LOGGING PRIMER AND SAFETY ON YOUR WOODLANDS

Making Timber Harvesting Decisions

Merchandising Logs: To Get Ahead, Plan Ahead!

Safety in the Woods

How to Choose a Forest Contractor

Remedial Commercial Thinning

NEXT ISSUE . . .

Legal Issues

This magazine is a benefit of membership in your family forestry association.
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Many woodland owners harvesting small volumes require self-loading trucks to transport logs. These trucks cost more $ per hour and cannot haul as much weight as long loggers, which may affect the cost effectiveness of hauling long distances, thus possibly reducing market options.

Photo courtesy of Steve Bowers

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Other than general editing, the articles appearing in this publication have not been peer reviewed for technical accuracy. The individual authors are primarily responsible for the content and opinions expressed herein.
Ending Thoughts

This is my last column as your WFFA president. I told the members of the executive board at our meeting in February that my term as president is nearly over—it actually ends following the election of new officers at our annual meeting in Mount Vernon on April 25. Bob Brink of Yacolt is the nominee for WFFA president.

During my term, did WFFA accomplish all that I had hoped? No, not entirely; however, several things have been started and some even finished.

The Washington Tree Farm Program (WTFP) is now co-sponsored by the WFFA and the Washington Forest Protection Association (WFPA), and is under new volunteer leadership. I expect that we will have an outstanding Tree Farm Program very soon. This program is free-of-cost with great benefits to all 10-acre-plus forest properties. All new certifications are conducted by foresters who have become “qualified inspectors.” Tree farms must meet or exceed the national American Tree Farm System (ATFS) standards to qualify as a Tree Farm. The standards are described on the ATFS web page at www.treefarmsystem.org. WFFA members are encouraged to become certified by WTFP and start receiving the program benefits. For information, contact the WFFA office at PO Box 1010, Centralia, WA 98532. My wife and I are certified tree farmers and we hope that you will become certified too.

You have heard of many of the other WFFA accomplishments during the past two years—the opening of our Centralia office, and the 3-15 year Forest Practices Permits now available to forestland owners. Another accomplishment has been to increase WFFA dues to help us keep pace with the ever-increasing costs that we are all facing. Remember, WFFA is doing much more than even a few years ago. Your help in providing additional dollars for our staff and officers to maintain the services asked by the membership is appreciated. There have been several other accomplishments, but I will stop here as I want to address items in this issue.

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Anyone that has worked in the woods for any length of time has probably had a close call or two, or at least seen them. My first exposure to logging was during college when the Associated Foresters (a student club at the University of Idaho) cut and sold firewood to raise funds for the organization. That was the first time I ever used a chainsaw. Between school years I spent a summer working with Weyerhaeuser out of Springfield, Ore., in a student program to expose us to different aspects of forestry. Safety was certainly stressed in the logging portion as I was a choker setter on a high-lead operation. I heard lots of stories about the accidents and near-accidents on big logging operations.

A few years later when I returned to the family farm after some military time, my real education began. Almost from the beginning I worked by myself in the woods felling, skidding and hauling logs to the mills. Sometimes I would work with our children, but this was mostly on the firewood side of things. I learned a lot, usually by trial and error, but also by reading, taking classes and talking with others in the business. The first thing I changed was in hauling logs. My old 1957 Ford flatbed made a lousy log truck. It was inefficient and I eventually found out illegal for hauling 16-foot logs unless I had special “log truck” insurance. So I started contracting with haulers to do that phase for me.

The next part was equipment. I started out skidding logs with a 30 horsepower wheel tractor. It worked, but was dangerous because I was attaching the skidding cable to the center point of the three-point hitch, which is above the rear axle height. Once when the log hit a stump, it almost dumped me out when the tractor front end came up nearly vertical. It was then that we bought a skidding winch, and a larger tractor that I needed for the regular farming. The winch does not allow the tractor to rear up as the legs hit the ground. Much safer!

Then it was personal safety equipment. Many years after I started logging, I cut my leg just above the knee with my chain saw when I lifted my leg into the saw while limbing a tree. The saw was winding down as I had taken my hand off the trigger and handle, but it still gave me a trip to the doc for a few stitches. Result: chaps! It is not that I hadn’t been warned, but I thought I could not afford the chaps. It turns out I couldn’t not afford them!

I have protected my hearing as well as possible. I have some hearing loss at age 63, but not terrible yet. I have almost always used a hardhat with the build-in ear muffs, and also have used the foam ear plugs inside the muffs! That’s at least one “atta-boy” for me!

The worst injury I have sustained is when a relatively small tree (6-8 inches at the stump) fell into two crossed standing trees. I expected it to swing to the right as it did, but it first slid backwards and then swung. I had stepped back a few steps thinking it would just swing right, but when it slid backwards 10 to 12 feet and then swung right, it caught me on the left knee and tore three of the major ligaments. The moral of that story is to get behind something that can protect you, or way out of the way, even for a little tree.

I’ve had other close calls of various descriptions, but it seems that most of them were when I was working with one of the kids, or someone that was inexperienced in woods work. The conclusion I came to there was that you have to be EXTRA, EXTRA careful when working with someone else, because you never know for sure what they are going to do or not do. The situation is unpredictable until you work with them for a long time and they know what you do, and you know what they do. It is also a matter of just plain thinking “safety” all the time. I find myself analyzing a situation much longer than I used to. What’s likely? What’s possible? What are my alternatives? What is the safest alternative, even if it takes a little longer? I think a lot more about walking into the house at the end of the day all in one piece as opposed to coming back with an injury that is inconvenient at best or fatal at worst. Accidents happen, but they can usually be prevented by thinking it through and taking a little more time. Believe me, it is worth the time!
I have been spending the majority of my time lately on the north Oregon coast. I am the forester for the City of Astoria. The city owns about 4,000 acres of productive forestlands. The hurricane-force winds of December 2007 caused catastrophic damage to large areas of the forest.

Astoria is not alone in this boat. The states of Oregon and Washington suffered equally in this event. Private and public forests throughout the affected areas are impacted. Now we all begin to deal with the results of Mother Nature.

As the first crews arrived on scene, they quickly realized that this was no normal logging job. They found a twisted, broken mess of trees stacked high and waiting to cause injury to anyone who entered. In the Astoria area alone, numerous injuries have resulted as well as two deaths. This is no picnic in the woods.

Family forest owners who have stood with tears in their eyes as they looked at what was once a beautiful forest say, “now what?” Just to get around to assess the damage is dangerous. I know, I have been there and sometimes wonder why I am in this mess—if I fall and break a leg they won’t find me. So, I have taken a few extra steps to make sure I can be found.

First on my list is to let someone know exactly where I am going and to not deviate unless that person knows I am changing plans. Second, I carry my cell phone at all times. With improved coverage, it just might work. Third, if it looks too dangerous or beyond my abilities, I DON’T GO.

I know of one family forest owner who now has a severely broken ankle doing more than he should have. These windfall areas are very dangerous places to be, so proceed with caution.

If harvest is undertaken, more caution is advised. Make sure that you choose an operator with great care. They need to be equipped to handle this type of harvest. Make sure you are as protected as possible with appropriate insurance. A serious injury or death will surely find its way to you, the owner.

Combined with a terrible market for logs, this is catastrophic in several ways. But we as forest owners have dealt with change and market ups and downs over the years and we will certainly see this through as well. So good luck to all who are out there dealing with the storm results and remember, be safe.

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Tour Time

- May marks the beginning of the woodland tour season. How are you doing on those New Year’s Resolutions anyway? I am not talking about your class reunion diet either. I am talking about your promise to attend one woodland tour during the year. Your local association and the Tree Farm System provide great tour opportunities. This is a chance to mix with fellow small woodland owners and see and hear what others are doing on their tree farms. Invite a friend to come along. Woodland tour season runs through October.

Sap is Up

- May and June are not the months to be doing a thinning operation. The bark is easily knocked off the trees you are not harvesting. Bark is like your skin—protecting the tree from disease and decay. You won’t find any tree Bandaids in your first aid kit either. Not damaging the bark is the best plan.

- Running Behind? This is a do-it-yourselfer malady occasionally caught by others
  - Pruning Projects: Dead limbs are OK. Limbs with needles and leaves are off limits.
  - Moisture Control: Most herbicides will kill or damage your seedlings when they are actively growing, so you need to keep the spray off your seedlings. When your seedlings are small you can devise some sort of a tree cover like a five-gallon bucket or a piece of stove pipe or piece of plastic pipe you can slide over your seedling while you spray around it. Your seedling protection needs to be large enough in diameter to avoid applying herbicide with the wetted base of your protection as you place it over your seedling.
  - Permits: You need a permit to apply herbicides, harvest timber, construct or reconstruct roads, and run power equipment.

