Southern Maine Forestry Services

2020 Newsletter

Forestry isn't rocket science. It's harder! P.O. Box 910, Windham, Maine 04062, (207) 892-6562

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WELCOME

We hope you enjoy this newsletter. We would like to thank all of you for bearing with us through these crazy times. This past winter was warmer than normal and in a band 20 to 30 miles wide paralleling coast soils never froze hard and we had to delay harvest jobs we had planned for you to avoid soil damage. We anticipated a busy summer getting caught up with a substantial backlog of timber sales. Then Covid-19 and a bigger hit to the local forest economy, a digester at the Jay pulp and paper mill blew up. Add traditionally low summer demand for biomass energy and that the biomass energy business is in slump due to low prices for natural gas and we have had a near perfect storm of bad news for selling low grade wood. Pulpwood and whole tree chips are not a big money maker for landowners but for loggers low grade wood cover a good part of their costs. Mills sawing white pine have had a good supply of logs and prices are just holding. On the positive side; hardwood to be processed into firewood is in good demand, the softwood lumber business is having a good run, hardwood mat logs are in high demand and the market for grade hardwood sawlogs and veneer logs is good.

The strange times have altered our plans a bit. Our intent is to produce newsletters spring and fall with the fall edition being primarily distributed by email. This one will be both emailed and snail mailed to clients and others on our list.

Articles inside will interest you. Many of you drink water from watersheds we manage and Chip has written about our work there. Controlling invasive plants is a regular subject in the news and we have done some of that work and demand for that work is increasing. We recently invested in a machine which increases our ability to provide that service. Erik has written a piece with information on that. Finally one rainy day Rene wrote to one of the loggers with whom we work. It's a pretty good view into a forester's mind marking your trees for harvest.

If you are not interested in getting this information, Constant Contact makes it easy to remove your address. Or, to add your address, another persons who is interested or to forward friends or other forest owners. Please help us spread the word. Rene's has preached for years, educated landowners are the best means of having well managed forests.

Forest Watershed Management Promotes Clean Water

Southern Maine Forestry Services, Inc. manages both Portland and Auburn Water Districts, the largest and second largest water supplies in the State of Maine. Portland & Auburn Water Districts began working with foresters on their land acquisitions during the 1930s. The primary objective is to provide the highest water quality possible. High water quality is usually associated with cool temperatures and high dissolved oxygen levels. The solubility of oxygen is higher in cool water than in warm water. The decomposition of organic materials can reduce or eliminate the supply of dissolved oxygen. This is why good watershed management focuses on growing good quality softwoods such as eastern white pine, red pine, and spruce. Cutting cycles are every 10-12 years, targeting the lower quality, diseased or damaged trees for removal. This enables the landowner to capture potential mortality, reduce fuel loads, maintain year around canopy cover, release regeneration, and promote growth of better quality trees. It is a conservative philosophy with an intensive approach. Through the use of whole tree chipping the landowner can also accomplish timber stand improvement (TSI). This is a weeding and thinning of smaller diameter stems which are cut, chipped and sold as biomass. All skid trails are designated by a licensed professional forester with trees marked for cutting oriented to that trail system. There are benefits from this practice both

environmentally and economically.



Today's logging equipment is large, heavy and most of the work is done with hydraulic equipment. Modern skidders remove several trees or a bunch at one time. Properly locating where they travel is important to minimize soil and residual stand damage. Successful results require a thorough understanding of forestry, soils, wildlife habitat, local and state codes, and a working knowledge of civil and mechanical engineering. The economic benefit: A study by Tom Ebner and Bob Daniels in the fall 2006 issue of the Southeastern Forester compared the results of a professionally marked stand verses one where trees harvested were selected by an equipment operator. The annual growth after harvest was 26% higher in the marked stand than in the equipment operator selected

Temporary bridges are used on all pre-designated brook crossings and skid trails are located to minimize soil disturbance and erosion. Timber harvests are scheduled well in advance so heavy equipment works when the ground is either frozen or dry.



stand. Residual stand quality was also higher in the marked stand. In the marked stand 5.2 % of the remaining trees were low grade compared to 14.2 % in the unmarked stands. Stumpage value prior to the next thinning was \$457 per acre higher in the marked stand. Having your property professionally managed vields better quality results. On well drained coarse textured soils with good timber it is not uncommon to grow about 1 cord per acre per year, more on better sites. The majority of our planned harvests are removing 10-12 cords per acre, or 20-30% of the stand volume. By growing a cord per acre per year and harvesting every 10-12 years Portland and Auburn Water Districts never exceed growth and the forest is managed in a sustainable manner, protecting the soils and growing better quality more valuable timber. Byproducts of this healthy forest are increased water quality, improved aesthetics, and wildlife habitat.

Chip Love - Southern Maine Forestry Services, Inc.

NOTE TO A LOGGER

Hi Logger/Stumpage Buyer,

inches.

I started this back when Client1's lot was still being cut.

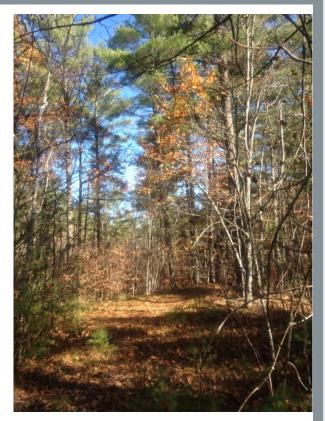
I don't know if you recall but you asked a question about how I choose which trees to cut or leave. I gave you a quick reply, something along the lines of, "I leave the ones I think have the best potential to grow".

