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After the Storm: Pioneer Forest Salvage Operations

Terry Cunningham, Pioneer Forest

Editors' Note: Almost a year ago, a "derecho" (inland hurricane) passed through southern Missouri accompanied by tornadoes in some areas. The damage was extensive and covered thousands of acres of private, state and federal timber lands. In this installment of our 'After the Storm' series, we asked Pioneer Forest manager, Terry Cunningham, to give *GH* readers an update on their salvage operations.



A tangled mess awaited loggers after the May 8 storm.

Pioneer Forest is a 140,000-acre private forest located in six Ozark counties. It has been managed for nearly 60 years using uneven-aged forest management, where single-tree selection harvests average every 20 years.

Before the storm, Pioneer Forest had six active timber sales and a planned harvest of 8 million board feet (International ¼-inch) which was approximately one-half of our annual growth. After the storm, we estimated from aerial photos and ground monitoring that we had at least 22,000 acres impacted enough to salvage. The following discussion explains our salvage strategy.

Right before the May 8 storm, markets for forest products were poor and prices were declining. While cross (railroad ties and stave logs (for barrels) were selling well, many sawmills placed quotas on their loggers. Pine markets were

extremely poor to non-existent, and demand for low-quality products (like pallets) was poor to non-existent. Pioneer Forest was selling standing timber for \$170 per thousand board feet (International ¼-inch).

(cont. pg. 7)

Seven Missouri Schools Get Fuels for Schools Grants

Joe Jerek, Missouri Department of Conservation

The Missouri Department of Conservation (MDC), in cooperation with the USDA Forest Service's State & Private Forestry program, recently awarded almost \$6 million in grants to seven public school districts for "Fuels for Schools" projects. The grants are being funded through The American Recovery and Reinvestment Act (ARRA).

"Fuels for Schools funds will help these schools and school districts install and operate boiler systems that use woody biomass from local public and private forest land to heat and/or cool their facilities," explained grant administrator John Tuttle, forestry field programs supervisor for the MDC. "Missourians care about conserving our forests, fish and wildlife. This technology will help these schools reduce dependence on fossil fuels, (cont. pg. 10)

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Plant Buffers May Limit Spread of Antibiotics in Animal Waste

Curt Wohleber, UM Cooperative Media Group

Research by scientists at the University of Missouri Center for Agroforestry suggests that buffer strips of grasses and other plants can trap and break down veterinary antibiotics in manure fertilizers.

Buffer strips have already demonstrated that they can be effective in protecting water quality, controlling erosion and supporting wildlife around crop fields.

“That’s the beauty of it,” said Keith Goyne, assistant professor of environmental soil chemistry in the MU School of Natural Resources. “Vegetative buffers already are a recommended practice for reducing sediment, nutrients and herbicides in surface runoff. Our research is showing another benefit.”

The finding comes amid emerging concerns about the use of veterinary antibiotics in livestock farming. Thirty to 80 percent of any given dose of antibiotic may end up excreted as waste rather than absorbed by the animal, Goyne said. When manure is used to fertilize croplands, antibiotics in the manure-enriched soil may leave the farm via surface runoff and eventually end up in streams, lakes or rivers.

While the concentrations of the antibiotics appear to be too small to pose a direct threat to human health, scientists worry that the presence of these compounds in soil and water may foster the emergence of drug-resistant bacteria that could infect wildlife, livestock and people. The compounds also may harm ecosystems by disrupting communities of soil microbes, which play a crucial role in cycling nutrients and decomposing organic matter.

Earlier studies by MU scientists have shown that grass buffers in croplands can filter herbicides in surface runoff by physically trapping sediment and nurturing microorganisms that break down herbicides.



Buffer strips of grass and trees adjacent to cornfields at MU Greenley Center, Novelty, Mo. Photo by Kristen Veum.

Goyne and colleagues – including assistant professor of forestry Chung-Ho Lin, professor of soil science Steven Anderson, graduate student Bei Chu, and two USDA soil scientists based at MU, Robert Lerch and Robert Kremer – have been conducting laboratory and field tests to see if buffers could play a similar role in filtering antibiotics.