Who Am I?

- I am a voracious enemy of mosquito larvae.
- I am not at all fishy.
- As an adult, I am a free meal to almost no one.
- I migrate toward water in the spring and away from water in the fall.
- I never scurry.
- You may have observed me crossing the road, or worse, flattened on the road.
- I have four short legs, and when mature, I am 5-8 inches long including my tail.
- Who am I? See the end of this column for the answer.

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**Things to do on a rainy day before fire season:**
- Change the oil in something.
- Make sure your fire equipment is in good working order.
- Sharpen your fire tools.
- Make sure your power saw spark arrester screen is good.
- Have your fire extinguishers recharged and checked out. The contents can become a brick and will not help you extinguish a fire.
- Make sure you have at least one operating fire extinguisher in each of your vehicles, on each piece of equipment and on you when you operate a power saw, lawn mower, weed whacker, etc.
- Go fishing.

**Firewood: Wood is a carbon neutral renewable fuel**
- Cut and split your supply before fire season and hot weather so your wood has time to season.
- Adopt an elderly couple or someone who is house bound and burns wood, and make sure they have a source of good seasoned wood.
- Firewood appears to be in short supply and the price is rising.
- Firewood is a young man’s sport when you are in it for the money.
- Hard work builds good character and you want your children and their children to be of good character, so you know who to call for help.

**Road Work**
- Good time to build a new road and/or reconstruct an existing road while there is still some moisture in your soil.
- Rock your roads with a traction coat for personal use or enough to handle winter logging.
- Replace and/or add culverts and water bars.
- Late summer ‘tis the season to do stream crossing work: There is grant money for replacing existing crossings with fish-friendly crossings.

**Who Am I?**

Down on the Tree Farm is edited by David Bateman with assistance from several Linn County Small Woodlands members. This column is a project of the Linn County Small Woodlands Association and OSU Extension Master Woodland Managers. Suggestions are always welcome; please send them to Dave Bateman at knothead@smt-net.com.

**Stolen Tractor — Reward Offered!**

Yanmar 336D Tractor stolen from McCormick Road in Scholls, Ore., around March 14, 2008. The tractor is red with a front end loader, skidding winch and brush cage. Please contact John Helmer at 503-222-4614 if you have any information. Reward: $500 leading to recovery of tractor.

**Notice anything different about this issue?**

Maybe how the trees in the photos look better in color than black and white?

Eight pages of additional color to this issue were made possible by a generous contribution from the Whatcom County Farm Forestry Association.

*We greatly appreciate Whatcom’s financial support and help in improving the look of Northwest Woodlands.*
By JOHN KELLER

Let’s face it. Inviting burly strangers with chainsaws and heavy equipment into your treasured forest to cut down trees and bulldoze dirt is not for the faint-hearted. Done properly, timber harvesting is likely to be an involved, complex process. Done poorly, a wide array of long-lasting problems may result from logging: jaw-dropping landscape changes, a degraded forest stand full of damaged trees, poor forest regeneration, compacted soils, muddy streams, hassles from the government and lost opportunity for profit.

Given the potential impacts, why would anyone want to cut their trees in the first place? In fact, the majority of landowners would rather not. State extension surveys consistently confirm that most family forestland owners do not consider harvesting timber as an important reason for holding their woodlands. And that’s unfortunate. Even with the risks, the forest landowner that fails to grasp that proper logging can provide a variety of benefits, both for the forest itself as well as the landowner’s financial situation, may be missing a great opportunity. At worst, through inaction, landowners may unknowingly allow threats to the health of their forest to develop unchecked.

Certainly the primary purpose of logging has traditionally been equated with making money. While this should still be an important consideration, timber harvesting can have many other positive benefits. Commercial thinning can result in more vigorous stands by giving the remaining trees more water, nutrients and sunlight, and removing from the stand those trees susceptible to problems. The result: a resilient faster-growing forest able to resist or recover from attacks by insects, diseases and wildfires. Uncrowded stands allow sunlight to reach the forest floor, encouraging...
understory establishment for wildlife use. And thinned stands can be very pleasing to the eye.

Careful harvesting using clearcuts, seed tree and shelterwood regeneration techniques can replace stands in poor shape with a new generation of healthy, diverse tree species. Strategically created openings from logging can create visual corridors and add habitat diversity, creating areas of food and cover for critters. Areas infested with root rot can be reforested with less-susceptible trees. These activities, coupled with good logging practices like retaining structural components such as snags and downed woody debris, can keep essential ecosystem functions working.

So here’s the challenge. How does a landowner who sees the benefits of harvest get it right the first and possibly only time she will ever have her timber harvested? Implementing your first timber sale involves a steep learning curve. And without planning, you can count on something going wrong. How do you pull off a timber sale without fear of certain disaster? Here are a few suggestions.

Educate thyself

Developing a working knowledge of your forest is something you should acquire long before you consider logging. Start now, before you are under pressure to harvest because of a hellacious December windstorm, spruce budworms blowing across the landscape toward your property, scorched timber, or the tempting cash offer by someone in a zip-down hickory shirt who just showed up on your doorstep.

Learn to evaluate the condition of your forest. Which trees are susceptible to clear and present dangers from bugs and cruds? Are there too many trees? Which ones should remain? Would it be better in the long run to simply start over?

Then there are the economic considerations. Is the market good? How much are the trees worth? And what is a fair price to pay for the logging and road building?

Rules and regulations are a fact of life. Almost all harvest operations will require you to secure a permit from one or several state agencies. Though it may be a bewildering experience the first time, you will need to contact your state forestry department to gain at least a rudimentary comprehension of its forest practices permit system.

Quite frankly, filling out a forest practices application, at least in the state of Washington, can be a very challenging experience, especially if you are trying to figure out fish-bearing stream buffers or address unstable soils features. Permitting processes are often more concerned with making sure the resource receives ample protection than with simplification for the landowner’s benefit. Both the Oregon Department of Forestry and Washington State

Website Resources

There are many excellent publications available to you in electronic and hardcopy format through the Extension Service. Visit these websites to view, download or order available publications:

Washington State University Extension
http://ext.nrs.wsu.edu/publications/

Oregon State University Extension
http://extension.oregonstate.edu/catalog/

University of Idaho Extension
www.cnr.uidaho.edu/extforest/Publications.htm

Montana State University Extension
www.forestry.umt.edu/hosting/extensionforestry/publications.htm
Department of Natural Resources have excellent illustrated booklets to help you understand requirements for wildlife trees, harvest unit size limits, reforestation, wetland and stream buffers, and other potential resource issues.

Check with your state extension service to see what workshops are available. Forest Stewardship short courses hosted by Montana State University, University of Idaho, and WSU extension services assist landowners in preparing forest management plans. OSU provides a wealth of useful information through its Master Woodland Managers program. Field trips and workshops may be sponsored not only by your local extension service, but by landowner associations and other private organizations.

Attending workshops will not only give you an opportunity to interact with professional foresters and biologists, but also rub shoulders with other landowners who have accrued great knowledge and experience over the years. They can share invaluable and candid information on individual loggers, log buyers, mills and consulting foresters.

There are some superb publications available in both hardcopy and electronic format. WSU Extension has developed two very helpful pamphlets: Managing Your Timber Sale and A Primer for Timber Harvest. Streaming video presentations are also posted on extension websites.

**Develop a set of objectives and communicate them**

While you are soaking up information, think about your reasons for owning the property and why you see harvesting timber as an option worth exploring. You should only move forward once you have articulated your goals and objectives, and are able to explicitly express them through a written contract with your operator and log buyer, enforceable with damage clauses and performance bonds.

Do you cherish the 100-year-old homestead apple tree? The uninformed road builder may see it as an easily removed barrier to a straight road. Do you want a healthy forest where the largest, best-formed (and most valuable) trees are left? Make sure it’s specified in writing and marked on the ground.

Remember, though most loggers enjoy working in the great outdoors, it is still their business and the funding source for their equipment payments and grocery bill. In the absence of any guidance or contractual limitations from you that reflect your objectives and special desires, maximizing their profit will be the default setting.

