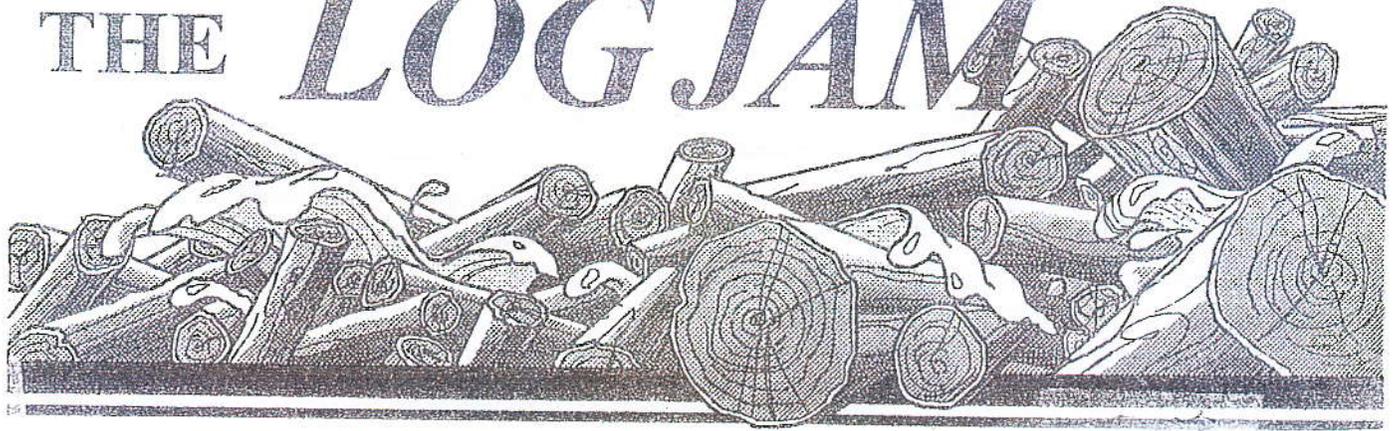


THE LOG JAM



Published by the Woodlot Association of Alberta (WAA)

December, 2012



And a Merry Christmas to One and All

Our Mission Statement :

"The Woodlot Association of Alberta's purpose is to promote leadership in sustainable forest management by encouraging the development of private forest by increasing awareness of their inherent social, economic and environmental values."

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17th ANNUAL GENERAL MEETING/HI-LITES

Due to the weather, attendance was lower than expected at our AGM at the Hinton Training Centre on November 2 and 3. However, had the meeting been scheduled to begin the day before, or to end a day or two after, driving conditions would have been considerably worse. As it was, we had more than enough members there for a quorum and all of our invited guests were able to make it. As a result, the meeting went ahead as HILITES scheduled.

The Board will be considering whether to advance the date of future AGM's. This would require a bylaw change, since a resolution passed in 2010 requires the AGM to be held between the end of October and mid November. We know that for some farmers, our present date is preferred. However, having experienced dicey driving conditions for two years straight on the first weekend of November, we must take another look at the date. As for location, the Hinton Training Centre remains well-suited to our AGM requirements, and the banquet and other meals provided were excellent and very reasonably priced.

Your Input solicited

President Peter Mills asked for suggestions from all members about possible experimental woodlot practices and projects, tours and demos for this coming year. Such activities can be funded from the grant that WAA received in 2012 from Alberta Sustainable Resource Development (\$15,000 per year for 3 years). Participation in other relevant workshops could also be funded. This past year the grant paid for the invited experts at Jurgen Moll's workshop in July.

Jurgen Moll was thanked again this year for his work on the LogJam. He in turn asked the membership to send in articles (2 pages maximum length, with photographs if available). \$5,000/yr of the SRD grant goes to production of the LogJam.

Finances

On the financial front, our operating budget is getting down to approximately \$7K, and until/unless we get a casino or other means of funding operating costs this year, we will have to tighten our belts starting now. A motion was passed to have the Board of directors meet with our current office manager (RISA) to look at ways of cutting the monthly price (\$650) for their services to us. A further motion to eliminate our 1-800 number was raised but not carried. As we did this year, we will be having two members conduct the annual review of our books as opposed to hiring an accountant. Thanks to Cheri Vohs for her excellent volunteer work in this regard and to Bernice Cassady for her diligent work as Treasurer throughout this year.

Grants of Interest to Woodlot Owners

Doug Macaulay, manager of Alberta Agriculture's Growing Forward Project, spoke about this federal/provincial cost-sharing arrangement, which has several aspects of possible relevance to woodlot owners. One aspect is a Business Opportunity grant to access expertise for a new venture or value-added. This pays for a feasibility study, market research, mentoring, and /or business plan development and can go to a producer or group of producers. Another aspect is the Product Development Grant, which assists with getting new equipment, labeling or packaging. A third aspect is a Leadership Development grant. For details go to www.GrowingForward.Alberta.ca or phone toll-free: 310-FARM.

