low risk**?

TG: Another point: Your hydrologist has been working on this logging plan for years. When Dave Dobi was in charge, he seemed quite prepared to sign off without walking the creeks he's subsequently walked, and which by his own admission have provided important information at variance with the government's TRIM maps. If Dave Dobi had stayed in charge, those creeks would presumably never have been walked. Though I respect your decision to share your hydrologist's preliminary report with us, I need to say I find this very disturbing.

T113 (second growth, 137 ha)

> "This new drainage info has significantly affected the assessment of T113. Before the changes, my main concern was the effect on flows in Ordschig Creek. Now it appears that Ordschig is sourced will above T113 but Case and its tributary Byrd are sourced almost wholly within T113. There are still significant site level issues with the lower planned road crossing on Ordschig but the effect of development on peak flow and water supply should be fairly minor. So that's relatively low risk except for the road. // For Case and Byrd I

would now say that the peak will likely increase, maybe sharply, and low flows (water supply) will likely go down during the high demand period (summer). Those effects are consistent with Rita's findings from Penticton Creek and no reason to think this area is much different. So T113 will increase peak and low flow hazards and that could have measurable effect on whatever is happening on the channel below. I know the highway is of limited concern because the channel isn't large or powerful but the points of diversion are a mystery that we'll have to dig into. If there's no infrastructure or use then the consequence could be fairly low, but I recall visiting at least one site down there ... and it was an active intake. I know that dead pine makes up a significant portion of T113, which does give us some rationale as portions will like a clearcut after deadfall, but not right away and there are portions that are mixed and have green pine as well. Based on the new information, that portion of T113 that drains to Byrd and Case looks risky unless the points of diversion are absent."

AA: Two notes here. First, we need more information on the creeks and will revisit when there's no snow on the ground. Second, it's not a good idea to cross the creeks, so how are we going to get the wood out without doing that? We're not done planning this one yet. The existing road already has an incredible number of pipes and expensive bridges. We'll have to carefully pick the contractor and supervise.

TG: Because by then we'll know who's responsible if it doesn't work out, right?

AA: Yea, roads and trails are key whenever you're going to cut on the side of a slope.

TG: Two points for T113. The first is the presence here of a band of alder. These alders fix nitrogen which results in some huge trees, some almost a metre across at 80 years old. Question**: If you go enter this band of alder, how can you guarantee you'll get proper regeneration**, that your clearcut won't turn into an alder thicket? My second point is that the dead pine will *not* look like a clearcut when they fall, given that there's already a healthy forest growing up under them. Only areas previously grown up to dense doghair forests might qualify; but otherwise T113 will *not* look like a clearcut when the pine falls. (Though it will look like one after you guys are finished with it).

T120 (oldgrowth?, 16.3 ha), T111 (oldgrowth, 11.1 ha)

"Based on the new drainage info I would say most of these two blocks drains to Fage and that they make up only a small portion of the watershed so my concerns around effects on runoff are low. We know that the pipes in the highway on Fage are a joke and are expected to fail without any development in upstream areas. So this scaled back 'bite' represents a cautious approach by Canfor that was perhaps motivated by other non-water related items like wind and caribou. The only thing about T111 is the amount of road that we're going to have to upgrade to get there. There are issues that need to be resolved drainage-wise but it's a big job. Could you just haul on existing and deactivate asap after harvest, yes, but that never seems to work out as planned. Both T111 and no-name to the north would have to go at once during the dry summer period with deactivation right on their heels. Otherwise we'll get caught by winter or weather or both."

GB: **This will definitely affect me and my ability to irrigate and run my farm**. If this is the case, your plan goes against past experience and against the Guiding Principles.
TG: This is **a conversation that needs to be had with Canfor's hydrologist**.
SB: **We'll invite him to the next meeting.**

T121, T106, T122, T123, T115

SB: We're running out of time so I'll condense the remaining five blocks: I'll paraphrase the hydrologist: other than there being a little water management on the roads post harvest, these are all low risk. He calls this a 'green-light' area for harvest.
TG: Actually I think we'll need to come back to these and look at them block by block.