In fact, the wise landowner will develop a written management plan that integrates their objectives with a careful evaluation of their forest resources to identify their options.
Such a document is a great tool for sorting out the intricacies of forest management and how to approach a harvest operation.

**Seek professional help**

Many states have government service foresters (now frequently called stewardship foresters) that can take a walk in the woods with you, carefully listen to your objectives, give you a general understanding and assessment of your forest's condition, and recognize obvious problems and opportunities. However, they can only take you so far.

If you decide you are serious about harvesting timber, consider recruiting the services of a reputable professional consulting forester. They can prepare and administer the timber sale based on your objectives, and keep the operation in compliance with applicable rules and regulations, saving you a lot of frustration and headache.

Consulting foresters know who the good, careful loggers are and will oversee the job from start to finish. They know where the best log markets are and make sure you have a good contract—a must when selling timber. They understand the silvicultural systems necessary to ensure that either your forest is in better shape following the timber harvest than it was before, or that the logged area is amenable to the successful growing of healthy seedlings. Typically, you will make a lot more money and have your ground left in better condition if you use a consultant than going direct through a logger.

In short, if you are considering selling your timber, the right question to ask is not, “Why should I hire a forestry consultant?” but rather, “Who is the best forestry consultant available that can understand and meet my needs?”

**Communications**

Wherever people are involved, there is the potential for poor communication. When money is also involved, misunderstanding seems to increase exponentially. But do not despair. Careful planning and recruiting the right assistance can make your timber harvesting a positive impact to your land for generations to come.

**JOHN KELLER** is forest stewardship coordinator, Northwest Washington, Department of Natural Resources in Sedro Woolley. He is also a fourth-generation owner of forestland near Kalama, Wash. John can be reached at 360-856-3491 or john.keller@dnr.wa.gov.
Safety in the Woods

By TED HAZEL

Like most things in life, working in the woods entails a certain element of risk. However, most people new to woods work do not truly realize the hazards they face. Statistically speaking, a fatal accident is about 13 times more likely to occur to a woods worker than to the average worker. If you pick up a chainsaw, this number jumps to about 65 times likelihood of a fatal incident. These sobering numbers from the Oregon Fatality Assessment and Control Evaluation Center should act as a loud-and-clear wake-up call to the importance of safety in our woods-related work activities.

Let’s start with personal protective equipment, which could vary depending upon your job description for the day.

Hardhat
- Always wear one when you enter an active harvest zone.
- Wear one when you enter a stand of trees that was thinned within the last few months. People have been fatally injured simply walking through trees that have been recently thinned.
- It’s not a bad idea to where one in any stand older than 25 years.

Hearing Protection
I prefer to use noise reduction earmuffs in winter and earplugs in summer:
- Wear them anytime you are around equipment and chainsaws in operation.
- Wear them anytime you want less distraction in life (sometimes cruising timber).

Eye Protection
A wire mesh face shield in winter avoids fogging, while clear UV safety glasses in summer cut glare.
- Always use when operating a chainsaw.

Leg Protection
Options available are chainsaw chaps, or protective pads in your pants.
- Wear them EVERY time a chainsaw is used in any way, shape or form.
- Chainsaw chaps must extend past the knee when the leg is bent.

Hand Protection
- Wear gloves when using your chainsaw for some vibration isolation, protection from cuts and warmth in winter.
- When working with cable, heavy thick cotton gloves offer protection from frayed areas.

Foot Protection
- Purchase stout boots that offer good ankle support, traction control and are waterproof when needed.
- For falling, cruising or any activity that requires walking on logs and limbs, caulk boots are the footwear of choice for sure footing.
- If, however, you are on and off equipment, caulk boots can be dangerously unnerving, almost like walking on ice. So for operating equipment, boots with a good traction sole work best.

First Aid
- Carry a personal first aid kit (containing a pressure bandage) that can be easily reached with either hand. Don’t put it in your hard hat, as that can be knocked away during an accident.

Communications
- A loud whistle that’s easily accessible should be carried to summon local assistance.
- Carry a cellular phone or other type of radio communication system that’s capable of calling out of your location reliably. Along with this system, you should have your location information in written form—street address and/or latitude and longitude. If you are working alone (NOT RECOMMENDED!), you should have pre-planned times throughout the day that you will call to check in with someone who could get you assistance. If you are working with a partner (RECOMMENDED!), check on each other periodically.

Now that you have donned the appropriate personal protective equipment (PPE), you are ready to get to work.

While this is not meant to be an article on timber falling, a brief discussion of some timber falling precautions and habits is needed.

Develop a habitual mental process of sizing up a tree’s hazard potential as you prepare to cut it. Check to see if the tree has a sound stable top, as well as those of any surrounding trees that could be brushed or bumped in the falling process. Look to see if there are other obstacles in the fall bed that could become dislodged in your direction as the tree hits the ground.

Predict where the butt of the tree is going after it comes off the stump. Many times they fall away from the stump, but sometimes they shoot back over the stump. Heavy limb loading can cause this, and falling directly uphill is very dangerous. Other times the butt can kick high in the air over an obstacle. Then there’s the banana-shaped tree that can roll to either side as it breaks hinge (ask me about this one sometime).

Be aware of wind direction and intensity. You usually can’t fight a wind that’s pushing the crowns around too much, and the smart faller goes home.

Plan two escape routes that allow you to get at least 25 feet from your stump, roughly 45 degrees to the sides and back from the ground fall line. As the tree begins to fall, use your chosen route to move quickly.
away from the tree.

Now here’s a tough one requiring you to fight your natural inclinations. You’ve finished your cuts and the tree is beginning to come off the stump. Unless you’ve determined that there is some specific danger at ground level, always look up to see what falling projectiles may be heading your way. Your inclination will be to watch the tree fall, but especially in thinning work, the danger is over your head.

And finally, you may work a 10-12 hour day at the company store, but falling and bucking timber is extremely physically taxing, and a six- to seven-hour day establishes a better safety limit. Be aware of your own body and mental state, and don’t push yourself. Accident rates go up as tiredness increases.

Many different types of equipment are used in the woods for various purposes. Match your equipment to the job and the current conditions. Specifically:

- **Load size.** Balance your loads to the size of your equipment.

- **Weather and ground moisture conditions.** On frozen ground, big equipment pulling heavy loads is safe and productive, but when faced with a 30 percent wet slope, an ATV moving smaller loads can be a safer low-production viable alternative.

- **Terrain.** A 35 percent slope is more than most ground equipment can safely negotiate, and agricultural equipment is more limited than dedicated logging equipment.

- **Speed.** Excessive speed always increases your potential for error. When your machine or the load being pulled hits something at great speed, you have much less time to react should you find the world suddenly going a little sideways.

- **Orientation.** Be mindful of the direction of load pull to the orientation of your tractor. Remember Newton’s Third Law of Motion: For every action there is an equal and opposite reaction. For instance, any time you have a load that is outside the axial line of your tractor’s pull, you run a risk of rolling your tractor that increases with the degree of angle.

It’s better to err on the safe side. Keep life in perspective in regard to what you are trying to accomplish and how fast you intend to accomplish it. Are a couple logs down in the bottom of a ravine really worth what it may ultimately cost you?

The key to safety in the woods is knowing your task at hand and THINKING AHEAD. Do I have the appropriate personal protective gear? Do I know the action-reaction points, and can I observe them from a clear, safe position? All situations are different and running on autopilot is how a person with longtime experience can become a statistic as quickly as any beginner.

THINK, THINK, THINK. If you’re too tired or impatient, go home early, or you may go home early.

**Ted Hazel** is certified by the Association of Oregon Loggers as an Oregon Professional Logger and is a graduate of OSU Extension’s Master Woodland Manager Program. He manages 175 acres spread over three counties and is a member of the small woodlands associations in Clackamas, Marion and Polk counties. Ted can be reached at thawzel@teleport.com.

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**Play it Safe When Logging**

*By R.N. “Chick” Jensen*

Concerning safety in logging, I offer some comments for the “hobby” logger.

I was a beginner over 60 years ago and have logged most of my working year. I really enjoyed the work, but in the beginning I did some really dumb things—and dumb things can get you killed. The first and main issue is always safety.

Get as much information as you can by talking with loggers and watching them work, and reading and viewing books and videos. Every year several loggers are killed, so if the skilled people have problems, how much is this problem amplified for a beginner?

There are two things that bother me: (1) logging with a little four-wheeler with absolutely no guarding (one of our small woodlands members was killed when a stick poked him); and (2) logging with a farm tractor and no guarding. You can either buy or make a canopy and you will be safer in many ways.