Resolutions

Two resolutions were passed at the AGM:

“Whereas the Woodlot Association of Alberta does not have a means to give persons who have given a special service to the WAA any long-term recognition,
Therefore the WAA Board of Directors should be able to make these persons an **honorary member** of the WAA. They should have all the rights of a regular member other than not being able to hold any office or vote at any meeting. In this way we would be able to retain these person within our orbit.”

“Whereas currently all members must renew their membership annually or bi-annually, consequently the WAA loses many members as their age/health causes them to become less active in the WAA.

Therefore be it resolved that the WAA institute a **life time membership** program to ensure that persons who were members in good standing for an extended period but feel now that their age or health no longer lets them play an active role in the association will continue to be valued members of the WAA”.

The criteria for issuance of a life time membership are:

- 1) Length of membership in good standing -- 10 years
- 2) Age ----75 years
- 3) If disabled or ill and unable to work, the age restriction would not be used and could be given at any age as long as length of membership is met.

The memberships will be given out at the annual general meeting each year with a write-up to follow in the newsletter and perhaps a photograph or two.

Election Results (and not a penny spent on campaigns!)

Your WAA Board of Directors for 2012/13 is:

Larry Nofziger (new)
Pete Mills
Louise Horstman
Jurgen Moll
Pieter vanderSchoot
Herb Cerezke

Bernice Cassady
Warren Stewart

Updates from Related Organizations

Canadian Federation of Woodlot Owners (CFWO):

Pete Mills, our CFWO representative, described the perplexing situation in which the Silviculture Investment Plan, which had been accepted by the federal department of finance, was not included in the federal budget. The CFWO will continue lobbying for this plan, which would certainly be a help to some woodlot owners.

Agroforestry and Woodlot Extension Society (AWES)

Nolan Duguid, who has replaced Doug Macaulay as extension specialist, gave an update on AWES' activities and future plans. The membership of the society has changed from mainly forest industry to a broader base (Alpac and DMI are still members) of 12 members including Capital Power, Alberta Agriculture, Agriculture Canada, the County of Red Deer. The WAA remains a member. Nolan is giving workshops on value added, sawmills, firewood, and tree projects with Red Deer County and Enbridge. Toso Bozic is working with Camrose, Strathcona and other counties on biomass projects. Toso attended a conference in Europe and reports that renewable energy will play a huge role in the future of Europe for national security reasons and that Canada is seen as a possible longterm supplier.

For a schedule of AWES workshops and fact sheets, see www.AWES.org.

Members' Forum

Two motions were raised by members and carried:

1) To petition the provincial government to establish a vehicle that would enable them (the government) to issue leases on crown lands (similar to grazing leases) for the purpose of establishing sustainable woodlots. The leases would be let to woodlot owners who have developed a woodlot on their private land. This motion pertains only to land in the White Zone and would be subject to a woodlot management plan approved by Alberta Sustainable Resources.

2) Be it resolved that WAA members renewing their personal membership be encouraged to purchase a gift membership for one year at a \$5 discount.

Other issues raised by members were a checkoff system and federal vs provincial definitions of a woodlot.

Educational/Entertaining Topics

Saturday was devoted to topics of general interest: Beneficial Insects in Woodlots (Doug Macaulay); Lumber production (Fred Priestly Wright); "Tangible" Education for Children (Morris Kochansky); Bears (Bernie Goski); and Mushrooms (Martin Osis). A hearty thanks to all our speakers for their fascinating presentations. And extreme thanks to Pete Mills for organizing this event.

Up Coming Events

Board of Directors - Teleconference - **November 25 / 12**
January 27 / 13
February 24 / 13
March 24 / 13
All calls are at 7pm

Board of Directors meeting at Whitecourt (date yet to be set)

Think Like a Wolf Seminar

Co-hosted by County of Barrhead, Lac Ste. Anne County and Woodlands County

This course will provide education to participants for managing wolves in order to avoid livestock predation. Learn strategies and the significance of respect for the wolf in relation to successful harvesting. This a two day workshop discussing topics such as wolf politics, wolf biology, habits of consistent wolf trappers, equipment (traps, snares, baits and lures), salient features and choosing capture sites, strategies and sets, humane trapping and avoiding accidental catches.

Instructor: Gordy Klassen

Date: January 12 & 13, 2013

Time: 8:00 a.m. – 4:00 p.m.

Place: Blue Ridge Community Hall

Cost: \$30.00 (includes lunch and course materials)



Registration Deadline is December 20, 2012.