In one study, the researchers collected soil samples from both

croplands and grass and agroforestry buffers at three MU research farms in Missouri – the Horticulture and Agroforestry Research Center in New Franklin, Southwest Center in Mount Vernon, and the Greenley Research Center in Novelty. They exposed the samples to two common veterinary antibiotics, sulfadimethoxine and oxytetracycline.

Comparisons of soil from croplands and buffers revealed that soils from several types of plant buffers were effective at reducing concentrations of the antibiotics.

A report on the research appeared recently in the journal *Agroforestry Systems*.

Related projects include a study at MU’s Bradford Farm near Columbia that looks at the effectiveness of three different buffer designs in reducing antibiotics in surface runoff.

The overall goal is to determine which combinations of plant species and soil types are most effective at filtering and degrading antibiotics, Goyne said. **GH**

The University of Missouri Center for Agroforestry, established in 1998, is one of the world’s leading centers contributing to the science underlying agroforestry. Find the Center online at <http://www.centerforagroforestry.org>

Property Lines: Do You Know Where Yours Are?

R. Scott Brundage, Missouri Consulting Forester

Being a professional forester for 51 years and a consulting forester for the last 30 years, I have been amazed to find that a majority of woodland owners do not know exactly what land they own. Most owners know where some of the corners are and some of the property lines, particularly if there is a fence, but do not know for sure where all the lines are.

If you are going to manage your woodlands properly, you need to know where the property lines are. Why? If you are going to have a timber sale, the forester has to know where the property line is so no trees are marked and cut on the neighbor's property. Missouri State Statutes have a triple damage section concerning trespass. Therefore, as a consulting forester, if I mark for sale trees on your neighbor's land and they are sold, I am liable for triple damages. If a landowner does not know or have marked or fenced his property lines, I stay away 100 or more feet from where he thinks the line is, or I just will not take the risk and turn down the sale job. The same holds true for a Timber Stand Improvement (TSI) crew who will kill undesirable trees and vines to release and let grow the valuable desirable crop trees. If the woodland owner puts in access roads, waterlines, skid trails, log yarding area, for example, he should/must know where the property lines are.

When a forest landowner calls and asks me to help him, we set a time and place to meet. When I arrive on the job, I always have an up-to-date Plat Sheet of the area, an aerial photo, an aerial photo with topographic lines and another aerial photo of the property with the soils map superimposed on the landowner's property. All this is available from a computer except the Plat Sheet. I encourage landowners to collect the same "tools" for their property so that they can become more familiar with it.

As mentioned before, the forest landowner must know exactly where their property lines and corners

Corner fence posts are good starting points for re-establishing boundary lines.



are. Usually, there are two choices to solve the problem. One is cheap and the other very expensive. I always pick the cheap alternative whenever possible.

The following is the fun and cheap way to relocate the old marked property lines. Remember, for many, many years, the land was owned by several to many previous owners. Each of those owners had to know where the property lines and corners are. In many cases, there was a property line fence agreed to by neighbors or surveyed in by a surveyor. If you know where and how to look, you can often find evidence of the old line. I always start by going to the County Courthouse and visiting the Assessor's Office. This office should have a large aerial photo map showing your property. The property lines are located on the map, and this is what your land taxes are based on. These maps are very accurate – land taxes are based on a legal description and that data is transferred to the aerial photo. These aerial photo maps are inexpensive; I usually pay \$5 to \$10 per photo.

With the latest aerial photo map, a copy of your legal description, a good compass, and a roll or two of fluorescent marking tape, you and your wife, or kids, or grandkids, are ready to try to re-establish your property lines. If you can get the neighbor adjacent to the problem area to help, so much the better. First try to find a corner or starting point. Usually there is something visible, i.e., corner fence posts where fences come together at the edge of forest and fields. Often an iron surveyor's rod driven into the corner is visible. If an old fence was present, start following your compass so you know approximately where the line is and look

for old fence posts, wire on the ground, pieces of wire growing out of trees along the line, etc. If you follow the compass line and check the aerial photo to often for confirmation (roads, fields, streams, buildings, power line or pipeline rights of way, for instance) you can often follow exactly along the old fence line. Kids love to help and go wild each time they find a wire, or some other piece of the puzzle. (cont. pg. 4)

Property Lines (cont. from page 3)