If you are working by yourself, have some way to signal for help—phone, CB or small air horn. Remember, the power saw doesn’t care what it cuts and the tractor doesn’t care if you are under it when it rolls over, so be properly equipped.

I’m not trying to discourage anyone from logging; I just want you to have the right mind-set when you get started. A lot of pleasure and satisfying work can be had, but take it easy, there is no need to rush. Your family wants you to come home in good shape—small scratches and bruises are acceptable.

R.N. “Chick” Jensen is a member of the Washington County Small Woodlands Association.
When asked to write an article on logging, my mental image was one of the whine of the chainsaw, wood chips flying, and the breaking of branches as the tree fell to the ground with a loud thump. The rumble of the skidder moving the logs to the landing or, for some of our landowners with steeper ground, the whorl of the carriage as it moves down the skyline, the crackle of the underbrush as the logs are pulled to the haul road.

Then after that initial thought I told myself, whoa, slow down here a minute and think about this, you're getting a head of yourself. Harvesting is an event that most family forest landowners will do once, maybe twice, in their lives. This important activity is an event that will change your property for a long time to come. If your plan is well thought out and you and your logger execute it correctly, you and your property will be better off for it.

As a stewardship forester I work to assist family forest landowners with their forest management activities. It is easy for me to tell you, “Let the forest tell you when it is right to harvest.” (No, you won’t hear voices!) One way you will know it is time when tree and stand growth has slowed, most of the trees are of a merchantable size and commercial thinning would help release the remaining trees in the stand. But I don’t feel the same pressures as the woodland owner to pay taxes, generate dollars for the kids’ college or provide some retirement income. So if the need and the biology of the forest coincide, maybe it’s the right time to harvest. Notice I said maybe?

The other consideration is the market. What? The market? Yes, what is the price offered for the product(s) that you are producing? Right now housing starts are down, housing loans are under tighter scrutiny, and prices for logs are low. Again, although I feel your pain, it’s easy for me to say wait, play the market, and when prices start to rise, then plan your harvesting. I also don’t have bark beetles nickel and diming my timber; I don’t have 400 hundred acres of fire-damaged trees or wind throw to salvage and market. What do I do now Mr. Fancy-pants Forester?

It is time to look at the products you have to offer. Sawlogs are the...
main product and will comprise most of the value in your harvest operation. However, when sawlog prices are low, are there other products you can produce and make money? Usually when sawmills are in a slowdown, sawdust and chips they produce are also down. So there may be a rise in the demand for chips. Is there a local chip market in your area? What about biomass? With the rise in petroleum and natural gas prices, are there outlets for hog fuel? Now wait just a minute, are you telling us the demand for hog fuel is going to pay the bills? No, but check to see if there is an outlet for your tops, limbs and other slash that you might get paid for that would otherwise cost you to dispose of. One of the best ways of increasing profits is to lower or offset your costs.

Okay, thanks for the tip on looking for different markets, but what does that have to do with harvesting or logging? Ah yes, well, to go along with multiple products that you have, do you have an operator that can produce a mix of those products? Are they equipped to produce the products in an efficient manner and do their employees understand marketing opportunities?

Locally, I have several examples of how an operator has met multiple objectives of commercial thinning (to reduce threat of bark beetle attack) and treating non-commercial trees to reduce ladder fuels and the threat of wildfire—all in one entry.

The commercial-sized material was harvested with a Timberjack harvester and the material was forwarded to landings. At the landings the material was sorted for sawlogs and chip logs. The smaller non-commercial trees and the slash left by the harvester in the harvest area were treated with a Felcon flail head mounted on an excavator.

Another example includes an operation that collected slash from a typical non-commercial thinning operation and forwarding that material to a tub grinder where it was processed and hauled to a cogeneration plant. In this case, the expense of the slash collection and grinding and hauling were paid for by the material removed.

This last example was actually facilitated by several operators working together for the benefit of all parties: the cogeneration plant got the material, the operator with the forwarder got extra work, the thinning operator was saved the liability of burning, and the landowner didn’t have the expense (and risk) of burning.

These are some local examples of how marketing a product mix and finding loggers with the right equipment and experience made the event of harvesting profitable. In addition, they left the forest in better condition and fulfilled both financial objectives and long-term objectives for the land.

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**Processing small pine saw and chip logs using a Timberjack Harvester.**

**Forwarding small chip logs and hog fuel to the landing.**

**A resulting thinned-from-below stand that reduced fire hazard and increased bark beetle protection.**
any woodland owners are adept at planting trees or running a chainsaw. Success of any woodland activity requires one to plan ahead, be it ordering trees for that regeneration project, lining up trucks or equipment for a scheduled road maintenance, or making sure the maul handle isn’t split and the chainsaw will start before cutting next year’s firewood. Selling logs is no different. As a matter of fact, lack of proper planning and pre-sale monitoring can be the leading culprit for an unsuccessful endeavor in merchandising logs.

Infrequent entries into the realm of merchandising can leave woodland owners wondering if their decision-making process is a well-informed one, particularly when they did not plan ahead. Selling logs is a daunting task. It is the culmination of decades of management when owners will finally realize a return on their investment. The wait has been 40, 50, 60 years or longer, so telling someone to spend a few minutes intermittently in the months prior to harvest is not asking too much of potential sellers. So here’s a plan for planning ahead.

First, in Oregon, get that Notification of Operations out of the way. The form is required by law for just about any woodland activity, so fill it out the first of every year. A notification number is required by all log buyers when offering a purchase order, so have it ready ahead of time.

The past several years, large-diameter Douglas-fir logs have been valued relatively equal to smaller material. Current market conditions now find values for larger material slightly higher than their smaller counterparts.

The past several years, log markets have been more volatile, particularly in the export sector. There have been occasions when a shipment requires an additional volume of logs, with speed of the utmost importance. The buyer cannot and will not wait around while someone fills out their paperwork. Washington, Idaho and Montana have varying permit processes, so always check with your state forestry agency if you are considering a harvest.

Logs are a commodity product, and all commodities have price trends. Whether or not woodland owners plan on selling logs, it is important to follow the market. Ideally, a seller should have years of data on log values in which to form a strategy on when to harvest. Worst case scenario, one should have been following the market over the past several months and keeping an eye toward the general economy.

Remember the old saying on determining the value of real estate: location, location, location? The saying that should be adopted by woodland owners selling logs is: tim-
ing, timing, timing. Various schools of thought exist on when a seller should market their logs. Sound advice is to sell when others are not, or cannot, sell their logs. This usually involves access, namely dirt versus rocked roads. If woodland owners cannot ensure access to their property, thus capitalizing on a favorable market when the opportunity presents itself, then the all-important factor of timing is lost.

Just as woodland owners need to plan ahead for market opportunities, it is equally important to plan ahead on the logistics of getting those logs to market: selecting a logger.

and carefully monitored the log market, obtained their purchase order and procured the best logger money can buy. So now they can sit back and enjoy the fruit$ of their labors. Wrong. What makes one think markets become static once a timber harvest is underway? Log markets are dynamic environments and what was once the best offer might not be so in the coming weeks and months. Very seldom does the same buyer remain the strongest throughout the year. What if they become second best?

Prices for these graphs were gathered through quarterly reports of the Oregon Department of Forestry, personal conversations with log buyers in western Oregon and purchase orders from various woodland owners in western Oregon. They depict an average price for each 12-month period. Higher and lower prices exist for each species over the represented time frame. These trends are representative of average, annual $ per MBF, not specific prices for a specific time period.

With increasing fuel costs, it is quite possible the best net return for Douglas-fir and whitewoods may be the mill nearest to the operation.

Scheduling a good logger is like going to a nice restaurant: everyone wants to be immediately seated and there are limited available seats, as there are limited good loggers. Finding and selecting a logger should be done months prior to the harvest. It is much easier to say one has changed their mind and release a logger from their obligation than to go begging at the last minute. It is not always the case, but there are reasons why certain loggers are available for work on short notice—and many of those reasons are not good ones.

So everyone has planned ahead
during the time of harvest?

It is perfectly within the rights of a woodland owner to “change horses in mid-stream,” allowing a seller to react to changes in the market, be it changing buyers or increasing/decreasing the volume of the harvest. Purchase orders are for an “estimated” volume of logs, not a “guaranteed” volume. Caveat emptor if entering into such an agreement! However, if a seller does decide to change buyers, the former buyer should be properly notified and given good reason, because there have been instances where they will meet the counter offer if given the opportunity.