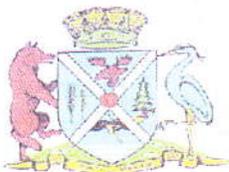
There will be a maximum of 20 participants for this workshop so register early.

To register please contact one of the following County offices:

County of Barrhead
780-674-3331

Lac Ste. Anne County
780-785-3411
Toll Free: 1-866-880-5722

Woodlands County
780-584-3866
Toll Free: 1-866-584-3866



Christmas: The Time for Giving
Give the Gift that Lasts

This is an opportunity for you to give a friend, neighbor, or relative whom you think would like to develop part of their land into a Woodlot. To help make this possible the WAA is offering a one year membership to the Woodlot Association of Alberta, for a reduced rate of \$20.00.

To take advantage of this offer just clip out the gift certificate application (*below*), fill it out, and mail it along with your cheque of \$20.00 (*made out to the Woodlot Association of Alberta*) to:

Mr. Jurgen Moll
P.O. Box 84.
Whitecourt, Alberta,
T7S 1N3,

We will then send your candidate a certificate that he/she is now a member of the WAA for one year. Gifted to them by yourself, along with a copy of the Log Jam.

I _____ would like to buy a one year membership to the Woodlot Association of Alberta as a gift at the reduced rate of \$20.00 for one year.

For:
Mr./Mrs. _____

Address: _____

Phone No. _____

Email (if available): _____

Enclosed is a cheque for \$20.00 made out to the WAA

Signature _____

Is it still retirement when you live in the bush?

On 44 acres of a wooded lot in the township of Dalhousie, in Eastern Ontario, George Fisher has made a comfortable retirement for himself. Dwelling in his log home in the bush and logging some of the trees on his property is how Fisher has spent the last 15 years. Fisher is a retired teacher and currently a member of the Eastern Ontario Model Forest.

Sawing storm fallen trees from last fall is Fisher's current task. The trees are mainly cedar but there is also some spruce as well. "We were able to get a 2x10 out of one of the cedars, so that comes from a pretty good looking tree," Fisher said.

Most of the wood is used by Fisher for projects around his home. "We continually need lumber for decking," Fisher explained. He uses the cedar for decking and his sauna is also made mostly from material on his wood lot.

The wood that is not used, mainly the big cedars, he sells at the log auction in Kemptville, Ontario.

Although a small operation, Fisher occasionally hires someone to help retrieve the logs from the bush. He has his own skid-steer and hires Murray Edwards who brings his Timberjack skidder and Norwood portable sawmill. "The oldest Timberjack in Ontario, maybe the world," Edwards said.

Fisher makes sure to get the most out of his bush. He has about a dozen maple trees that he taps for his own pleasure and jokes, "we are expanding to 25 this year."◊

Changing of the Guard

Hello WAA Members,

I'm Larry Nofziger the most recent addition to the WAA board of directors. So let me introduce myself. I'll start in 1974 when Chris and I were married in Indiana. We spent the next 2 years working for my dad on his grass seed farm in the Willamette Valley in Oregon. Two years later we were able to immigrate to Canada as farm labourers. So we arrived in the Peace Country in 1976 and began looking for a place to raise a family. In 1977 we bought a quarter section of land SW of Elmworth, Alberta. Six years later we became Canadian citizens and homesteaded the quarter adjacent. We have since sold that quarter and bought another half section a half a mile away. Our home is located 15 miles SW of Elmworth, which is 15 miles SW of Beaverlodge, which is 30 miles west of Grande Prairie. Chris has worked at Elmworth School since 1986 in a vary of positions. Besides raising 3 grown children, she has learned how to drive a tractor, raise small livestock, operate as chain saw, tree planted and piled lumber!

Mostly I have worked as a carpenter in various kinds of construction including concrete work for oilfield and log home construction which I learned via the school of hard knocks.

We live without the power on the original quarter section we purchased 35 years ago. We have a hexagonal log home, a log garage, log guest house and a 32'x48' shop, all of which we designed and built. These buildings are all heated with wood and powered by solar.

In the late 90's I bought an antique 48" Cousts sawmill and replace all of the wood in it. I have since collected a set of equipment to compliment the saw. I have sawn several hundred thousand board feet of mainly aspen and mainly oilfield salvage trees sawn into pipeline skids.

We joined the Wood lot Association because we have a wood lot and wanted to learn to be better stewards and managers of our little piece of "paradise". We nicknamed our place The Last Resort and also want you all to know that we also operate the "Dew Drop Inn".

-Larry Nofziger

The Board welcomes Larry as a member on the Board of Directors of the Woodlot Association of Alberta, and look forward to working with him.

We also want to thank Dennis Quintilio for his many years of service on the Board of Directors, he will be missed, and for his good work as editor of the "Western Farm and Forest" magazine.