When you find any evidence of the old line, flag it with a piece of fluorescent flagging tape. Often when you run such a line from corner to corner, you can look back and see a perfectly straight line along the old fence line. The next step is to buy 6- to 6 1/2-foot steel "T" fence posts, a fence post driver (works much better and is safer than a sledge hammer). Use an ATV to carry the posts, fluorescent flagging tape and fluorescent ball caps. Begin at the property corner and drive in a steel fence post next to the surveyor's iron or corner post. I like to use three people and then start down the old, poorly marked line and drive in a new steel fence post every 100 feet. If it is more than 100 feet between the flagging tapes marking the discovered old line (say 300 ft.), one person goes ahead 300 feet and places a fluorescent ballcap on the old flagged area. Another person takes two fence posts and the driver and goes down the old line 100 feet. The third person puts his fluorescent cap on the last steel post.

Now you can motion to or tell the middle person exactly where to put in the next steel post. The middle man then moves on another 100 feet and repeats the last step. This method guarantees a perfectly straight line where the old fence line existed. This method costs very little and is much cheaper than a survey. Do not use small, cheap electric fence posts; they can easily be pulled out, and you need a permanent marked line.

What do you do if you find or know your corners, but there is no old fence or any evidence of a property line? If you must know exactly to build a fence or something else, you must hire a surveyor. Only a surveyor can legally establish a property/boundary line. Remember, you can re-establish a line like the first example, but a surveyor is needed to establish an exact corner or property line. If you must have a property line surveyed, check with your neighbor because he/she will benefit just as much as you will. The neighbor should pay his half of the survey cost.

While I am at this point, let me mention something which can save you thousands of dollars, or cost you thousands! Some of my clients have just bought their property and have had it surveyed. Great! I go out with them to determine what quality timber they bought and find the corners all staked and flagged. The lines are seldom marked through the woods, and we are now back to the first of this article. If the property/boundary lines are marked by the surveyor, there is a surveyor stake and flag every 200 to 500 or more feet and a pin or iron next to the stake. In this situation, I

tell the landowner to immediately take steel fence posts and place them next to the surveyor stake and/or pin. As soon as the leaves fall and you can see through the woods, finish marking the line with a steel "T" post every 100 feet. Can you guess how many people follow this advice? Very few. If the line is not marked as suggested, in a year or two, or three the surveyor flagging tape is gone, the stake has rotted and fallen over or knocked over by a deer or a neighbor kid. Bottom line is, you spent thousands on a survey, and because you did not follow up their work, your money is gone, and you are back to square one. Few surveyors tell a landowner the above information.

There is a third option that is very cheap and could serve your immediate needs. You have found your corners, but have no line and you want to have a timber sale. Take a compass and fluorescent flagging tape and start at a known property corner. Carefully shoot as straight a line as possible to the other known corner. As you proceed, liberally flag the line so it will be easy to find on your return. Practically every time I do this the flagged, new line is off or misses the other property line corner post or iron. Let's say the line ends up 20 feet off from the corner. I then turn around and follow the line back to where I started at the first corner post. As I go, I move the flagging tape to near where I think the correct, yet invisible property or boundary line lies. I now have a flagged property line that has to be very close to the real line. This type of line serves the purpose of marking a timber sale or doing TSI, etc., but is not the real (exact) property line. Only a surveyor can determine exact lines. Obviously, the best time to do such work is the dormant season when the leaves are off the trees and the understory vegetation.

In Missouri, our legislature passed the "Purple Paint Law" in the mid-1990s. Purple paint every 100 feet on boundary line trees or fence posts means NO TRESPASSING, just as a green light means go and a red light means stop. Each year this law saves thousands of often the best trees (butt logs) from being ruined by nailing NO TRESPASSING signs to trees. Finish your property/boundary line reestablishment job by painting the top 8 to 12 inches of the fence posts and trees exactly on the line with purple paint. This helps keep trespassers off your land and invited hunters and guests from accidentally getting off your property. **GH**

***Editors' Note:** This is an abbreviated version; for full article, contact Brundage at brundage@socket.net.*

Preserving the Family Forest: Liquidity, Liquidity, Liquidity

David Watson, Certified Financial Planner

In the last issue of Green Horizons, Kirk detailed the issues that were present in the “Dogwood Case Study.” In that real life situation, the current landowner passed away prior to completing his succession plans and left a few problems for his heirs, regarding the transition of the family tree farm to the next generation. One of the issues that the family faced was the need for additional liquidity. The need for liquid assets to pay for estate settlement expenses is not an uncommon situation. In fact, one of the obstacles that has thwarted many farm and timberland owners for years, is the need for liquid cash to pay for estate taxes. In many cases, the family forestland property had to be sold by the heirs to generate the cash to pay the estate taxes – a real tragedy!