So what values can one expect in the future, or possibly as a better indicator of what lies ahead, what might be found by looking back? As stated, logs are a commodity product. Commodities are a high risk-high return endeavor and emotion can play a large part in determining value. When prices are rising and everyone is saying there is no end in sight, the end is near. Last spring/summer when red alder values were soaring, many knowledgeable buyers told us it would only get better. It was stated in this publication that would not be the case. It was not the case. Alder val-

There are limited market options for ponderosa pine in western Oregon and Washington. Sellers of pine on the westside are required to haul long distances to maximize dollars per MBF or shorter hauls to sort yards for fewer dollars per MBF.

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- Fish and stream protection
- Forest protection laws
- Fire in Oregon’s forests

The Oregon Legislature created the Oregon Forest Resources Institute to improve understanding of forestry and to encourage sound forest management.
ues have declined approximately a third from their historic highs.

Same for Douglas-fir and white-woods: values have declined about 30 percent from this time last year. Currently, many buyers are saying the bad news is not over, it may get worse. Once again, emotion is entering the marketplace. This should be a sign that indeed, the end is near and we may well have reached the bottom. But do not expect a rapid return to the good times. The general economy is not strong, housing starts are down and foreclosures are up. But good news is Japan has weathered their downturn and China remains a growing force in the global marketplace.

Redcedar and cedar in general have remained strong throughout the general economic downturn. Reasons for this strength are the end products of redcedar such as upscale remodeling, decking, interior trim and moulding and siding: projects that are not so dependent on general economic indicators, rather more upscale consumers, and the fact cedar has few substitutes. Cedar logs will likely remain at their high values. Douglas-fir and whitewood values, with their end-products being more commodity type materials (dimensional lumber) need to increase from their current low levels to at least a point where mills realize a profit. Without a positive rate-of-return, no business can remain in operation.

Predicting log values several years into the future is risky business. Who would have thought pre-1993 (the spotted owl) that Douglas-fir values would practically double overnight? Who forecast red alder at over $1,000/MBF last summer? Who saw current Doug-fir in the mid-$400/MBF today? Who would have dreamed incense cedar worth nearly $1,000/MBF? As the economy becomes more globally based, we may see more stabilization in commodity pricing, but we cannot take the emotional component out of the equation. The best one can do is plan ahead, continue to monitor the market and make the best, well-informed decision possible.

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How to Choose a Forest Contractor

By REX STORM, CF

Family forest owners should exercise as much care in selecting a logger or forestry consultant as they would in choosing a painter to do home improvement or a general contractor to build a new home.

Often the technical complexity of harvesting and replanting trees merits that the woodland owner should seek help from skilled professionals. It’s prudent business practice for a landowner to effectively communicate detailed operating plans and performance expectations for the desired logging project. The economic values and legal requirements involved in a harvest operation warrants that the woodland owner hire a forestry consultant to serve as a “general contractor” to manage a timber harvest from logging through reforestation.

Prior to beginning work on a harvest, reforestation or other project, there’s much planning to complete. The forest landowner must be able to provide a written property legal description, plat map, harvest unit map, cutting prescription and designated harvest boundaries on-the-ground. Below are a few questions for the forest landowner and the logging contractor.

Questions for the Landowner Before Harvest Begins

- Can you provide a forest management plan and map, with long-term goals for harvest, access, reforestation, protection, scheduling, financial aspects and so forth?
- Can you provide a harvest plan and map detailing logging methods, tree selection, timber falling, skidding pattern, equipment, utilization and fire prevention considerations?
- Can you provide a road plan that describes road locations, construction, maintenance and other items?
- Can you provide a post-operation clean-up plan for slash disposal, erosion control and roads?
- Will you complete the necessary tax filings and reforestation requirements?
- Will subcontractors do a portion of the work, and if so, what assurances are there that subcontractors will perform work up to standards of the landowner?
- How will disputes be handled during and after operations are completed?

Questions for the Logging Contractor Before Harvest

- How long have you been in business? Can you provide business references from landowners and mills?
- Can you supply certificates to verify proof of contractor coverage by workers compensation and forest liability insurance?
- Are you accredited as a Professional Logger in your state?
- Can you conduct an on-site visit to agree upon locations and specific
terms for boundaries, harvesting, roading, reforestation and other planned activities?

- Can you supply a contract and map to address agreements for work performance, completion, liability, measurement and payment terms?

How can the landowner achieve the best value for the timber harvested and reforestation to follow? Engaging a professional forestry consultant or a timber mill forester can be very helpful to prepare forest plans and contracts for the logging contractor; however, many landowners rely on the expertise of the logging operator to manage the forestry project completely, safely and in compliance with state forest regulations. The following tips are worth considering when arranging for a logging operation.

**How to Choose a Logger.** Picking a professional logging contractor is one of the most important steps taken when harvesting and selling timber. Seeking business references and receiving bid proposals from more than one contractor is suggested. Each Northwest state has its own privately-run professional logger accreditation entity—these are good sources to find experienced logging contractors.

**Who’s Who in Forest Contracting.** Many different players may be involved in a harvest operation. The landowner or a hired consultant may serve as the general contractor. Often there is a timber purchaser (mill) that buys the logs. Or in other situations, the timber purchaser can serve as the general contractor, who then contracts the logging, reforestation and other jobs to one or more third-party loggers or forest subcontractors.

**Work with a Forester.** Should you work primarily with a forester or a logger to complete a planned harvest? Unless you are familiar with the details of modern logging methods for selling timber and are up to speed with forest practices law, regulations and market prices, then you would be well advised to enlist the services of a consulting forester or a purchasing mill forester.

**Develop a Management Plan.** A forest management plan should include goals for long-term timber growth, harvest, reforestation, resource benefits, protection and income—and ways to attain those goals. Many forest landowners seek the services of a consulting forester to develop their forest plan.

**Property Lines, Boundaries and Legal Restrictions.** Prior to any operation, all legal matters and location of the harvest area must be determined, described in writing, mapped and identified on-the-ground. Proper property line identification prevents trespass, clear title to timber is necessary, and assuring that no mortgage or easement restrictions limit timber harvest is important.

**Harvest Prescription/Logging/Reforestation Plans.** Determining which trees to cut—and trees to
leave—should be tailored to a specific logging prescription and post-harvest projects, all which are consistent with the forest management plan. The logging methods are linked to terrain, road designs, water and habitat protection, fire hazard, slash disposal, reforestation and future plans. Post-harvest projects should design slash disposal and include tree planting details.

Logging/Transportation Plans. Carefully planned forest roads are a valuable investment necessary to harvest, reforest and manage a forest. Road construction and use during logging should be described in the management plan. After harvest and tree planting is completed, road management remains important to protect forest values and road investment.

Timber Appraisal/Accountability. Timber may be cruised and appraised prior to sale, then scaled after harvest by a knowledgeable forester to assure that the harvested timber volume is accurately measured and paid for. Standing timber is sold on either “scaled” basis that’s measured after cutting or “lump sum” that’s measured before cutting. The most common timber sale measurement is Scribner board foot sawlog scale or green ton weight scale for less valuable trees.

Written Contract. A written contract—including the agreement terms for conducting harvesting, reforestation or other operations—is very important to describe the responsibilities of each party. A contract protects both the forest landowner and the logging contractor. Standing timber is real estate until it is cut. The logger typically does not take title to cut trees, which are property of the landowner sold to mill purchasers. A contract can be provided by the consulting forester, purchaser or logger.

Legal Requirements for Logging. Forest operations are regulated by the respective state governments to assure that the environment is protected, cut areas are reforested, and taxes are paid. Commercial forest operations require compliance with comprehensive regulations such as forest practices, fire prevention, safety, wage and labor, workers compensation, transportation and taxation. Prior to operations, applicable permitting and notification is necessary.

With a professional logger and a good management plan, a forest landowner is well on their way to getting the most from their timber and helping to protect the future value of forest resources. The respective state forestry agencies and forestry extension services are good sources of information about logging woodlands. Excellent sources of information about woodland management include county extension foresters and state forestry agencies. More information about directories of professional loggers and forestry consultants is available online:

Association of Consulting Foresters: www.acf-foresters.com
Associated Logging Contractors: www.idahologgers.com
Associated Oregon Loggers: www.oregonloggers.org
Montana Logging Association: www.logging.org
Washington Contract Loggers Association: www.loggers.com
American Tree Farm System: www.treefarmsystem.org
Society of American Foresters: www.safnet.org

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What’s My Fair Share?
What is the fair payment to the landowner for timber harvested? There is no one fair percentage payment to the landowner because every harvest operation is different. The fair payment to the woodland owner for their standing timber to be harvested (called “stumpage”) is best determined through a residual value calculation—where all operation costs are subtracted from the delivered log value paid by the mill (called “pond value”).