Ford and Weyerhaeuser collaborate to develop automotive applications

Ford's investigation into the use of tree fibers called cellulose in plastic composites has shown using the fiber in automotive applications could significantly reduce CO2 emissions and weight, while speeding processing time by as much as 40 percent.

Ford has worked with Weyerhaeuser – one of the largest forest products companies in the world – to prove out a more sustainable plastic composite material for future Ford vehicle components.

Cellulose joins the growing list of sustainable materials originating from unlikely sources that could soon be used in Ford vehicle components and help further reduce the automaker's reliance on traditional content such as fiberglass and petroleum.

The Ford biomaterials research team has been working with forest products leader Weyerhaeuser to investigate the use of a plastic composite material utilizing cellulose fibers from trees in place of fiberglass or mineral reinforcements.

Because the cellulose fibers in this new composite come from sustainably grown and harvested trees and related byproducts, such as chips, the environmental impact of building cars could be lessened. Specifically, replacing fiberglass, minerals and/or petroleum with a natural, plant-based material can sequester CO2 and ultimately lead to a smaller carbon footprint, among other benefits.

"Our responsibility to the customer is to increase our use of more sustainable materials in the right applications that benefit both the environment and product performance," said John Viera, Ford global director of Sustainability and Environmental matters.

Ford's research has found that Weyerhaeuser's cellulose-based plastic composite materials meet the automaker's stringent requirements for stiffness, durability and temperature resistance. Further, components weigh about 10 percent less and can be produced 20 to 40 percent faster and with less energy when made with cellulose-based materials compared with fiberglass-based materials. These weight and process savings can enable equivalent or reduced component costs.

And like other less-than-obvious candidates for use in vehicle components, such as retired and shredded paper currency, the cellulose-based plastic composite material could be as important to Ford as soybeans have become. Ford uses soybean-based cushions in all of its North American vehicles such as the all-new Fusion, saving about 5 million pounds of petroleum annually.

A seedling of an idea

About three years ago, Ford began working with Weyerhaeuser to evaluate the use of a cellulose-based plastic composite material for potential use in vehicle components.

Several prototype vehicle components were created from the cellulose-based material and put through a battery of tests by a team led by Dr. Ellen Lee, Ford's plastic research technical expert.

"We found that working collaboratively at an early stage has accelerated the development of a material that has a high thermal stability, doesn't discolor and doesn't have an odor," said Lee. "That's important because it opens the door for use of the material in a wide range of applications that could eventually add up to significant environmental benefits across our product line."

For example, prototype armrests were tested as potential components that could feature the cellulose-based material.

Not only can the cellulose material be used in interior applications, but the high level of performance provided by the cellulose fibers also makes it a good candidate for exterior and under-the-hood applications as well.

"Cellulose fiber is a great renewable resource that already has established infrastructure around the world, making it an ideal material for Ford's global products," said Lee.

Weyerhaeuser alone oversees more than 20 million acres of sustainably managed and third-party certified forestland around the world and plants more trees than they harvest.

"Weyerhaeuser is a pioneer in sustainable forestry. Last year, for example, we planted more than 66 million seedlings as part of an ongoing process of renewal that ensures forests and the products that come from them meet present and future needs," said Don Atkinson, vice president market development and new products for Weyerhaeuser's Cellulose Fibers business.

China wood pulp production to continue at aggressive pace, but market pulp business unsustainable over time

BOSTON, Sept. 27, 2012 /PRNewswire/ — China will continue to see rising wood pulp production along with rising imports of wood chips to make that pulp, according to 2012 The China Pulp Market: A Comprehensive Analysis and Outlook, a new study release today by RISI the leading information provider for the global forest products industry. The study also concludes that large-scale papergrade market pulp production in China is not a sustainable business over time.

A steady upward trend in wood growing costs in southern China will keep China's pulp producers purchasing ever-increasing volumes of wood chips from greater distances, including North and South America, at very high costs.

"Wood costs in China are already almost the highest in the world, and account for as much as 70% of cash costs for bleached hardwood kraft (BHK) market pulp producers in China. Market BHK producers in China have some of the newest and largest pulp lines in the world, and yet are still the high cost producers, even in their own market," said Kurt Schaefer, VP of Pulp & Recovered Paper at RISI.

"Our research indicates that wood growing costs in southern China will probably outpace growing costs in Brazil by a wide margin over the next decade, and this suggests that large-scale papergrade market pulp production in China is not a sustainable business over time," continued Schaefer.

2012 The China Pulp Market: A Comprehensive Analysis and Outlook reports on the real size of the China pulp market, examines Chinese pulp capacity, identifies the different end-uses that drive demand, and discovers the factors that may cause closures in the medium-term.

Presidents Message

Pete Mills

Hello everyone;
Welcome to another issue of your LOGJAM.