That is true but only a partial answer. We have a range of clients. Our clients include cities, where we manage the wildland areas of parks and cemeteries. These areas have heavily used recreational trails and lots of public use. There, retaining big, aesthetic, healthy, safe trees is the priority. Other clients have the main objective of growing trees and producing as much value from the land as possible. In-between clients have more reasons for owning land than I can list. The one thing most have in common is that they are long term investors in their forest.

You've cut Client1's and Client2's, woodlots which are good examples. I've managed Client1's lot for more than 35 years and Client2's lot for 40 years. On both properties I've had more timber cut than existed when I started. Both also have more standing timber today than when I started managing them. And it is better, more valuable timber.

There are lots of things foresters think about when marking trees to be sold and those to be left to grow. We work for our clients, and their goals are the first thing we have to consider. Species, stem quality, maturity, disease, damage and other characteristics of the tree are the scientific part of the decisions. Access for the equipment is considered. Just as important are the economic factors. We try to minimize the growth of low value species. Current demand and prices are factored in, and if prices are at the high end of the range for particular products we may choose mark more stems of species that produce that product. The opposite is also true; if demand is down for a product we may leave more stems of those species than under normal demand. Another factor is what foresters call economic maturity. This is when a tree will no longer grow or improve its value enough to meet a certain rate of return. I generally have in my head 6% as the break point. Using red oak for an example, as I write this a 16" DBH oak is worth about \$50.00. With a good crown, and allowed to grow for 20 more years, it will get up to about 24" in DBH and have a value around \$320.00 at today's prices. If it achieves that, the tree will have earned just below 11% a year. Everything being equal I'd consider an oak that size to have likely reached economic maturity. Left another 20 years and continuing to grow well it will likely be around 28" DBH and have a value around \$655.00. A really nice tree in anyone's book but it value will only increase at a rate of only 3.6%. Do the same calculations for a white pine and it also usually drops below a 6% rate of return somewhere between 24 and 28

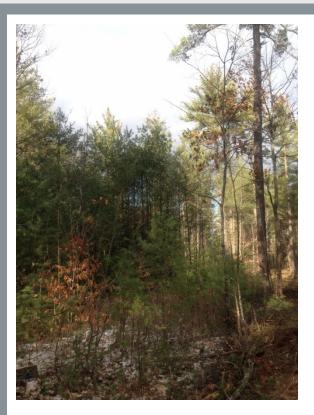
Well managed land is important to our clients and to logging contractors and wood buying mills too. Things have changed greatly since I logged as a kid to put myself through school with a chainsaw and a crawler and then a skidder to pull the wood. Back then if a crew might have had \$20,000 invested in equipment. It didn't take many acres to keep a crew cutting. Today I think most mechanical logging crews have \$2,000,000 invested in equipment. Trucks would be in addition to that. At 30 loads a week they need 1,000 to 1,500 acres or more a year to keep them busy. The investment in land and timber it takes to grow enough wood to keep one medium size crew cutting is somewhere in the \$15,000,000 and \$20,000,000 range. So, someone needs to keep at least \$100,000,000.00 invested in land and timber to keep enough wood growing to grow enough wood to keep your business in wood to cut. For the average saw mill you can add another "o" or a billion dollars invested in land and timber to grow a sustainable supply of logs.



Our job most often is to take the long view and help our clients earn a good return on their investment. We know loggers have to take more of a "today-focused" view to cut and deliver enough wood to pay today's expenses and earn a decent return. In the long run our client's interests and loggers' overlap to a great extant but in the short term sometimes not.

This is how a forester's mind geeks out with 4 days of rain.

Rene



(above: skidder trail 5 years after being cut, left; 3 stages of pines. Both from well managed forests with optimum growth of owners investment and best management of the forest)

SPRAY MANAGEMENT

Our company has always been modeled on a three legged stool including timber sale administration, professional services and technical services. Our goal is to satisfy our needs either by contracting or providing those services ourselves. Pesticides are frequently



the most efficient and cost effective tools for protecting forests from pests, both insect and plants, and controlling species composition in seedling/sapling stands. Southern Maine Forestry has maintained a master pesticide license since the beginning of the company. Historically we utilized herbicides to control competing vegetation when establish plantation or releasing pine regeneration from competing hardwood. Some clients have us spray to maintain their view. More recently controlling native and introduced invasive shrubs and vines has become important. In some places you can hardly turn around without seeing an invasive shrub or vine these days.

The best time to control an invasive plant problem is when the population and the size of the plants are both small. We have a fleet of hand pump and back pack mist blowers and have treated over 100 acres per year with this equipment most years. But there are many places where large areas of forest are infested. For those you need more efficient equipment.

We recently purchased a Kubota utility vehicle to increase our ability to treat these large areas more efficiently. We are excited to put this new tool to work. We gave great consideration in choosing a machine built and outfitted to meet our specific needs. The machine has an enclosed cab for worker protection. It has an aftermarket set of tracks giving it better flotation on soft soils as well as better traction to operate of challenging terrain including skidder trails. The track system also improves the clearance. A winch that can be mounted front or back to self-rescue!

We considered a skidder mounted spray rig but that is a large heavy machine. This machine is small enough to be moved with a pickup truck but large enough to carry a sprayer and 50 gallons of pesticide. Its size gives us the flexibility to move to treat small areas while having the capability to treat large areas efficiently. We have outfitted the Kubota with a mist blower that can spray 30-40 feet. The herbicide can be turned on and off as well as the direction of the sprayer can be controlled from inside the cab.

Many people feel it is impossible to successfully control large infestations of invasive species, not so. We have almost 40 years of experience controlling vegetation. The key to success is utilizing the right chemical at the right time of

the year. Coordinating a treatment to follow a timber harvest will provide optimum access and control. We look forward to solving your vegetation management challenges!

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