The calculation is: Pond value – logging & road building costs – trucking cost – slash disposal & reforestation costs – contractor profit & risk – consulting forester fee = Stumpage value (this is the residual value of standing timber paid to landowner).
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Family forests at least one acre in size, 10 percent stocked with trees, and owned by private individuals, couples or family estates account for about 42 percent of all forested acres in the conterminous United States. The reasons for ownership, and the intensity of management, are varied and often differ between regions of the country.

In the 15 western states, small parcels (10-49 acres) are often managed with minimal or no custodial activity. The reasons for this can be varied. For instance, some families work offsite with little spare time to invest in their forest; this may also correlate with their inability to afford larger properties that could produce income. Landowners may have little knowledge of basic ecology, or they don’t know where to obtain trusted information about forest management. It’s also apparent that more owners are embracing non-consumptive values such as scenery, recreation or the protection of nature.

Whatever the reasons, a passive or hands-off approach comes with substantial risk because forests are dynamic—they change when humans cause disturbance and when humans prevent disturbance. Over millennia, forests evolved with wildfire, wind, snow or ice, insects, disease and non-native species. These disturbances occur singularly or combine in frequency, magnitude, extent, seasons, historical variability and synergy with other factors. Whether deliberate or unthinking, the choice to “let nature take its course” with so many unpredictable influences can produce an undesirable outcome.

For families that choose the hands-off approach, there are at least two situations where some action should be considered. The first and most universal situation is maintaining forests that are “fire-safe.” The second circumstance is maintaining forests that depend on disturbance for ecological survival. It might be surprising to know that some degree of active management for fire-safe or disturbance-dependent forests is now practiced by the National Park Service and The Nature Conservancy, two nationwide landowners commonly associated with preservation.

Studies of fire history show that wildfire was a regular event at intervals that varied by ecosystem. Centuries ago, fire in ponderosa pine forests burned only the forest floor every 10 years or so because large, thick-barked pines growing with park-like spacing could survive the low-heat flames. Fire in wetter forests of white fir, Douglas-fir or red fir burned less often, perhaps 25-75 years on average. This longer fire-free period allowed flammable vegetation to develop from the ground up to the tree canopy, producing hotter flames that killed trees in patches and created openings. Cool, wet forests such as coastal western hemlock or subalpine fir burned so infrequently that an abundance of fuel produced high-heat fires that killed in large, sometimes uneven, expanses.

Western hardwoods such as quaking aspen, black cottonwood, red alder and paper birch are pioneer species that prosper from high light levels and exposed mineral soil. Without disturbance, trees having greater shade tolerance such as spruce, white or grand fir, and lodgepole pine creep into the picture over a few decades and eventually replace hardwoods after several decades. This encroachment is a serious and immediate problem that western hardwood forests can survive only with uncontrolled natural disturbance (plus collateral damage to human property) or with controlled human intervention. A hardwood forest is preferred habitat for many wildlife species and, of course, provides natural beauty for human eyes as well.

To identify forest management options for either situation, hands-off managers should seek the advice of a professional ecologist, forester or biologist. Helpful information can also be found on the Internet. For techniques to create fire-safe conditions near human development, see the website www.firewise.org about FIREWISE, an awareness program from the consortium of wildland fire organizations and federal agencies responsible for wildland fire management in the United States. For knowledge about disturbance-
dependent hardwood trees, see
pdf for quaking aspen;
www.fs.fed.us/pnw/publications/gtr6
69/pnw_gtr669a.pdf for red alder;
www.fs.fed.us/database/feis/plants/
tree/popbalt/all.html for black
cottonwood; and
www.fs.fed.us/database/feis/plants/
tree/betpap/all.html for paper birch.

Finally, here are seven essential
actions that the hands-off (or any
other) manager should undertake.
1. Get to know your property and
the non-trespassing view of neighboring
ones. Learn your trees and soils.
Locate your property boundaries
and land survey monuments. Search
for safety hazards to humans and
wildlife (e.g. surface water; ground
excavations; refuse dumps; equipment or chemical stores; steep or
unstable roads and trails; road bar-
rier devices; animal traps; fence
wire). Be alert for invasive weeds,
sources of erosion and damage to
trees from insects, disease or
wildlife.

2. Talk and work with your family
and heirs. This may bring to light
an interest in some facet of property
management that is helpful.

3. Talk and work with your neighbors. They may have knowledge
about land management resources
or history for the area, and may also
cooperate on projects of benefit to
both ownerships.

4. Determine your short- and long-
term objectives for ownership and doc-
ument them in a management plan.

5. Become familiar with local land
use laws, regulations and landowner
liability. Investigate landowner liabil-
ity insurance as a rider to your
homeowner’s policy. Discounted
insurance for firefighting and general
liability is available for OSWA mem-
bers through J.D. Fulwiler &
Company (www.oswa.org/JDF.html).
Special land liability insurance is also
available for purchase as a benefit of
membership in the National
Woodland Owners Association (see
www.woodlandowners.org).

6. Learn about forestry education
programs, forest-owner organiza-
tions, and sources for technical or
financial assistance. Find the web-
site or phone number of local feder-
al or state natural resource agencies,
soil and water conservation districts,
and weed control boards.

7. Keep good records, including
picture documentation, about your
forest. Photo-monitoring can iden-
tify conditions or changes over time
where memory alone may fail.

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be reached at esi@bendnet.com.

Photo-monitoring Tips
1. Define the question(s) to be
answered.

2. Select one or more sites that will
answer those questions. Anticipate
potential changes that could block
photopoint access or view (e.g. future
vegetative growth, high water,
planned disturbance, etc.).

3. Determine the specific attributes
to study.

4. Identify when and how often to
monitor...annually, seasonally,
before/during/after disturbance, etc.

5. Describe the specific photo-
graphic procedure used.
a. Create a map of the study area
and individual photopoints with a site
description (include GPS coordinates
if available), at least two landmarks
and directions that anyone could
understand.
b. Use a permanent marker (e.g.
metal t-post or pipe, 2x2” wood stake
driven into ground) for each photo-
point, but take care to prevent a
human hazard.
c. Take repeat photos at the same
time of year and, if possible, same
time of day. Bring a paper copy of
the last photo to accurately compose
subsequent ones. With close-ups,
position the camera on the north side
of the desired view to prevent your
shadow from obscuring details.
d. Include an identification placard
in the foreground, giving location, date
and compass bearing for the center-of-
view. Instead of white paper, use yel-
low, gold or pink color to avoid sur-
fase glare under various lighting condi-
tions. Be sure the writing is legible in
your camera viewfinder.
e. Center the photo on a reference
point of known height (e.g. shovel,
yardstick, tree stump, etc.) that is
located a documented distance from
the camera. This can help to estimate
the dimensions of nearby objects.
f. Document and securely store all
photos immediately after processing!
Don’t depend on the brain’s “photo-
graphic memory.”

The complete loss of quaking aspen from a site is often the final outcome of vegetative succession to conifers.
Bill Triest says that owning forestland promotes humility. Perhaps it’s because his land is in the hills, 27 miles northwest of downtown Portland, and as Bill remarked, “Everything is uphill. But it’s flat-out beautiful!” Or maybe it’s the elk that tend to eat his crops, about which Bill is much more magnanimous than others might be: “It’s the cost of doing business.”

Bill is an herb farmer and has been farming on his 34 acres in Oregon’s Washington County since 1975. In the beginning, his primary interest was farming, and the timber provided a convenient wood source for construction projects as well as some value-added products to his commercial herb operation. Soon, Bill realized the timber had potential; and the more he “worked with timber” the more he began to love forestry. To learn more about this newly sparked interest, Bill attended the Oregon State University-sponsored Tree School where he met Chal Landgren, extension forester for Washington County. With Chal’s encouragement, Bill went through the Master Woodland Manager training offered through Oregon State University Extension. His interest in forestry translated to the eventual conversion of some of his existing strawberry fields into Douglas-fir interspersed with western redcedar and red alder.

Today, Bill retains 25 of his 34 acres in forest with the remaining nine acres as open fields for his commercial herb operation.