I would like to take this opportunity to say thanks to everyone who helped out with our recent AGM. As you know we held it at the Hinton Training Centre again and I personally thought it worked out great. Unfortunately we can't say the same about the weather as there were a number of folks that had indicated attendance then couldn't make it with the icy roads. It did give me great pleasure to announce during the business meeting that the WAA has been awarded a \$15,000 grant for each of 3 years by Alberta Environment and Sustainable Resource Development. These monies will be used to ensure the continued publication of the Logjam and for holding training sessions and seminars. If there are management issues that you'd like to see addressed then please contact one of your directors and maybe we can arrange for something in your area.

I thought the AGM speakers fit in very well and provided a couple of different points of view. I had to chuckle with a couple of our speakers who insisted that they were not woodlot owners yet all their rational for having their trees were 100% in keeping with our organization. Happy woodlot owners who didn't even know they were. Overall I think it was a good couple of days which everyone got something out of from woodlot management to milling to wildcrafting and wildlife.

I would like to take this opportunity to say thank you to retiring director Dennis Quintilio. Unfortunately Dennis' consulting activities on forest fire here in Alberta (and elsewhere) has meant that he has been spread just too thin so it was with regret that he felt he couldn't stand for another term. Fear not I have already told him that we will not hesitate to call on him should we need his help or insights in future.

I am also happy to say that we had a new director elected at the AGM so it gives me great pleasure to introduce Mr. Larry Nofzinger to everyone. I am pleased to have known Larry for many years. Larry lives not too far from me in the Elsworth area off the end of the grid so it's solar and wind all the way. He also does some farming and runs a sawmill. Hopefully we'll get him to say a few words on his own behalf elsewhere in this issue.

Once again, should there be articles that you would like to see or better still that you would like to write please don't hesitate to contact any of your directors or our editor, Jurgen Moll directly.

In the meantime if there is anything that either I or any of the other directors can help you with please don't hesitate to contact us or the WAA office.

Last but certainly not least with Christmas fast approaching I hope that you will all notice our new gift membership that we have available. I know that on occasion I have been explaining the WAA to someone and realized that a membership in the organization would really get my message across. So maybe this year how about getting one for another family member or maybe that work colleague that you've always suspected is a closet woodloter.

It may be just a touch early but I hope that everyone has the opportunity to get together with their family and friends over Christmas and I would like to wish each and every one of you a very happy Christmas with a healthy and productive new year.

Organised crime moving into logging: UN, Interpol

PARIS — Organised crime is now a big player in illegal logging, which accounts for up to 30 percent of all wood traded globally, the UN and Interpol warned on Thursday.

In the mid-2000s, some tropical countries reported a fall in illicit forest clearance, but this may well have been a mirage, they said.

In fact, criminals laundered profits into tree plantation companies.

They used these as fronts for driving corridors into old forests, plundering trees which they frequently passed off as wood from sustainable sources.

"In many cases a tripling in the volumes of timber 'originating' from plantations in the five years following the law enforcement crackdown on illegal logging has come partly from cover operations to criminals to legalise and launder illegal logging operations," said the report, Green Carbon: Black Trade.

Between 50 to 90 per cent of logging in the Amazon basin, Central Africa and Southeast Asia is illegal, although not all of this is from organised crime, it said.

Globally, illegal logging is worth between \$30 and 100 billion (25 and 77.5 billion euros) annually, or between 10 and 30 percent of all timber transactions.

Among examples cited in the report, some 3,000 companies in Brazil are under investigation for "eco-certifying" illegal timber and exporting it abroad.

"In Indonesia, the amount of logs allegedly produced through plantations increased from 3.7 million cubic metres (129 million cubic feet) in 2000 to over 22 million (770 million cu. ft.) in 2008," it said.

Less than half of these plantations actually existed, investigators believe.

Among the casualties are indigenous forest dwellers, who face rising violence from loggers, as well as biodiversity and the fight against global warming.

Deforestation accounts for an estimated 17 percent of all man-made carbon emissions and 50 percent more than those from ships, aviation and land transport combined, the report noted.

The report called for a greater policing effort against illegal logging syndicates, tax fraud, corruption and laundering.

It also suggested an independent rating of companies to discourage investors from funding illegal practices.

The report pointed to some encouraging initiatives, including the International Consortium on Combating Wildlife Crime (ICWC), whose partners include among others Interpol and CITES, the Convention on International Trade in Endangered Species.

Another weapon is so-called REDD-plus, in which wealthy countries provide funds to poorer countries to encourage them to be custodians of the forests.

However, "if REDD-plus is to succeed, payments to communities for their conservation efforts need to be higher than the returns from activities that lead to environmental degradation," warned the report.