Currently, there is no estate tax on transfers occurring in 2010 due to the “sun-setting” of the prior law. (See *Death Tax Update*, page 6.) Many tax experts do expect Congress to reinstate the estate tax, or some form of it, at some point in the future. However, regardless of the future of the estate tax in this country, there are numerous other needs for liquid cash in the succession planning process for timberland owners:

- *To pay off remaining debts. If the woodland will pass with any significant debts attached to it, heirs may find it difficult to pay-off the note obligations. Liquid cash could increase the likelihood that the property will be retained in the family.*
- *To provide operating capital for the continued operation of the timberland/tree farm. New heirs may not have the expertise, or time, to operate the tree farm, or manage the woodland, in the same manner as the previous generation. Sufficient operating capital will allow the heirs to pay property taxes and operating expenses (or hire someone to perform the necessary maintenance) so that the woodland can be retained in the family for the long term.*
- *To “equalize” the estate. Often, some heirs are not interested in owning/operating the family woodland. It would be unwise to try to force them into such a long-term commitment if their heart is not in it. Other assets, such as liquid cash, can be given to those heirs, while the family forest can be transferred to others who have the interest and ability to continue the legacy.*
- *To allow for the future expansion of the family forestland. Sometimes the threats to the family property come from neighboring farms. A pool of liquid cash can be*

used to acquire adjoining properties when they become available. This would allow motivated heirs to correct poor management decisions on neighboring properties, or avoid sub-division and/or development of adjoining lands.

- *To purchase the interests of any co-owners. If a given family-owned property is jointly owned (i.e. with other relatives), life insurance payable to the heirs of the deceased would allow the funds necessary to buy the other interests in the property.*

For those families interested in preserving the family forestland, there are several potential sources of liquid cash:

- *Savings – if available in the estate*
- *Liquidation of investment assets (i.e. stocks and bonds) – although these assets are often already “spoken for.” These assets are frequently needed to provide income for living expenses of a spouse or other heirs. If not, they could be sold to generate cash for the forestland planning.*
- *Borrowing – caution should be used in depending on this strategy. The uncertainties of the credit markets, interest rates, and the willingness of lenders to lend, makes this option unpredictable.*
- *Life insurance proceeds – this can be an attractive option if available, since the proceeds received are generally tax free and the cost (the cumulative premiums over time) are often less than the death benefit. There are two sources of life insurance – existing policies on the landowner’s life, and a new policy taken out on the landowner’s life.*

Many individuals have purchased life insurance for other purposes (i.e. mortgage payoff, college funding, or income replacement), during the course of their lives. Landowners should consider this potential need for liquidity before surrendering existing life insurance contracts. It may be smart to “recycle” these older contracts for use in the family forestland succession planning. If a new policy is required, care should be taken to structure that policy for the maximum tax impact. For example, the use of a life insurance trust to apply for, and hold, the life insurance is often recommended. A trust allows the insurance to be held by a third party, so the estate taxes are not increased by the death benefit. With this strategy, soliciting the advice of the legal

(cont. pg. 8)

5th Grade Arbor Day Poster Contest - Missouri's Winner

Mariah Harper, a fifth grade student in Sweet Springs, is the Missouri state winner in the 2010 Arbor Day National Poster Contest.

Harper's poster was selected by a panel of artists and members of the Missouri Community Forestry Council. The contest, sponsored nationally by the National Arbor Day Foundation, asked fifth-grade students to create a poster reflecting the theme "Trees are Terrific...and Energy Wise." More than 1,500 fifth-grade students from 62 Missouri schools participated.

