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TREE FARM BULLETIN

CRITICAL ZONE SCIENCE...SAY WHAT?

By Carl Struck, NM Tree Farm #2
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My partner Johanne and I get a number of alumni magazines delivered to our home with mildly to moderately interesting articles demonstrating why you might want to make a charitable contribution to your alma mater. Usually I skim through these quickly and deposit in the recycle pile. One recent article however caught my eye and, after reading it twice, I thought it worth sharing at least the salient points with my fellow tree farmers and foresters. The article "How Critical Zone Science Unearths Secrets" can be found at <http://dukemagazine.duke.edu/article/how-critical-zone-science-unearths-secrets> and actually comes from our son's alma mater Duke University. The reason I would like to bring your attention to this article is that Tree Farmers are unlikely to come across this in our normal reading material.

The tag line of the title reads "The new cross-disciplinary field of study concerns itself with the living skin of the Earth" and was authored by Scott Huler October 24, 2018. The story concerns two Duke alums, Dan Richter Ph.D. '80 and Will Cook '88, who are at the forefront of "scientists who practice biology, pedology (the science of soil), ecology, hydrology, geology, geochemistry, geophysics, biogeochemistry, geomorphology, climatology, and even-in some ways, especially-anthropology," in a cross-disciplinary, holistic approach best described as an area of study from "treetops to bedrock...the zone critical to all the life on Earth."

O.K., I admit it...at this point in the article I was hooked! Anthropology...really? Having been a tree farmer in a ponderosa pine forest in Northern New Mexico for over 25 years, not to mention an anthropology major in college, I've come to appreciate the importance of our forest soils and how the role of forest duff, top soil and nutrient recycling is critical to the growth and well being of all living plants and animals occupying this niche. Like most tree farmers, I started out spending a lot of time walking through the forest looking up and cogitating on how I could improve, from the ground up, the health of this acreage I was fortunate enough to inhabit. I was thinking mostly about the trees, grasses and shrubs as well as the wildlife they support. After many years of observation and self-education, I eventually found myself spending a great deal more of my time looking down and carefully examining the role, health and the human history, that's the anthropology part, of the soil our trees were rooted in. It wasn't long before I came to realize that our forest soils had suffered a great deal since the initial clear cutting, second growth

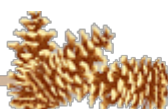
cutting and over-grazing, followed by soil loss through erosion, of the late 19th and early 20th century and that not much had been done to mitigate this condition in the last two or three generations of forest management on our property. It didn't seem to me that tree farmers were being given much education or guidance for the long term well being of the soils their trees depended on and that our "best practices" recommendations were a little short on how important it was and is for us to support the complex soil making process going on beneath our boots. To discover that some of the latest science refers to forest soils as the "critical zone of the critical zone" was exciting!

This article, even though it superficially concerns a forest in the Piedmont region of South Carolina, explains how forestry in general has spent more time, perhaps understandably, above ground than below. As Richter explains it "(t)he twentieth century was a time of enormous growth in scientific disciplines, but also a time in which those disciplines became siloed. Geologists had their concerns, soil scientists had theirs, biologists had theirs. Even ecologists, working to connect things into a system, seemed to leave out much that happened when you got below the surface of the soil." Huler writes "critical zone scientists are looking ever more closely at the soil itself. The soil has centuries of land-use habits in its very composition. Critical zone scientists help it tell its story, when that story may help save our planet."

Heady stuff to be sure but I think in our present global climate change atmosphere, this sort of approach might be just what we need to readjust our perspective and do a little deep thinking about the complex science going on beneath the surface and how our actions above ground might help or harm the very processes our future may depend on. This article gives us laypeople, especially us forest dwelling laypeople, a descriptive taste of the sort of analysis these scientists are involved in trying to quantify these processes. After reading this article I guarantee you will never walk your land again oblivious to what is going on from the duff down. I urge you to visit the WEB address referenced above to read the article yourself but here's a little science-speak taste to maybe peak your interest. "Soil microbes, like all living things, breathe; the soil gas the team samples contains the carbon they exhale. Different sources of carbon have different isotopic signatures"..."(f)or example, one isotopic signature comes from what soil scientists call bomb carbon. Nuclear-bomb tests taking place from 1945 through the early 1960s released radioactive isotopes of carbon. All over the world, plants photosynthesized that carbon, moving it deep into the soil through roots, building it up in leaf litter. Within the soil, microbes release that bomb carbon in their respiration."