Hydrologic Effects of Forest Management

Richard Rothwell

This is the third article in a series of three addressing the topic of trees and water. In the first two articles the ecological benefits of trees and water, the water balance and flow paths of water in and out of watersheds were described. In this article the hydrologic effects of forest management are described.

Forest management (harvesting, silviculture) has the potential to increase water yield and maximum flow events. More than a hundred years of experimental studies in the world confirm that forest disturbances (e.g. wildfire, forest harvesting, insect infestations) that remove or alter forest cover can increase water yield (i.e. total annual/seasonal flows) and maximum flow events. Such increases are caused by changes in the water balance:

$$Q = P - (ET + I) \pm \Delta S$$

Q = streamflow, P = precipitation, ET = evapotranspiration, I = interception, ΔS = soil water storage

Removal of trees results in the reduction of evaporative losses (ET + I) in a watershed, which makes more water available for streamflow. Soil water storage and flow paths (surface and subsurface) can be changed with the removal of forest cover and construction of roads and trails for access. Changes in water quality (temperature, chemistry) and aquatic/riparian habitats are also possible.

Forest managers, whether large companies or individual woodlot owners need to aware how their operations can affect water and other associated water based resources (e.g. recreation, fisheries, and water quality).

Forest Management Effects

The hydrologic effects of forest management whether by large forest companies or small woodlot operations will be similar in some respects, but at the same time different. The biggest difference is the size of operations. Forest management by large companies is usually for timber production on large management areas compared to the smaller holdings of woodlot owners. Forestry practiced by the large companies is more extensive, while that on woodlots can be more intensive and focused on a wide range of products (e.g. timber, berries, honey, and agriculture). Woodlot operations also enjoy more freedom in setting management objectives than large companies that are regulated by governments and subject to public scrutiny. Woodlot operators are similar to the large companies as both are committed to sustainable forest management.

The following discussion is a series of questions and answers that address the hydrologic effects of forest management. Treatment effects of other disturbances are also important but are not addressed as they were considered beyond the scope of this article. Information on these disturbances can be found in the references for this article.

Question: What are the magnitude and duration of water yield increases due to timber harvest?

Water yield will be increase with the extent of forest harvesting in a watershed. Maximum responses can be expected to occur with 100% removal of forest cover in a watershed. Water yield increases are usually expressed in millimeters of extra water or as a percent increase in annual/seasonal water yield.

The magnitude of water yield increases will vary with the climate of a region and the amount and timing of precipitation. In areas like the Pacific Northwest (Oregon, Washington, and coastal British Columbia) increases of 300-500 mm are reported. In regions of less precipitation like the Rocky Mountains water yield increases are less than 150 mm. In Alberta, water yield increases of 27% (84 mm) were reported in the Hinton-Edson region and 6% (17 mm) increase in the Kananaskis Valley (Swanson *et al* 1977, 1986).

Increases in water yield are usually greatest in the first year after harvesting and then slowly decrease with the growth of new forest cover. The time to return to pre-harvest flows (i.e. hydrologic recovery) depends on how fast trees re-

establish on harvest blocks (recovery of evaporative losses). Local research suggests hydrologic recovery for an aspen forest will be 15-25 years and 30-50 years for pine and spruce forested watersheds (Liefers *et al* 2002).

Little evidence exists that forest harvesting can sustain water yield increases over large areas (NAP 2008), as forest cover in watersheds most often will be a mix of harvested and un-harvested areas, which has a moderating effect on water flows. Increases in small watersheds ($2.56-12 \text{ km}^2 = 1-5 \text{ mi}^2$) can be more noticeable.

Question: What are the magnitudes and duration of peak flow increases due to timber harvest?

Decreases in evapotranspiration and interception after logging make soils wet, and high soil moisture levels at the start of a rainstorm can increase summer peak flow (storm runoff). Increases in snow melt runoff occur primarily in the spring as a result of increased snow depths in harvest blocks and melt on soils with low storage capacity and/or reduced infiltration.

Increases in peak flows vary widely with the amount of harvesting and climatic region (i.e. volume and timing of precipitation) and size of a watershed. In areas characterized by heavy winter rainfall (Oregon, Washington, and coastal British Columbia) increases of 35-122% are reported (Harr 1976). In Alberta Sawson and Hillman (1997) report peak flows on harvested watersheds in the Hinton-Edson region were 1.5-3 times greater than those of paired un-harvested watersheds. Peak flow increases can be expected to diminish at the same rate as water yield increases.

The magnitude of peak flow events is expressed by their frequency of occurrence. A 2-year event on average can be expected to occur once every 2 years, while a 25 year event can be expected once in 25 years. Percentage increases for peak flow events decrease as the magnitude (recurrence interval) of the peak flow increases (Harr 1976). As storm magnitude increases (total volume of precipitation or snow melt) the amount of precipitation that can be stored decreases. Therefore large peak flows experience smaller relative increases than small peak flows. However, small increases in extreme peaks cannot be ignored as these flows affect more people than smaller peaks.