As the state winner, Harper will receive a \$50 savings bond from Forest ReLeaf of Missouri, a framed certificate from the Missouri Community Forestry Council, and a commemorative tree will be planted in her community by the Missouri Department of Conservation. (cont. pg. 7)



Death Tax Update

from the Forest Landowners Association

By now, almost everyone has heard that the federal estate tax was eliminated as of Jan. 1, 2010. Although tax repeal usually is a welcome development, the 2010 estate tax repeal is only temporary, and the full tax is scheduled to be reinstated in 2011 at even higher effective rates. Moreover, since many Wills are drafted with potential taxes in mind, this temporary repeal has and will lead to a great deal of confusion and consternation among clients and their advisors. Furthermore, do not expect the repeal to last. Most prognosticators believe that Congress will act this year, probably with retroactive effect, to reinstate the estate tax as of Jan. 1.

So, what should you do if you feel that your estate plan may be affected by the temporary repeal? First, do not panic. Instead, review your estate planning documents with a few guidelines in mind to determine if you need to take action now.

Remember that, regardless of changes in the law, you should review your Will and other estate planning documents periodically to determine if modifications are necessary as a result of changes in your personal circumstances (e.g., marriage, divorce, death of a spouse, a significant increase or decrease in net worth, birth of a child or grandchild, etc.). Now would be a good time for you to undertake such a periodic review and to contact your financial planner and lawyer if you have any questions or concerns.

For unmarried individuals, or for married individuals either without children or with Wills that leave all assets to a surviving spouse, the temporary repeal in the estate tax probably has no impact on your overall testamentary plan. Of course, every individual's circumstances are unique, so if you think your Will or family situation is atypical, then you should contact your financial planner to determine if further review and modification of your estate plan is warranted.

For married individuals with children and with tax-motivated Wills or revocable trusts (i.e., Wills that leave the estate tax exemption amount to a family trust and the balance to a surviving spouse), the temporary repeal probably justifies some action on your part. This is because the temporary repeal may affect the dispositive provisions of your Will, thus potentially altering the amount you leave to your spouse and your children if you die in 2010 and the law remains unchanged. Fortunately, though, a relatively simple, inexpensive Codicil to your Will may be all that is necessary to preserve the benefits you intended for your spouse and children when your Will originally was prepared. Further, this Codicil may be drafted so that it only applies during 2010 and only if the estate tax is not reinstated. Therefore, if new law is passed in 2010, or if the estate tax is reinstated in 2011 as scheduled under current law, your existing Will and estate plan remains intact and no further action may be required on your part.

Pioneer Forest Storm Salvage (cont. from front page)

We estimated there were 25 million board feet of timber on the ground and we had a three-year window of time to salvage it. Immediately, we suspended harvesting of standing timber and moved our existing six contractors into salvage timber operations.

With poor markets, we knew that outside loggers would not be moving into the area, and we would instead be competing with other landowners for logging services. So, we immediately set our stumpage prices at \$125 per thousand board feet, approximately half of the price for logs delivered to the mill. With pulpwood or blocking (small or defective trees) selling for \$26-\$29 per ton delivered to yard, we set our stumpage price at \$5 per ton for this product. All loads were to be weighed or scaled. Our pricing and recruiting efforts paid off in that the number of active sales on Pioneer Forest increased from six to 24 within weeks.

As of March 1, 2010, we have salvaged over 17 million board feet and estimate to be finished in mid-summer of 2010.



Above: Even young trees with their ability to bend were no match for Mother Nature. Right: The pine trees remaining in this formerly mixed oak-pine stand will allow this acre of land to remain in forest cover.



Things We Have Learned

Because it was a straight line wind, many trees have roots still connected on one side even though they are lying on the ground. As a result, they are not declining as rapidly as we expected and have remained salvageable for a longer period of time.

Many of the Ozark loggers were not set-up to utilize the smaller trees before the storm. With this material already down and in the way they were forced into marketing it. Many will continue to use this market after salvage is completed.

Sawmills had standing timber purchased at the time of the storm at higher prices. They left these sales and purchased salvage timber at lower prices to stay in business during a period of declining markets.

Additional impacts to the forest will unfold in time and will be monitored by our continuous forest inventory (CFI). Forest growth, forest health, and forest composition will most certainly be impacted by the Storm of 2009 and we will share this information as events unfold. **GH**

Arbor Day Poster Contest (cont. from page 6)

“Students like Mariah have learned about the importance of trees to our environment and how they can make a difference” says Justine Gartner, Forestry Program Supervisor. “The poster contest is a fun yet educational way to help students understand the value that trees have in the environment. We realize that an awareness of the relationship of trees and our environment begins at a young age. The Missouri Department of Conservation helps promote many conservation education

programs, like the recognition of Arbor Day and the poster competition.”