Holy carbon sequestration, Batman!!!! Yeh, you can be sure that also includes our innocent looking soils here in New Mexico... home of the atomic bomb after all! I know, I know this might sound like a lot of, maybe too much of, all this science stuff...after all, some people think scientists pull this "stuff" out of their...well, thin air, but as you read Huler describing to what ends these scientists go to collect and quantize the data, necessary to understand the forest soil dynamic you may, like me, come to the conclusion that there is more we can and must do to help our forests become more resilient...especially in the face of global climate change.

This article is about a six-page read, so settle down in front of a nice crackling fire, open the link above and get acquainted with a different way of looking at our forests. Critical zone science...maybe this is the lens tree farmers need to start using as we approach forest management going forward.





United States Department of Agriculture

Tax Tips for Forest Landowners for the 2018 Tax Year

by Dr. Linda Wang, National Timber Tax Specialist, USDA Forest Service

The Federal income tax provisions that apply to timber have changed for the 2018 tax year from the December 2017 new tax legislation. To help family timber owners, foresters, and their tax preparers in filing their 2018 tax returns, this bulletin provides income tax guidance that is current as of September 30, 2018.

Timber Property Types

It's important to recognize that the tax treatments vary significantly for different types of properties. You must make a determination on your property type each year. Your timber may be classified under one of the following three types: (1) *personal-use* property (mainly for personal enjoyment vs. for profit); (2) an *investment* property (mainly for generating profit from growing timber or asset appreciation); or (3) a *business* property (with regular, active, and continuous profit-making timber activities to qualify). Businesses are subject to passive loss rules (i.e., losses from a passive business cannot be used to offset nonpassive income such as wages). In other words, deductions from a passive business may be denied for the year (when there's no income of the passive source). A passive activity is one in which you do not materially participate, mainly based on the number of hours you participate in the business. Also, your timber may be considered a *hobby* if it is not engaged for profit. Losses from hobby activities are generally not deductible.

Example 1: Mr. Henderson owns a 57-acre tree farm where he manages timber primarily for profit. He reports his timber as an investment.

Deductions of Timber Expenses and Taxes

For timber owned as a business, if you are "materially participating" in the business, the timber expenses are fully deductible on Schedule C of Form 1040. These expenses may include fees paid for forester, attorney, or accountant, precommercial thinning, firebreak maintenance, overnight travel, vegetation-competition control, insects, disease, and fire control, and depreciation from equipment used. For timber held as an investment, timber expenses (along with certain other "miscellaneous itemized deductions") are no longer deductible, starting in 2018 through 2025 (Public Law 115-97).

Example 2: Ms. Smith owns a 50-acre property as an investment. Her 2018 timber expenses of \$1,000 is not deductible.

State and local property taxes on timber investment property are deductible on Schedule A. Alternatively, you may elect to treat these taxes as part of the timber costs (i.e., as "carrying charges") and deduct them upon timber sales. Property taxes paid in a trade or business are deductible on Schedule C. Severance and yield

taxes paid are deductible from the timber harvests.

Timber Sales and Reporting

To be eligible for the beneficial long-term capital gains, you must own the standing timber held as an investment for more than 1 year before the sale (inherited timber is automatically considered long-term). Timber sale expenses are deductible from the sale proceeds. Report the sale of standing investment timber on Form 8949 and Schedule D.

Example 3: Ms. Johnson sold hardwood standing timber she inherited 10 years ago for \$12,000. The timber is an investment for her. Assuming the selling expense was \$500 and the timber depletion (see topic below) was \$4,000, she will report \$7,500 (\$12,000 - \$4,000 - \$500) as a long-term capital gain on Form 8949 and Schedule D.

Example 4: Assuming the same facts as above in Example 3, except that the taxpayer is classified as timber business. In this case, the gain of \$7,500 would qualify as a capital gain.