Question: What are the changes in water quality due to timber harvest?

Water quality is defined by its intended uses (e.g. drinking water, recreation, irrigation, power generation, habitat for aquatic life). All water in nature contains organic matter, inorganic matter, and dissolved gases derived from its environment, from human activities, from the atmosphere or from living organisms (Chang 2006). The Concentration of these substances and their biological, physical and chemical effects are the basic criteria in the determination of water quality.

The impacts of forest harvesting on water quality can include the following: soil exposure and disturbance resulting in erosion and sedimentation in water bodies associated with the construction of roads, stream crossings and mechanical site preparation techniques, introduction of forest chemicals into water bodies by spraying and drift, increased water temperatures resulting from the removal or disturbance of riparian ecosystems (i. e. streamside vegetation), livestock grazing along stream courses resulting in reduction in forest cover, soil compaction, stream bank disturbance, erosion and sedimentation in streams.

Summary

Forest harvesting has the potential to increase water yield and peak flows. Is this good or bad? The answer to this question depends on what you want. It might be positive in areas where more water and longer lasting flows are desired. It might be negative if increases resulted in more frequent flooding and loss of aquatic habitat from streambed scouring and sedimentation. A middle of the road approach would be to minimize hydrologic changes to maintain existing conditions.

Management planning and activities to reduce/minimize hydrologic impacts of forest harvesting for woodlot operators will depend upon the size and scale of operations. Increases may be more noticeable in small watersheds when more than 50% of a watershed is harvested in a single cut. Partial cutting systems or small clear-cut harvest blocks spaced in time to achieve a mix of old and new harvest blocks are expected to moderate changes in flows. Periodic thinning is reported to have little impact flows as the extra water generated is utilized by remaining trees. Prompt regeneration of harvested areas will further moderate changes over the longer term as they grow.

Impacts to water quality associated with harvesting and access can be reduced by careful planning. Objectives should be to minimize soil disturbance and exposure that can result in soil erosion and sediment transport into water bodies. Retention and protection of riparian areas are important as they maintain aquatic habitats and act as filters for sediment from upslope areas. Preparing a forest management plan should be considered as forestry is a long term undertaking. Numerous guides and standards (CSA 2008, OWA 2009), for planning for forest woodlot management are available from government sources and the internet.

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Did You Know :

That there are more than 24 species of birds attracted to the White Spruce, including purple finches, crossbills, woodpeckers, chickadees, and wood thrushes.

and

That there are some 118 species of birds known to eat the fruits of the Elderberry, including woodpeckers, kingbirds, grosbeaks, bluebirds, thrushes, towhees, mockingbirds, and white-crowned sparrows.

Editorial

Jurgen

When the recession came in 09 the economy in particularly for the forest industry took a real down turn. Which resulted in the price of standing timber on private woodlots being reduced to the point where many owners feel that to continue maintaining a woodlot is a losing proposition.

Just wait a minute before you give up on your private forest, and consider that the forest industry has for many decades worked on a seven year cycle in which the prices raise and fall during these periods, and right now they are in a down turn. Also remember that our northern forests are slow growing for it takes 100 years for a conifer to mature and some 65 years to grow a mature deciduous tree. Therefore woodlot owners must think in the long term, even into your children and grandchildren's lifetime, who will benefit from the work you are doing in your woodlot.

But not all is doom and gloom when one looks down the tunnel of time the bright light can be seen, when one has read some of the articles in this news letter, such as Weyerhaeuser and Ford using wood fiber in autos, China running out of a wood supply, and the crime in wood theft and exploitation of the large tropical forests, in addition Europe is going green and will require more bio-fuel stock much of it from forests.

This can only mean only one thing that there are better days ahead and the price of wood fiber will increase in value, so hang in to take advantage of better times for the woodlot owner.

Wishing all of you a Merry Christmas and Best in 2013

DON'T FORGET TO RENEW YOUR MEMBERSHIP IF IT EXPIRED IN 2012

(If you can't recall what the expiry date is call Kim @ 1-800-871-5680)

OUR WOODLOT

Gordon Kerr

The Kerr Family Woodlot has been in the extended family for sixty one years. It was purchased while in the midst of a logging operation which was agreed would continue to completion. That continuance proved to be an unfortunate decision.

This 160 acre property was burned in about 1890 so it had become a sixty year old primarily Lodgepole Pine forest, with a small number of white spruce. The property included a small steam tractor driven saw mill. Old stumps still present today indicate that the trees harvested were only 6 to 9 inches in diameter at two feet above ground. Not much for lumber potential but the harvester apparently didn't care as he also supplied mine props, so he high-graded the place leaving only widely scattered younger pine.