If you would like more information about the 5th Grade Arbor Day Poster Contest, please visit the National Arbor Day Foundation’s website at www.arborday.org. **GH**

The Toolbox

Hank Stelzer, MU Forestry Extension

Just like home repairs, certain woodland jobs can be accomplished quickly and efficiently if the right tool is used. In this installment of 'The Toolbox' let's take a look at scale sticks, diameter tapes and increment borers.

Tree and Log Scale Sticks

If you want to determine the volume of timber in a tree or log, this tool is a must-have. It is similar to a wooden yardstick, with various scales marked on it that allow you to measure the diameter and merchantable height in trees and logs, and determine the volume of wood. Tree and log scale sticks can be used to estimate volume using the Doyle Scale or International 1/4 Scale (the most commonly used log rules in Missouri). The sticks are easy to use and come with directions. They are inexpensive (less than \$15) and if you live in Missouri they're free! All you have to do is contact your local MDC Resource Forester (<http://www.mdc.mo.gov/forest/contacts/>) or private consulting forester (<http://www.missouriforesters.com/>). Note the consulting foresters' scale stick uses the Doyle Scale while the MDC scale sticks use the International 1/4.

Diameter Tapes

If you want to measure the diameter of a tree more accurately than can be accomplished with a tree and log scale stick, use a diameter tape; more commonly called a D-tape.

The tape is wrapped around the tree, and the diameter is read directly from it. D-tapes are used annually when measuring crop trees to determine their growth rate or when measuring a tree's diameter to very accurately determine timber volume. The latter scenario is especially important when the tree is a veneer-grade black walnut! D-tapes are an indispensable tool for a forester and can be purchased from forestry supply firms for \$35-40.

Increment Borers

Borers are definitely a forestry specialty item. They are used to cut and extract a small, round wooden dowel called an increment core from a tree. If you take a core that extends all the way to the center of the tree, you can count the growth rings and determine the tree's age and its historic growth pattern. A core taken only one to two inches deep can be used to determine the width of the last several growth rings, thus telling you how fast the tree is growing. Tree age and its growth rate are very important pieces of information for the forester. An increment borer consists of an auger bit, a handle, and an extractor tray that slips into the hollow auger bit after you have drilled into the tree. Increment borers come in a variety of sizes and prices range from \$175 to more than \$300. **GH**

In the next issue, we will take a look at hatchets and squirt bottles, chainsaws and herbicides.

Preserving the Family Forest (cont. from page 5)

and financial advisors on the succession planning team is highly recommended.

We have often heard the phrase "cash in king." This is especially true for families trying to successfully pass a large and complex asset, like a piece of forestland, to the next generation. Access to an ample amount of cash can often allow the forestland to be transferred, managed properly, and kept in the family for future generations. We remind our clients of a simple truth – "cash will be as important to maintaining a tree farm after the landowner is gone, as it is while he (or she) is alive... probably more important." **GH**

Material discussed herewith is meant for general illustration and/or informational purposes only, please note that

individual situations can vary. This information is not intended to be a substitute for specific individual tax, legal or investment planning advice. Please consult a qualified professional for legal advice/services.

David Watson is a financial advisor specializing in working with rural landowners, sportsmen and conservation-minded families.

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Cedar Management Study Underway in SW Missouri

Frances Main, Missouri Department of Conservation

“What do you mean I have more money in my cedar than in my oaks?” That is a common response when a landowner has asked for help with a mixed oak sale and I come across a beautiful stand of eastern redcedar (*Juniperus virginiana*). As a forester in southwest Missouri, I can see the economic value of those high-density, self-pruned, no-taper cedar stands as well as the loggers who covet them. The question has always been how to harvest that stand while perpetuating its characteristics so the landowner will have a future sale from the same tall, straight stand of cedar he started with.

David Gwaze, silviculturalist with the Missouri Department of Conservation, has joined me in the quest to answer that question. A study has been designed to investigate the impacts of forest management on redcedar regeneration.



MDC foresters seek to determine how to best manage cedar stands so a landowner will have a future sale from the same tall, straight, stand of cedar he or she started with.