Cultivating wildlife habitat is a major objective for Bill Triest. Some of the nine acres not in forest are used as habitat openings for grazing elk that frequent his property. Even though he has some elk damage to his crops, Bill plants grasses and clover for the elk. He likes to keep them around as he feels they are indicators of the status of wildlife populations on a larger scale: “For all the damage the elk do, we appreciate that they are here.” He currently rests his crop fields periodically, but he says he may stop mowing them as often during these rotations in order to provide additional wildlife habitat. Bill suspects that elk populations are on the decline due to the conversion of hardwoods to softwoods (Douglas-fir specifically) on neighboring industrial lands. He posits that the initial response of elk was positive to the newly cleared areas where browsing and grazing opportunities were abundant. But as these even-aged stands matured, the structural components that provided resources for the elk decreased. Bill wants to try and maintain the multi-species and uneven-aged forests that he observed in 1975. “For the first five years I saw ground squirrels everywhere. I haven’t seen a ground squirrel in years.”

Bill understands the dynamics of a...
forest; how it develops and changes through constant disturbance and recovery. He knows that as the structural components of a forest shift, so do the associated wildlife populations.

Bill also knows that time moves very slowly in a forest, but he is a little impatient, “I want to speed up the process and create more of an understory. They may be cosmetic changes, but that’s my motivation—to increase the diversity of native flora in order to increase the native fauna.”

Through observing the area around him, Bill has cultivated a strong sense of forest resource conservation. “I am surrounded in a timber zone so I have some degree of protection from development,” says Bill, “but Washington County is rapidly growing with Intel and Nike…the urban growth boundaries have contained some of the development, but I see it slowly creeping toward the farm.”

I asked Bill to suppose if his land was suddenly taken out of forest and open space, what the impact to the surrounding landscape would be. His answer surprised me. “Take my land out and 10 more parcels just like it, and it wouldn’t make a huge difference in this county—there’s a lot of resource out there. But every shoulder to the wheel helps!”

Bill hopes that by the time his land passes to the next generation, his management objectives will pass with it; not just on to his own family, but to the greater community as well. Bill is supportive of current Oregon state policies regarding natural resources and stemming the tide of growth, but he is somewhat critical of residential development approaches, “Washington County lot sizes are so small and the homes so close together, there is nothing nearby that tells you where you are—nothing indicative of the state, region or environment.” In other words, when you look out your window what tells you that you’re in Oregon, other than your license plate? How do you know you didn’t wake up somewhere in Arizona? Bill believes that if people have a constant, regular exposure to the natural resources in a county, a state, a region or a country, then better policy decisions will be made regarding natural resources and conservation. After all, this is what happened to Bill. A constant, regular exposure to the natural processes on his property led Bill toward making better decisions for himself, his land and for everyone around him.

JANEAN CREIGHTON is the natural resources educator for Northeast Washington and Washington State University. She can be reached at 509-477-2199 or jcreighton@spokanecounty.org. Janean will be providing periodic articles with a wildlife twist on an occasional basis in future issues.
Remedial Commercial Thinning

By DAVID HIBBS

I thought I was doing a commercial thinning, but now I'm not so sure. I am telling myself that I learned a lot and knowledge is an investment in future profitability. We shall see.

Most of my forestland is in the transition stage from beating on blackberry and hazel to doing pre-commercial thinning (PCT) work. But I have a corner of three to four acres that is a little older; I did a PCT in it about 10 years ago. Last fall, at age 28 and a crowded 350-400 trees per acre, it needed thinning again and the trees were large enough to be sold. The topography was easy and I had my tractor with enough to be sold. The topography allowed a hinge to be left on the stump, but controlling direction of fall was still often quite difficult. I settled on setting the choker low and pulling the butt to the tractor. This had the pluses of better control and not needing to reset the choker to yard the log. The minus was that I had to cut the tree entirely through at the stump without setting it down on the saw. After a few mistakes, I learned how to use wedges to keep the tree from dropping on the bar.

Bucking decisions turned out to be surprisingly simple. The trees were quite cylindrical until they entered the crown and then tapered rapidly. I cut 32+ foot logs to four-, five- and six-inch tops. I think 46 feet was the longest.

After several days of logging, I started to get a little picky about which trees I'd bother to yard out. A seven-inch diameter at breast height (dbh) tree that is 24 feet to a four-inch top has so little volume it didn't seem worth the time/cost of getting it to the deck.

I didn't need all my skid roads. The winch has 165 feet of cable, quite a reach. And there are a couple of tricks I learned from an old German forester (Klaus Puettmann) about yarding in a crowded stand that really helped. First, the choker can be twisted around the log so that, when the log is pulled, the log rolls as well. This trick can help move the butt of a log sideways past a tree or stump. Second, a second choker can be set up to function as a pulley so that the tree is pulled, not directly to the winch, but around an obstacle first.

I learned my road design needs some work. There was a corner I had to yard around that was too acute. I had to make a three-point turn, which meant unhooking from one end of a log and reattaching the tractor to the other end. Not efficient at all. And then there was a corner that was too acute for the log truck to make. We talked in advance about unloading, turning and reloading at that corner, but, on the critical day, the driver decided to try a three-point turn by backing out onto a grass landing by the corner. He got stuck. Too icy. He unloaded, I got the tractor, I pulled, he unloaded and left, I breathed a sigh of relief.

Dollars made or lost:
- 20 tons of logs at $46/ton;
- Yarding cost with tractor: about $250;
- Repairing the tractor: $30;
- Hauling cost at $85/hr: $425;
- Logger wages: pretty low.

Knowledge gained:
- I know how far away from a tree to park the tractor.
- I know how to fell, trim, buck, yard and sell small trees.
- I have a stand that really looks good now, all set for another decade of good growth.
- I have a plan for how to redesign the bad corner the truck couldn't make.
- There were certainly a lot of inefficiencies in this project, but I'll know how to do better next time.

DAVID HIBBS (and Sarah Karr) own 92 acres in southern Polk County and is a member of the Benton County Woodlands Association. In his day job, David is a professor of ecology and silviculture at Oregon State University in Corvallis. He can be reached at 541-737-6077 or david.hibbs@oregonstate.edu.

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Safety Needs to Come First

By ROD HUFFMAN AND REX STORM, CF

S o, you want to buy a chainsaw this weekend and do some logging on your woodlot. Will you be safe? Or frankly, will you safely act to prevent injury, or worse, death? Whether you are a do-it-yourselfer cutting firewood, or a woodlot owner having years of weekend experience with saws and skidders, when logging on your woodlands you should always keep a few safety basics at the forefront. Although recreational woodspeople are not subject to government logging safety regulations, safe work practices should nonetheless remain paramount for the weekend logger. So, listen up!

Why should safety be such a big deal when modern technology has galvanized our society from those bygone dangers of the halcyon steam-powered days? Regardless of modern times, logging is still one of the top three most dangerous occupations in North America today, having job fatality rates comparable to commercial fishermen, airplane pilots and truckers.

Logging is dangerous and its hazards warrant serious safety attention by even the casual woodcutter. In three years in Oregon, 2003-05, 28 workers were killed in logging accidents, including equipment operators and log-truck drivers. Timber falling is by far the most hazardous job in the woods (11 died in '03-05 in Oregon). A fatal incident for a faller is 65 times more likely than for workers in general, and three to five times more likely than for other logging jobs.

While self-employed folks doing their own logging are not subject to state and federal logging safety regulations for employees, it’s prudent for the part-time logger to heed those valuable occupational safety precautions applicable to employed loggers. Refer to the sources in the sidebar for logging safety regulations in your state.

Although innovative practices have combined to make logging work safer than ever before, many of the inherent hazards persist from falling trees or moving machines. And the weekend logger—who typically has another occupation—generally is unversed in logging hazards and the up-to-date safety practices to mitigate those hazards.

Northwest logging in the last 150 years has taught us several basic concepts of timber safety practices that should be heeded by anyone stepping foot into the forest to work the timber, cut trees and move wood.

**Common sense for the layman**

- **First Aid.** Anyone working with chainsaws or in the woods should be trained in first aid and CPR.
- **Personal Protective Equipment (PPE).** Wear appropriate gear for the work hazard, such as hard hat, hearing-eye-respiratory protection, sturdy footwear, gloves and sleeves, leg chaps and high visibility color.
- **Training and education.** Become adequately trained in safe work practices, and the hazards you may be exposed to using machines and logging methods.
- **Health and fitness.** Labor in physically demanding conditions requires good personal health, physical fitness and mental alertness. Always be drug and alcohol free.
- **Work planning.** Identify hazards, arrange work, structure tasks to be completed safely, and follow your safety and health plan.
- **Environmental hazards.** Be knowledgeable of safe work around local hazards, such as walking in slippery terrain, and labor in heat or cold.

