

CSA Community Advisory Group
To Western Forest Products
December 12, 2018
Western Forest Products Boardroom

Attendance

Present

Jane Cameron - Chair
Wayne Brewer
Mark Hassett
Joseph McLean
Mark Anderson
Tom Koleszar
Clay Brander
Barry Miller
Doug Fuller
Paul Goodwin
Drew Brayshaw – Statlu Environmental
Darwyn Koch - WFP
Val Thompson – Facilitator/Secretary

Absent

Russ Parsons
George Illes
Dave Hodgins
Ben Berukoff
Cindy Elliot
Bill Maitland
Rory Maitland
Andy Payne

6:15 pm: Meeting called to order
Quorum met.

Safety Review

Facilitator noted fire exits and first aid attendants in case of emergency. Meeting place in case of emergency was noted.

Code of Conduct

Code of Conduct for Community Advisory Group was reviewed.

Review and Acceptance of Agenda

Agenda was accepted.

Review and Acceptance of Minutes

Minutes were accepted.

Welcome and Introductions

Chair welcomed group and guest speaker Drew Brayshaw.

Correspondence

Copies of recent correspondence were provided and reviewed

Emails to First Nations

Letter to PRPAWS

Company Update

WFP acquired a mill in the US on November 20th from Columbia Vista Corporation for just over 30 million dollars. It consumes primarily Douglas fir and it has a strong foothold in the Japanese market. This was a strategic purchase so that they can cut less Douglas fir at their current mills and fulfil other markets. It is in Vancouver, Washington and has about 90 employees. They produce 60 million board cubic metres per year to fill their orders.

Question: It is just a sawmill?

It has a planer and a kiln.

Question: But no other kind of operations?

No.

Question: It does those little Japanese dimensions?

Mostly big squares. They do a lot of timber houses in Japanese style.

Question: Will it impact the Saltair operation?

No. None of our logs will be shipped down to the US for this. They buy all of their wood. 150,000 feet per year. They have no need for our wood.

They have niche markets in Japan and we have niche markets in Japan, but ours are around hemlock squares.

The deal will close in the first quarter of 2019.

Question: What is their certification?

FSC and PEFC. They have small private lands.

The new WFP website was launched sometime in November and when it was launched all of their operational maps were gone. They are back now.

Current Activities

Harvesting – PD-466, PD-212, ST-095, ST-096, ST-344, GI-158, ST-116, ST-271, and ST-108.

Road Construction – ST-060 (postponed), ST-347, ST-289, ST-076, ST-077, and GI-138.

Fires/Slides/Spills (YTD):

No new Fires.

No new spills

No new slides.

Harvesting Stats (YTD):

2018: As of November 30, 2018 the total amount harvested from the TFL (YTD) is 425,253 m3. The budget target was 401,447 m3.

TFL 39 block 1 is on target to meet cut control.

Water Quality and Quantity in Watersheds Supplying Domestic Water – Drew Brayshaw, Statlu Environmental Consulting

Forest hydrology: The water balance is a simple equation that nobody can ever seem to make work. There is precipitation – it rains and snows but some of the water doesn't make it to the ground, it lands on the trees and evaporates back into the air. Some of the water that makes it to the ground sinks in and some runs off. Ultimately precipitation, evaporation and runoff should equal and if they don't it should be because there is some change in storage. If the ground gets water there is more storage, if it gets dryer there is less storage. If there is a lake or a swamp and it gets bigger there is more storage, if it gets smaller there is less storage. Overall precipitation should equal runoff and a little evapotranspiration. Unfortunately, when we measure these things it doesn't quite add up but if it is close enough that is good with most hydrologists given the complexity of the natural environment. Forests have many forms of storage: soil, canopy, and wetlands/hollows.

How can forestry affect hydrology? There can be more water because you have logged or other changes in canopy structure have occurred. That can result in more floods, more sediment moving and measurable changes to the patterns of stream channels. Changing the forest can create woody debris in stream channels. Over time you can change the maturity of the forest, you have a young plantation and everything is happy so you don't get as much old senescent wood falling over so you change the inputs of wood to the stream. This changes how much sediment is held in place versus moving through the stream. Suddenly, down at the mouth of the stream you have more or less sediment. You have either a build up or erosion down to bedrock and there is not enough sediment any more. There is lots of complexity when you have forest hydrology because the forest is a buffer between the atmosphere and precipitation and the stream that is carrying the precipitation away.

Watershed assessments are assessing to figure out how planned effects of forestry are going to interface with the current state of the watershed. The watershed may already have been affected by previous logging, landslides, insect infestation, fire or other things like that. The assessment includes looking at what has already been done to the stream and what is going to happen as is versus what is proposed and what would happen in the future. Direct effects include things like landslides caused by logging putting sediment and wood into the stream. Incremental effects are caused by all of the changes over time to the forest canopy.

The Watershed Assessment Model is broken down into five components: cumulative forest development (Equivalent Clearcut Area), road density, sediment source survey, channel pattern change, and riparian forest quality/changes. This assessment is given to show the effects someone's development might have and the risks entailed. Ideally they would want it to be very low risk. They might recommend measures to mitigate any possible adverse effects. Perhaps delaying cutblocks in certain watersheds or reviewing the roads you use.