To help determine how much of the stand needs to be harvested at any one time to ensure recruitment of similar high quality trees, the study will use three silvicultural treatments: 1) clear cut (half the area will be replanted and half left to regenerate naturally; 2) thinning down to a moderate basal area retention; and 3) thinning to a light basal area retention. Of course, the ever present “control plot” also will be in the study.

Each plot measures 0.2 acres (a circular plot with a 52.7-foot radius) and all treatments are replicated five times making the entire study site about 5 acres. Dormant season data has been collected, and post-treatment data (survival, density, height and diameter) will be collected in years 1, 3, 5, and then every 5th year for 15 years.

We look forward to more insight into the sustainable management of relatively pure stands of eastern redcedar. **GH**

The Bid Box

(All volumes reported in Doyle Scale)

It's Baaaack... The Bid Box Returns!

Timber markets are beginning to show some signs of life. The 'experts' are debating whether this is the beginning of a sustained recovery or a simple short-term supply/demand response. At any rate, one fact remains... in strong or soft markets it always pays to seek competitive bids for your timber!

This timber was marked in February 2009, but was not put on the market until January 2010 because of the very low demand for timber. FYI, this consulting forester did not complete even one timber sale in 2009.

Shelby County

- 50 acres
- 974 mixed hardwoods (71 black walnut, 903 other hardwood species)
- Estimated volumes: black walnut - 11,050 bd. ft.; other hardwoods - 155,900 bd. ft.
- Forester valued the sale at \$26,000 to \$36,000

Nine bids

- o \$32,661.81 (accepted)
- o \$30,211
- o \$26,500
- o \$22,500
- o \$19,875
- o \$16,000
- o \$15,080
- o \$13,309
- o \$10,000

- **Return: \$653 per acre**

Do you have a timber sale for The Bid Box? We would love to hear from you!

Fuels for Schools Grants (cont. from front page)

reduce energy costs, create or retain local jobs and support healthy forests and the state's forest industry."

Tuttle noted that conservation pays by enriching our economy and quality of life. He gave the example of Missouri's forest products industry, which generates more than \$5 billion in economic activity each year and supports more than 30,000 jobs.

"The Fuels for Schools projects will help create a stronger market for woody material historically considered waste, such as unhealthy or small-diameter trees and wood debris left from logging," he added. "These forest products currently have little or no commercial value so the Fuels for Schools projects can provide micro-markets for wood chips produced from them."

Tuttle explained the projects also will support forest health, a key part of the MDC's mission, by making it economical to thin overcrowded forest stands and remove diseased and insect-infested trees.

He added that the projects also can serve as examples to other schools, businesses and government agencies interested in wood-fueled energy systems.

Tuttle said that similar efforts in other states have proved successful. Missouri's projects will be based on the Fuels for Schools and Beyond program. This partnership between the USDA Forest Service and several western states promotes the use of forest biomass waste for heating, cooling and power in public and private buildings. According to the Fuels for Schools and Beyond website (www.fuelsforschools.info), fuel cost savings for projects that have replaced natural gas boiler systems have averaged at 25 percent while facilities replacing fuel oil systems have enjoyed savings of 50-75 percent.

The MDC mailed grant solicitations to public schools in the state's most heavily forested counties: Barry, Bollinger, Butler, Carter, Crawford, Dent, Douglas, Howell, Iron, Madison, Oregon, Ozark, Perry, Phelps, Pulaski, Reynolds, Ripley, Shannon, Stone, Taney, Texas, Washington, Wayne and Wright.

A multi-agency selection committee reviewed grant applications. Committee partners are MDC, USDA Forest Service/Mark Twain National Forest, Top of the Ozarks Resource Conservation and Development Council, Big Springs Resource Conservation and Development Council, Missouri Department of Natural Resources Energy Division, Missouri Forest Products Association and the University of Missouri Extension-Forestry.

The committee selected grant recipients based on economic needs, dependence on the forest products industry, project feasibility and the ability to implement the project quickly, proximity to public and private forestland and partnerships with other public entities that could benefit from the biomass energy system. **GH**

Grant recipients and amounts are:

Southern Reynolds County R-II School District:
\$970,000

Perry County 32 School District: \$970,000

Steelville R-III School District (Crawford County):
\$900,000

Rolla 31 School District Junior High Building (Phelps County): \$760,000

Gainesville R-V School District (Ozark County):
\$970,000

Eminence R-I Elementary (Shannon County):
\$350,000

Mountain View-Birch Tree Liberty High School (Howell County): \$850,000

THE STORK HAS (FINALLY) LANDED!