**Working around others.** Establish safe practices for nearby workers and their machines; communicate frequently on job site.

**Working alone.** Avoid doing dangerous jobs alone (falling timber). When working alone, have a check-in system and communicate where you are working to another person.

**Well-maintained tools and machines.** Monitor tools and equipment and keep them in good-repair. Remove from service if malfunction is a hazard.

**Basic hazard areas**

- **Chainsaws:** Prior to operation, sawyers should receive specific orientation on safe chainsaw operation. Saws must be equipped with a chain brake, throttle control and operated

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### State Logging Safety Regulations

- **Oregon** www.orosha.org
- **OR-OSHA** (Oregon Occupational Safety and Health Division) provides safety rules for logging under its comprehensive 250-page, Division 7, Forest Activities Standard.
- **Washington** www.lni.wa.gov/Safety/default.asp
- **WA-OSHA** provides safety rules for logging under its comprehensive, Safety Standards for Logging Operations, Chapter 296-54 WAC.
- **Idaho** www.dbs.idaho.gov/logging/safety_rules.html
- **Idaho** has chosen to not run its own safety program, and therefore employers are subject to federal OSHA logging regulations. Additionally, Idaho has some state regulations applicable to logging safety under the Idaho Minimum Safety Standards and Practices for Logging
- **Montana** www.osha.gov/SLTC/logging/standards.html
- Montana employers are subject to federal OSHA logging regulations.

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NORTHWEST WOODLANDS . SPRING 2008 . 29
DEAR TREEMAN, You mentioned recently in a talk of yours that red alder were nitrogen fixers, thus a leguminous plant. Legumes are a family of plants that bear bean pods. You also mentioned that seeds of the red alder are stored in little “cones,” so how can an alder be a legume if its seeds are in cones? Am I missing something here? —MG

DEAR MG, Not a thing…you’re right on the mark. The nitrogen fixation component of red alder comes from the family Rhizobiaceae, a soil bacteria capable of forming nodules on a plant’s roots where they fix atmospheric nitrogen. Many definitions state these rhizomes come from leguminous plants and, obviously, red alder is not a leguminous plant. But there are non-leguminous plants also capable of nitrogen fixation, with alder being likely the best known. There are no fewer than 22 genera of shrubs and trees in eight families that are nitrogen fixers. The more common ones include Alnus, Ceanothus and Purshia.

Much of the discussion on the importance of nitrogen fixation in red alder has originated from the contention that managing Douglas-fir in a monoculture has depleted the soil of available nitrogen, thus the unsustainability of continued rotations. There are myriad hypothesis on the “value” of monocultures versus mixed species, and I do not have the space, or more importantly the knowledge, for further discussion. Some questions yet to be answered include the ability of plants to utilize other nutrients in the presence of nitrogen fixation. For timber companies, the overriding concern is internal rate of return in homogenous stands versus mixed species management: now you know why they usually grow one species per site. Of course, we are not considering the issues of stand diversity, aesthetics, recreation and fish and wildlife. The only thing we know for sure is just how much we don’t know. —Treeman

DEAR TREEMAN, I read in the paper that the timber industry is having hard times. I went into Home Depot the other day and lumber doesn’t seem to be much cheaper. So how can you tell me things are so tough when lumber is still expensive and log prices are so low? It’s just the mills aren’t making as much as they’re use to making and now they’re crying. —Dick

DEAR DICK, You’ve fallen prey to the age-old axiom about the perception of value as seen from the perspective of buyer versus seller: One believes they’re not being remunerated equitably and the other in fear they’ve overpaid. For the woodland owner, it’s the belief there’s some vast, capitalist-wing conspiracy where log scalers and log buyers are teaming up to screw the landowner.

Currently, Random Lengths is reporting Green Douglas-fir Standard & Better 2x4s at $162/MBF. Converting with various log buyers in the area will show Doug-fir log values less than $500/MBF. Simple math tells us that buyers must triple their lumber versus log scale ratios to break-even, and we’ve only accounted for the cost of the log, disregarding any additional costs of production. And before we jump to any conclusions: Even the most efficient mills are not generating overruns of +300 percent.

You ask: How can these guys stay in business? Well, they can’t. At least they cannot sustain their business when lumber is valued at less than a third of what they’re paying you for your logs. It’s the American way to root for the underdog, the downtrodden, the oppressed. Weyco lost millions in their last quarterly report. And if Weyco can’t make it, what makes you think the “little guy” is going to pull through? Just remember: Has a poor man ever offered you a job? Has a bankrupt mill ever paid you for your logs? Everyone must see a positive rate of return on their investment, and when they don’t, the rest suffer along with them. —Treeman

DEAR TREEMAN, I heard on the radio that a pencil will go 37 miles. You can write 37 miles worth of stuff. That sounds like a lot. When I heard the quiz, I thought maybe three or four. Is 37 miles true? —Cyndi

DEAR CYNDI, 37 MPP (miles per pencil)!! What…Did they use titanium-tipped graphite? Once again we see the value of academic research and its veracity in relation to reality. By applying constant pressure of one said secretary (we would need a potentiometer to measure “constant” pressure, but Treeman is working on a shoestring
Safety Needs to Come First

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according to manufacturer’s instructions. Never use a saw to cut overhead or one-handed, or an unsafe reach, or in an unbalanced position. Wear Personal Protective Equipment.

Struck-by danger: Being “struck-by” an object is the most common event causing logging injuries. Vigilance to prevent injury from hazards of moving timber, logs, machines, falling trees and rolling debris should include these basic precautions:

- Wear high-visibility colors that contrast with surroundings;
- Position yourself in the clear, out of harms-way;
- Communicate with equipment operators; and
- Never assume!

Falling: Train before you cut! Seek training from experienced fallers about falling safety. The primary falling hazards involve snags, kickback and getting caught in the falling zone. Safe falling involves these five basic steps: 1) assess the area; 2) assess the tree; 3) establish a safe working area; 4) fall the tree; and 5) get in the clear.

ROD HUFFMAN is training director and REX STORM, CF, is Forest Policy manager, with Associated Oregon Loggers, Inc. For more information, contact: AOL, 503-364-1330; rhuffman@oregonloggers.org or www.oregonloggers.org.

CALENDAR

Lanscaping for Fire Prevention, Sessions of this program through University of Idaho Extension can be scheduled for interested groups of 10 or more. Contact Chris Schnepf (Idaho Panhandle) at 208-446-1680 or Randy Brooks (North-Central Idaho) at 208-476-4434 to make arrangements.

Oregon SAF Annual Meeting, May 7-9, Eugene, OR. Contact: Stephen Cafferata, cafferat@msn.com.

Washington State SAF Annual Meeting, May 28-30, Little Creek Casino and Resort, Shelton, WA. Contact: Peter Heide, 360-705-9287 or pheide@wfpa.org.

Starker Lecture Series: Impacts of Planted Forests in Oregon Coast Range, with Examples from Private and Public Sectors, May 29, Corvallis, OR. Contact: http://www.cof.orst.edu/starkerlectures/.

Thinning and Pruning Field Day, May 30 in Moscow, ID; June 28 in Coeur d’Alene, ID. Contact: Randy Brooks, 208-476-4434, rbrooks@uidaho.edu.

Pruning to Restore White Pine, June 20, Newport, WA. Contact: Chris Schnepf, 208-446-1680, cschnepf@uidaho.edu.

Blue Mountains Forest and Range Owners Field Day, June 14, Dayton, WA. Contact: Andy Perleberg, 509-667-6658, andyp@wsu.edu.

Forestry and Leadership Youth Summer Camp, June 22-28, Wilsonville, OR. Contact: Rick Zenn, 503-488-2103, rzenn@worldforestry.org.

OSU Tree School South, June 29, Roseburg, OR. Contact: Raini Rippy, raini.rippy@oregonstate.edu.


Forest Insects and Disease Field Day, July 18 in Coeur d’Alene, ID; July 27 in Orofino. Contact: www.cnr.uidaho.edu/extforest.

Western Washington Forest Owners’ Field Day, Aug. 12, Naselle, WA. Contact: Andy Perleberg, 509-667-6658, andyp@wsu.edu.

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