In 1961 the land had become "infested" with hazelnut bush and a very heavy understory of other shrubs; and the tractor plus sawmill pirated by unknown thieves. Likely its greatest value then was as ruffed grouse and deer habitat. From then until 1985 it was largely ignored and grazed by a neighbour in exchange for "keeping an eye on it". At this point Gordon and Marilyn (Collins) Kerr and family took a keen interest in the woodlot.

In the late 1980's Marilyn became owner of the woodlot and we decided to pay more attention to management. First we cleared two fence lines so it was fenced from other properties, and grazing was removed. Clearing of the fence lines brought \$5.00/ tonne standing on the stump, for all pine over 8 inch DBH from a neighbour who had a saw-mill nearby. We bought the materials and an adjacent neighbour built the fences. As there was very poor access to and not vehicle use possible within the woodlot we contracted to have some roads built and about 12 acres, in small 1 – 3 acre clear-cut plots. On the advice of a professional forester these plots were cut in winter, with all trees less than 8 inches DBH left standing, and all limbs left at the stump. This was to result in a burst of regenerating pine seedlings in spring and a new forest to replace the old. It didn't happen.

After felling trees stem removal was by line skidder, with 12 – 14 stems at a time. When the decking was done it looked like a bomb had been dropped with trees scared and leaning in every direction. The past open canopy had fostered a heavy ground cover which immediately rebounded in the spring and took over the entire site. While pine cones may have opened and seeds germinated the competition from other growth resulted in almost no successful seedlings evident by fall. Elk deer and moose were attracted to these sites of the general new growth and apparently eat almost any seedling which managed to get its head above surrounding vegetation. Had we harvested in summer and created a lot of surface disturbance we might have had a better result. At least this harvest paid \$15.00 / tonne for pine on the stump and so gave a decent financial return. We thought about scarification but the cost was \$2,000.00 just to get equipment on site and then a cost per hour about equal to what we had been paid for the trees.

Two years later we had a small job done at \$85.00 per tonne but that was only an acre and a half. Have since thought we should have harvested the whole place at that price, but

what we wanted was a diversified and sustainable forest. A few years later we contracted to have some trails cleared and made passable for a pickup as well as a skid/hiking trail diagonally across the property. This paid for gravelling of some low spots, and left a few dollars in the bank from pine at \$65.00/tonne on the stump.

Regeneration on the original harvest plots remained a problem resulting from moose and elk as well as a series of drought years. Replanting got some results from under-planting spruce in aspen but pine in the cut blocks was a waste of time and effort. At that point I decided to go with nature's succession, which was for this forest to change from pine to spruce. Additionally spruce, with a few years of heavy spruce seed production, from drought influence, from our and the neighbours' spruce, was resulting in a spruce understory developing on all of our forested areas.

We had planted about 1,500 to 2000 seedlings (equal pine and spruce) over the years with no success except some spruce. Then the seedling and planting program of the Woodlot Association of Alberta came into being in 2010 and we were able to have 6,000 spruce and 4,000 pine planted. By good fortune it was a wet summer in 2010, 11 and 12, and elk numbers had declined. The seedlings did well and with luck over the next few years our regeneration problem may be solved. What a God-send that program was for our woodlot, and likely many other people.

We made mistakes in our first harvest which we learned from. The question largely since has been how to get any value from our trees in a lumber market slump? We keep hoping that the slump will turn around, but money beyond paying for forest management is no longer priority #1. Where we go from here is the question. We have about 130 acres of forest which is getting older each year, average about 100 to 135 years. So far we have avoided Mountain Pine Beetle, and the trend in Southwest Alberta looks promising. Marilyn and I are too old to do any heavy work for the most part and our woodlot 3 ½ hours from home. The balance of the family is working or at school 5 days a week so more than a day or two of effort now and then just isn't on.

Our earnings are well ahead of our costs over the years. Largely the biodiversity of the land still remains as we had hoped. Our woodlot plan will have to change to match our new situation but this time it must include two more generations of family in the process. As the regeneration moves ahead we need to develop new harvest blocks or removal of old pine to be replaced by spruce.

In spite of the difficulties the woodlot continues to be a joy. To see a pile of logs pay for management, see the new forest start to grow as it has for eons, observing the maintenance of biodiversity from bears to shrews, squirrels to butterflies, Cranberry patches to Indian Paint Brushes and to the occasional deer harvested on the edge of clearcuts, and on and on is what makes it all worth while. To know we are contributing to community benefit of watershed management provides satisfaction.

Pictures of - Gordon Kerrs - Woodlot



Natural regeneration didn't happen



Pine deck @ \$65.00 a tonne



Skid and Recreation Trail



Deer steaks are a bonus
(Lucky shot ??)