Co-editor Michelle Hall and husband Derek welcomed their second son, Konrad, on March 22. (This might be the reason your Spring **Green Horizons** newsletter is a little late, but a pretty good reason, we think!) Everyone, including big brother Quentin, is enjoying the little guy and actually getting some sleep, so far.



The Back Page

eXtension 'Soft Launches' Wood Energy

Do you want to understand how the properties of woody biomass affect how it may be converted into useful forms of energy? How about learning new paradigms in harvesting woody biomass for energy? Or what conditions a wood energy facility must meet to be successful? Answers to these and other wood-related energy questions can now be found at eXtension's Wood Energy Community of Practice (CoP), <http://www.extension.org/wood%20energy>

Forestry experts from universities around the country have developed the Wood Energy CoP to be your one-stop shop for science-based information. The site was 'soft-launched' March 1, meaning that we are still tweaking some facets of the site as we receive feedback from users. So, if you like what you see, have a concern as to something presented, or

wish to see something that is not there, we would love to hear from you. Just click on the, "How are We Doing?" link at the bottom of the page to provide us with your feedback!

GH Online: Find *Green Horizons* on the Internet at <http://agebb.missouri.edu/agforest/index.htm> or <http://snr.missouri.edu/forestry/extension/>

Deadlines for Newsletter Submissions

Spring Issue:	March 15
Summer Issue:	June 15
Fall Issue:	September 15
Winter Issue:	December 15

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UNIVERSITY OF MISSOURI Extension

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Calendar of Events

April 17, 2010: Missouri Chapter of the Walnut Council spring tour, Hawkpoint, Mo. The Missouri Chapter of the Walnut Council will hold its spring tour April 17 north of Hawkpoint, Mo., in Lincoln County on the Don Bohler tree farm and two neighboring properties across the road. Site suitability will be the main emphasis as it relates to black walnut, white oak and red oak. Timber stand improvement has been done on Bohler's while discussions and procedures will be held on the other properties where TSI has not been conducted. Current and projected tree values will be made on maturing walnut and oaks. More details on the schedule, agenda and directions are available by contacting H. Palm (palmh@missouri.edu or 573-228-0898).

July 18-21, 2010: Annual Meeting of the Northern Nut Growers Association, Wooster, Ohio. The 101st Annual Meeting of the Northern Nut Growers Association will be held at the College of Wooster in Wooster, Ohio. The program will include Show and Tell session, technical presentations, field tours and banquet. See details at www.nutgrowing.org or request from icomserve@aol.com

July 25-28, 2010: Annual Meeting of the Walnut Council, Grand Rapids, Mich. The 40th Annual Meeting of the Walnut Council will be held in Grand Rapids, Mich. For details, contact Liz Jackson, at Jackson@purdue.edu or 765-583-3501; or Roger Corwin at roger-corwin@comcast.net or 616-452-9188. Details also will be available in late spring at www.walnutcouncil.org

Sept. 22-25, 2010: Annual Black Walnut Festival, Stockton, Mo. The 50th Annual Black Walnut Festival will be held in Stockton, Mo. Activities include a carnival, parade, crafts, food and games. For more information, contact Debbie Whisler at 816-229-8558 or 816-228-6322; the Stockton Chamber of Commerce at 417-276-5213; or Hammons Products Company at 888-4bwnuts. The Stockton Chamber of Commerce's Web site also will have festival information; go to www.stocktonmochamber.com

Oct. 1-2, 2010: Annual Brunswick Pecan Festival, Brunswick, Mo. The 30th Annual Brunswick Pecan Festival will be held in Brunswick, Mo. For more information, contact Tammy Taylor at 660-548-3340 or go to www.brunswickmo.com

Oct. 16, 2010: Missouri Chestnut Roast, New Franklin, Mo. The Eighth Annual Missouri Chestnut Roast will be held in New Franklin, Mo. Details can be found at www.centerforagroforestry.org; or contact Julie Rhoads at Rhoadsj@missouri.edu or 573-882-3234.