T121 (second growth, 32.2 ha)

> "I've walked this block and have no concern with development related effects on runoff or streamflow but there is a fan in the block on the main southern tributary (the one with the "S" on it) on which the channel can move naturally or if disturbed by skidding, falling, etc. The best management practice is probably to park all of the Wildlife Tree Retention Areas on that feature and delete it from the northern tributary but we could risk manage that one by reviewing it post-harvest and maybe berming it up a bit at the most likely diversion point. That's actually a simple job that would allow development of the fan area to the north with little or no risk."

SB: Any questions?
TD: No.

T106 (second growth, 47.7 ha)

> "I've walked this one as well including that trail that snakes down to the highway north and west of the block. Development of timber here isn't going to affect anything. The only thing that could go wrong is diversion of water above the break in slope, somehow. The area is extremely dry but running surface water can surprise you so maybe consider deactivation post-harvest, waterbars at least in the first year."

TG: **T121, T106, T122 and T123 are all underlain by volcanic rock, so we need a second opinion here (as per Dr Hickson's report)**.
TB: Second Canyon too.
SB: For Second Canyon, he's saying the area (above the Trophy Mountain Road) is a red light area: don't go there because of the need to replace the culvert on the road.
TG: Once we're south of Buck Hill, we're into a lot of considerations besides hydrology. These will need to be addressed in detail. For example**, the ringed wetlands in T106 and T122 may be places where the volcanic bedrock has begun to fail**.
RN, TD: What are the circles in T122 and the big extended donut in T106?
SB: They're non-classified wetlands. Could be a small spring. [BUT SEE TG COMMENT ABOVE]

T122 (second growth, 26.4 ha)

> "Same report as T106. These are dry, boney, plateau-like features that aren't going to affect anything unless we divert water somehow. Same recommendation here, at least put some waterbars down to prevent any kind of running surface flows."

SB: This area is benign, very conducive to harvesting.

T123 (second growth, 37.6 ha)

> "I didn't look at this block and I'm not sure that it's laid out yet? Either way same report as for T122 and T106. Very dry site, more than likely the blue line is a non-classified drainage or small S6 at best and the removal of timber here isn't going to affect anything unless we somehow divert water. Same strategy as above, think about some deactivation just to be sure, probably best to go temp road and then get out!"

[NO DISCUSSION]

T115 (second growth with vets, 39.6 ha)

> "Absolutely nothing going on here, low risk. ... There is a little old road in there that would be good to pull if you logged it. If you don't log there it's not your problem."

[NO DISCUSSION]

HYDROLOGIST'S SUMMARY:
"As you can see the risk is to the north where we're into the snow zone and we have some consequence. Down south you're down low and in most cases the highway is well equipped to handle things, except for Second Canyon Creek, where an undersized concrete box there jammed two springs ago."

SB: I've handed out a summary from our biologist. [NO DISCUSSION: DEFERRED TO NEXT MEETING]
TG: It would be good to have copies of the map to look over at our leisure.
SB: Concerning T158 and T159: those are patches that may contain merchantable timber, but we haven't looked at them yet. As for T161 and T175: At our last meeting we got a little bit of direction from the Referral Group to the effect that you don't mind us looking a bit further to the south in the Upper Clearwater. So if we're maybe potentially going to walk away from some blocks in the north, then we need to look further south and try to make them up.
TG: So far we've only talked about hydrology. There is lots to talk about later.
RN: After reading Mike's report, there are concerns with everything north of and including the Fage Creek drainage. If you pull out of the North and do something in the South, there will be very few objections from Upper Clearwater once this goes out for public

discussion. Nobody lives south of there, and there very few infrastructure problems (except 2nd canyon). You can avoid a lot of conflict by making a change like that.
TG: Good points but there are other considerations that need to be addressed. Before we give up on areas south of Fage Creek, we need to discuss Clearwater's interests, questions larger than people's drinking water, like caribou, the Geopark and World Heritage site proposal, tourism, economics.

Note: Roland and Tom leave Kamloops office and **meeting officially ends**. Trevor turns off recorder. Further discussion ensues.

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