However, if the business taxpayer cut his timber (or had "a contract right to cut" the timber) to sell or to use in his trade or business, different rules apply. Under this sales method, capital gain treatments (Sec. 1231 gain) are available when the taxpayer has owned such timber for more than 1 year and elects to treat the cutting as a sale. The election is made on Form T, Part II.

Example 5: Mr. Jones is a logger and manages his Douglas fir timber as a business. He cut his timber himself and delivered and sold the logs to a mill for \$20,000. Assuming the fair market value (FMV) of the standing timber on January 1, 2018, was \$15,000, and his timber depletion (see below) was \$2,000, under Sec. 631(a) election, gains of \$13,000 (\$15,000 - \$2,000) from standing timber are capital gains, and the \$1,000 (\$20,000 - \$15,000 - \$4,000 cut-n-haul cost) from the sale of felled timber is ordinary income.

Timber Basis and Depletion Deduction

Generally your timber basis is the amount you paid for it (if you purchased the property). For inherited property, it is the timber's fair market value on the decedent's date of death.

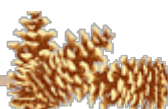
Example 6 (a): Six years ago, Mr. Forrest inherited a tract of timberland. A professional appraisal had retroactively established the timber basis as of the date of death, which consisted of \$16,000 for 80 thousand board feet (MBF) of pine sawtimber and \$5,000 for 250 cords of pine pulpwood.

Timber depletion is a deduction against the timber basis upon timber sale.

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Example 6(b): Mr. Forrest sold 50 MBF of sawtimber. His depletion was \$10,000 (\$16,000 of total timber basis ÷ 80 MBF of total volume x 50 MBF of timber sold).

Timber and Landscape Tree Casualty Loss

Depending on the type of properties affected, loss of timber and landscape trees due to a casualty event such as hurricane, fire, earthquake, tornado, or hail or ice storms may be tax deductible. For timber held as an investment or a business, the loss deduction is the smaller of the adjusted basis of timber and the difference of the FMV of the timber immediately before and after the casualty in the block. Report salvage sale of timber separately. A taxable gain may result if the salvage sale exceeds the adjusted basis of the timber and related selling expenses.

Example 7: Mr. Brown owned a woodland as an investment. A professional appraisal documented a \$5,000 timber loss from hurricane damage. Assuming his timber basis was \$1,000, the amount of casualty loss deduction would be limited to \$1,000.

For 2018 landscape tree loss at a private residence, the deductible casualty loss would be limited to federally declared disasters.

Installment Sales

Using Form 6252, a taxpayer may defer taxes by spreading the gain from the property sale over 2 or more years.

Example 8: Mr. Davis sold \$10,000 of timber (\$7,500 after deducting timber depletion and sale expenses). His *gross profit percentage* was 75 percent (\$7,500 ÷ \$10,000). The buyer paid him \$6,000 in 2018, and he took a note payable in 2019. Report a \$4,500 gain (\$6,000 x 75%) for 2018. Interest charged on deferred payments is ordinary income.

Reforestation Costs

Reforestation costs are tax deductible. Taxpayers may deduct up to \$10,000 (\$5,000 for married couples filing separately) per year per qualified timber property (QTP). Any amount over \$10,000 per year per QTP may be deducted over 84 months (*amortized*). Trusts are eligible for amortization only.

Example 9: Mr. and Mrs. Lee incurred \$17,000 to replant their property in 2018. They deduct \$10,000, plus 1/14th (\$500) of the remaining \$7,000 in 2018 for a total deduction of \$10,500. For 2019–2024, they will deduct 1/7th (or \$1,000) of the \$7,000. In 2025, they will deduct the last 1/14th (or \$500). Report the deduction as an adjustment to gross income on the front of Form 1040 for investment, or Schedule C for business. Elect to amortize on Form 4562. Also, attach a statement to the return showing the date, location, and amount of the expenditure.

Depreciation, Sec. 179 Expensing and Bonus Depreciation

For timber held as an investment or a business, you may take depreciation on the assets used (for example, tractor, logging equipment, bridge, culvert, fence, or temporary road). Land is not depreciable. Also, business taxpayers may elect to deduct up to \$1,000,000 for qualifying property in 2018, subject to

\$2,500,000 annual phase-out and business taxable income limitations (Sec. 179 expensing). Also, eligible taxpayers may take a bonus depreciation equal to 100 percent of the cost of qualifying property.