A lot of the parts of the watershed assessment are pretty direct. You go out to look at a stream, you see what is there, take some notes, take some pictures, come back and write it down. When it comes to assessing cumulative effects it gets tricky because the effect is not just here. It is things that are happening all around that matter. They like to come up with a number and bring it down to a statistical value that they can point to and say this is at this level and it means this. What they have used for the last 20 years is Equivalent Clearcut Area (ECA). It is a way of netting down the area of cutblocks as they mature with new trees. A ten hectare cutblock that has just been logged simply has an ECA of ten hectares. When you come back 20 years later and it has trees that are ten metres high and the canopy of a tree is butting up against its neighbouring tree it has recovered perhaps 50% of its hydrologic effect relative to a neighbouring mature stand so it could now it is functioning as if it were a five hectare clearcut. This can be done for every area of forest cover that has been disturbed in a watershed, add it all up and express it as a percentage of watershed area and say the ECA of this watershed is a certain percent. Equivalent Clearcut Area (ECA) is used as an index to evaluate potential for changes to peak flows, low flows, mean annual flows: timing, frequency, magnitude and duration of flows. Road density provides a related but separate index specific to road network. Specific effects depend on details of road network and relation to hydrographic divides as well as total length of roads. ECA and the road density index can tell what the cumulative hydrologic hazards related to harvesting and road building are.

Specific effects are things like changes in number, size, volume, type of sediment sources, fine vs. coarse sediment, changes to riparian vegetation, changes to channel pattern, and changes to woody debris in streams. Answers to questions about the changes in streams can tell a lot about what is going on with the stream

When they talk about watershed assessments in community watersheds they try and define risks. A risk is a hazard that applies to a specific resource. The risk depends not only on the nature of the hazard but on the result. A hazard would be changes to water quality whereas the risk would be drinking the water because that is the resource that is used by someone. The risk could be to fish if it is not a water source for people. Peak flow hazards are floods and damage to infrastructure. Low flow hazard includes the risk of water being unavailable at sometimes. The hazard to mean flows is the risk to total volume of water over time. Timing of flows (earlier/later, more/less) means sometimes you may have to do without water. Water quality hazards include risk of sediment, to temperature, chemical parameters, and pathogens

A watershed is an area of land where all of the surface water drains to the same point. The watershed divide is the height of land forming the rim of a watershed. We know where the boundaries of a watershed are by looking at a map to see the contour lines. The highest contour line is the boundary of the watershed. Anything moisture landing on the slope down on the other side of the top contour will run the other way. The line is only as good as the map. The watersheds were first given legal protection in 1995 and the maps were drawn to the best map of the day. Mostly these were provincial government trim maps at 1:20,000 scale. Some were drawn off of federal topographical maps that were 1:50,000 or larger. NTS might have been 1:250,000 scale. There was a lot of uncertainty. A trim map has 20 metre contour intervals. The boundaries on these watershed maps were not checked. The boundary of the Jeffered Creek watershed map was drawn by a civil servant from a NTS topo map based on contours that had been inferred from aerial photos and passed into law without any sort of field trip checking. When it comes time to do a watershed assessment, they start looking at some of the boundaries and over the intervening 20 years they have better tools. There are higher resolution maps and LiDAR. LiDAR can be accurate to within millimetres. They can make canopy height models, ground elevation models and you can take those two models to see how big the trees are. You can pick up many things when you are comparing these models to models made from maps with contours of 20 or 30 metres. They have found ridiculous things like streams being half in the old watershed maps and half out. Even with the excellent new mapping they still go out and do a field check. They take a GPS, record all of the points in the GPS, and come back and compare the points to make sure they make sense.

When applied to Jeffered Creek, looking at two different LiDAR sets (from WFP and BCTS for their areas), the maps changed dramatically. The watershed is longer and skinnier. The area is similar but has shifted. The new map has been submitted to the government for official designations. Hopefully, in a couple of years there will be the new map on the government website.

Question: Why doesn't the watershed go right down to the ocean?

Because we are concerned about water quality and quantity for the Stillwater Waterworks district. The bottom point where it crosses the stream is where their intake is. If this were a fisheries sensitive watershed we would have the map drawn right to the ocean.

In addition to all of the mapping of Jeffered Creek they did a Watershed Assessment. It turns out that they almost didn't need to do it. After all of the boundaries were revised it turns out there is less than 1 ha (0.75 ha) of harvesting proposed over next five year period within the revised watershed boundaries. 0.72 hectares belongs to BCTS and a tiny piece less than 30 metres long belongs to WFP. Despite the logging the net ECA will actually decrease from 12.8% to 12.3% by 2022 because of all of the recovery of previously harvested blocks. There is a very low hydrologic hazard from both blocks and roads. The proposed logging is near watershed boundary, far from water intake, and separated by wetlands (sediment sinks). Therefore, hydrologic risk from proposed logging is both very low and decreasing over time. The mainstem channel is intact, not changing over time, and has a mature riparian forest.