Net Investment Income Tax

Timber sales from an investment or passive business may be subject to a 3.8-percent net investment income tax for single taxpayers with adjusted gross income (AGI) over \$200,000 (or \$250,000 for couples).

Example 10: Mr. and Mrs. McDonald sold investment timber at a \$40,000 gain. Assuming their AGI was \$270,000, the lesser of the timber gain or \$20,000 (\$270,000 - \$250,000 threshold) are subject to the 3.8-percent tax (\$760 tax).

Cost-Share Payments

You may exclude part or all of a qualified cost-share payment you received from your income if it was used for capital expenditure. Otherwise, report it as ordinary income. Qualified Federal programs for income exclusion include the Forest Health Protection Program, Conservation Reserve Program (CRP), Conservation Security Program, and Environmental Quality Incentives Program. Several State programs also qualify for exclusion. The excludable amount is the *present value* of the greater of \$2.50 per acre or 10 percent of the average annual income from the affected acres over the last 3 years.

Example 11: Mr. Hill received \$6,000 from CRP cost share for qualified capital expenditure in his timberland. If he had no income from the property in the last 3 years, he could exclude up to \$4,912 (((\$2.50 x 100 acres) ÷ 5.09%) from his income. The interest rate is from the Farm Credit System Bank. If he had \$9,600 of income from the property in the last 3 years, he could exclude up to \$6,287 ((10% x (\$9,600 ÷ 3)) ÷ 5.09%). Attach a statement to the tax return describing the cost-share program and the exclusion calculations.

Filing Form T (Timber)

Form T (Timber), Forest Activities Schedule, is required if you claim a timber-depletion deduction, sell cut products in a business (under Sec. 631(a)), or sell outright business timber. However, you are not required to file if you only have occasional timber sales (one or two sales every 3 or 4 years).

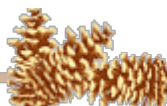
Conservation Easement

Donation of a qualified conservation easement are tax deductible. The deduction is up to 50 percent (or 100 percent for qualified farmers and ranchers, including forest landowners) of the taxpayer's AGI in a year. Any excess amount of donation over the 50- or 100-percent limit may be carried forward for 15 years.

Like-Kind Exchanges

The tax deferral rules for like-kind exchanges after December 31, 2017, apply only to exchanges of real property not held primarily for sale. It no longer applies to personal property.

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1) NRCS-EQIP Update

In our Tree Farm Bulletin, November 2018 we discussed the Natural Resources Conservation Service 2014 Farm Bill – Environmental Quality Incentives Program. We received information from the NRCS office of an extended EQIP deadline. If you would like to be considered for funding in 2019, your application must be completed and submitted to your local NRCS office by close of business on January 18, 2019.

2) COMMITTEE MEETING

Date, time and location to be determined.

3) BUY, SELL OR TRADE

Are you looking for forestry related equipment to buy (i.e. chipper, splitter, chainsaw, etc.)? Or, do you own forestry related equipment you would like to sell or trade? Forestry related equipment only, please, no homes or land. We would like to help you make the connection with other New Mexico Tree Farmers. Provide us with a description of the equipment, price, photo and contact information and we will post it in the New Mexico Tree Farm Bulletin. If you would like us to help you make the connection, please provide information to Arnie Friedt at arnie.friedt@state.nm.us

4) COMMUNITY CORNER

If your community is having a forestry related public event let us know the details and we would be delighted to promote your event in the New Mexico Tree Farm Bulletin. Give us the event details, Who, What, Where and When with contact information and we will include in our monthly bulletin. If you would like us to help you promote your event, please provide information to Arnie Friedt at arnie.friedt@state.nm.us

5) E-MAIL INSTEAD OF SNAIL MAIL

Would you prefer to receive your Tree Farm Bulletin by e-mail instead of snail mail? If so, contact Doug Boykin at doug.boykin@state.nm.us and provide him with your contact information. By receiving your Tree Farm Bulletin by e-mail our operating costs are reduced. Thank you for considering this option.



*Your New Mexico Tree Farm Committee would like
to take this opportunity to wish you and yours
Happy Holidays and a Happy New Year!*