Question: Forestry usually has a 30 metre riparian area around most rivers and creeks and so forth. How is that number determined? Why is it not less or more in some cases?

It can be less or more in some cases. When they created the Forest Practices Code, they split up streams into 6 or 7 types and they classified them as S1, S2, S3 and S4, which are fish bearing. S5 and S6 are non fish bearing and NCDs which are little ones that don't really have a continuous channel. The Riparian Management Area is divided into a Riparian Reserve Zone along the stream and the Management Zone which is the rest of the area away from the stream. Different levels of activity can occur in each of these zones. For very small streams, such as S6, there are no restrictions at all. They are non-fish small streams and they are everywhere. If you had to manage for them you wouldn't be able to log anywhere. An S4 fish stream has a 20 metre management zone and no reserve zone. A management strategy is agreed to at a landscape level where they may harvest anything from zero to 100% of that management zone. S3 streams are more than 1.5 metres at full width have a 20 metre reserve zone which you cannot touch and a 20 metre management zone where you can have variable retention. S2 or S1 streams have 30 or 50 metre reserve zones. They all have different reserve zones based on the stream width and presence or absence of fish. Community watershed streams default to be treated as if they were fish streams even if there is no fish present.

Question: How do you develop a plan somewhere like Roberts Creek where the water supply likely won't support a few more thousand people that will likely move in?

SCRD has been pretty proactive. They have been acquiring water licenses. Any time someone is about to let a water license lapse the regional district steps in and assumes control over it. They have watersheds that have nobody using them at this time. They are holding them for future use. The only problem is a lot of these surface water sources are not all that good. Surface water has water quality issues that well water usually doesn't have. Some are quite steep watersheds that may have landslides and debris coming in. Well water has problems with arsenic in the bedrock. Jeffered is on surface water for this reason. Ultimately, the SCRDR is going to develop additional surface water sources and they are holding the rights for the sources already. They are waiting until they can justify building the treatment plants and piping.

Some findings came out of the Jeffered Creek assessment that were not specific to forestry operations. Community watersheds have the same problems as stratas. People do not want to spend money unless they have to and when they have to it is too late. The pros of having people take care of their own watershed are: local knowledge and rapid response if there is a problem. The cons include: funding model – people wait until it is broken because they don't want to put the money out making care be reactive rather than proactive. Jeffered Creek watershed infrastructure is located amidst large fallen trees this creates the possibility for damage to intake/pipe. Jeffered is small and stable therefore the risks are low. Things that could happen are ones that would occur naturally.

Question: Have you seen much effect of climate change?

Yes, we do see effects of climate change. It is really easy to see the effects over long periods of time. When you compare the things were in the '30s, '40s and '50s to present conditions and to the predictions of the future if carbon emissions are not substantially reduced and if atmospheric carbon is not effectively capped by about 2080. Precipitation in southern BC has already gotten 13% more intense over the last 20 or 30 years. The effects from climate change that we see are wetter winters and dryer summers. This includes more floods with a decrease in snow and an increase in rain. The average precipitation has not changed that much but the wet is wetter and the dry is dryer. Building reservoirs is expensive.

Question: Is the forest legislation more effective for water quality and preservation than the Water Sustainability Act?

They are intended to work on different things. The forest legislation is about managing forest activities to ensure that they are not increasing risks. The Water Sustainability Act is about assessing source areas to figure out what is there and what the problems are because most of the water users don't have anything in their budget to do anything in their larger watershed.

Question: Is the province active in mapping aquifers?

There is data. It tends to be focused on the aquifers that are used. There is aquifer mapping up and down the Sunshine Coast close to the roads but if you were to go somewhere like the head of Powell Lake there would be no mapping even though there is definitely aquifers.

Question: But they have been mapped where people live?

Yes, especially where there are wells. There are well logs that form a database and you can use that information to say where and how thick the aquifer is. They aren't just mapped, they are classified on a couple of parameters. If they are confined or unconfined, whether their usage is low, moderate or high and what their vulnerability is.

Question: How can you gage when the height of a tree's transpiration in its life cycle before it starts losing?

I wouldn't say it starts losing. A tree transpires at a certain rate based on its surface area. It depends on how many needles or leaves it has. There are graphs for each species based on age, height, and canopy structure. We are not talking about huge values although it adds up over time. The transpiration rate for most big conifers is 2 or 3 millimetres per day. A small watershed that has been logged loses that 2 or 3 millimetres per day which doesn't sound like much, but over a month it would be 90 which is equivalent to monthly rainfall in the summer.

Question: In the case of Haslam watershed where there are 3 different user groups – how do you figure a case like that out?

There are a lot of spreadsheets and number adding. They would work it out and let the concerned parties know how things are distributed. Ultimately, the logging companies would have to come to an agreement about who logs what where.

8 people will be required to meet quorum at the next meeting.

Adjourned: 8:30pm

Action List Items

Action Items	Who	When
Bring back definitions of independent and dependent contractors for next meeting.	Darwyn	September 19/18 – Darwyn to report in December

