

Organic Conservation Easements on Working Agricultural Lands

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Restrictive covenants in the form of conservation easements offer conservationists a powerful tool for protecting ecosystem services on working lands without having to purchase fee simple property interests. But the negotiation over restrictions is not a zero-sum game allocating gains between business and environmental concerns. Well-crafted restrictions support long-term partnerships and advance both business and conservation priorities. Organic farming restrictive covenants will be considered, demonstrating that arrangements that do not allow for business success can become obstacles to conservation achievement as well.

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INTRODUCTION

There are a variety of tools available to conservation professionals interested in changing the land use landscape in the United States. Increased regulation and enforcement, contamination cleanup efforts, and acquisitions of land or land interests have all resulted in successful conservation projects. Yet one prolific arrangement, conservation easements,² has a footprint that continues to grow at an impressive pace. Known in the federal tax code as a “qualified conservation contribution,”³ a conservation easement is a legal tool that landowners can utilize, in partnership with a qualified non-profit organization or government agency, to create permanent land use restrictions structured to ensure the protection of

² See Adam Looney, *Charitable Contributions of Conservation Easements*, THE BROOKINGS INST. (May 2017), https://www.brookings.edu/wp-content/uploads/2017/05/looney_conservation_easements.pdf. (The pace of conservation easement donations has been skyrocketing in recent years, from “\$1.1 billion in 2013 to \$3.2 billion in 2014, according to preliminary IRS tabulations.”).

³ See I.R.C. § 170(h); see also Treas. Reg. § 1.170A-14(b)(2). (Under the regulations, the terms easement, conservation restriction, and perpetual conservation restriction have the same meaning).

important natural resources.⁴ To the extent that a restriction results in the reduction of a property's value, the federal tax regulations allow greater tax deductions to donors.⁵ While buying large tracts of land might be impossible due to funding limitations, conservation easements often allow groups to accomplish the same conservation objectives with a much smaller outlay of cash.⁶ By restricting land use and enforcing those restrictions, conservation groups can advance conservation objectives without holding equity interests in land or incurring ongoing management expenses.

Qualifying conservation easements are perpetual, running with the land forever,⁷ making the scope and conditions of the easement very important. While development restrictions are the primary goal of conservation restrictions, there are a host of other negative or positive land use covenants that might be enshrined in the conservation agreement. These details matter for landowners, especially for those whose properties are integral to their livelihoods, such as farm and ranchlands or working forests. Tax breaks or cash received in exchange for development restrictions may be attractive to a host of agribusiness owners and landlords but restriction terms can ultimately serve to undermine long-term business feasibility if not considered carefully. This paper will focus on a conservation easement case study which demonstrates how important a long-term perspective is when designing perpetual restrictions on property in order to ensure that agribusinesses' priorities can succeed alongside environmental priorities indefinitely.

Part I serves as an introduction to conservation easements and the long-term view which often justifies their creation. Part II describes the importance of

⁴ *Conservation Easements*, LANDSCOPE AM., landscape.org/action/consERVE/easements/ (last visited April 2022). *Tree Preservation*, VILL. OF MONTEBELLO, villageofmontebello.org/departments/tree-preservation. (A conservation easement placed on a property serving as a home for endangered birds might prohibit development or the removal of any trees, for example).

⁵ The regulations require that conservation easements be valued using comparable sales data, if available. See §1.170A-14(h)(3)(i). However, because conservation easements are so specific in terms of geography and restrictive covenants included, it is near impossible to find comparable easement sales data. See INTERNAL REVENUE SERVICE, CONSERVATION EASEMENT AUDIT TECHNIQUES GUIDE 43 (2018). (The IRS's audit guide for conservation easements makes mention that it is "usually the case" that there is "no substantial record of comparable easement sales."). In cases where there is insufficient sales comparison information, the before and after approach must be used. This method involves appraising the property at its highest and best use before the donation of the restriction and after the donation in order to obtain the value of the conservation easement (and of any corresponding tax deduction). See §1.170A-14(h)(3)(i).

⁶ See Daniel Pessar, *Logistical and Tax-Related Obstacles to Coordinating Conservation Land Assemblages*, 51 ENVTL. L. 437, 441 (2021) (discussing funding limitations on conservation organizations).

⁷ Treas. Reg. §1.170A-14(g)(3). (If there are circumstances that could result in a cancellation of the restrictions, the easement does not qualify for tax deductions unless "the possibility that such act or event will occur is so remote as to be negligible."). *Questions?*, LAND TR. ALL., <https://www.landtrustalliance.org/what-you-can-do/consERVE-your-land/questions/> (last visited March 24, 2020). (Although "[a] few conservation programs use temporary easements... only permanent conservation easements qualify for income and estate tax benefits.").

monitoring, enforcement and partnership to successful ecological advancement. Finally, Part III provides a case study in which ambitious conservation restrictions can undermine business objectives and even long-term environmental and policy objectives as well. Organic farming restrictions on working farms serves as an example of how inflexible restrictions imposed on an ever-changing agribusiness can create challenges for the landowners that enter into these agreements and for the entities tasked with enforcing them.

I. OFTEN, THE NEAR-TERM IMPACT OF A CONSERVATION RESTRICTION DOES NOT JUSTIFY THE COSTS OF THE COVENANT BUT THE LONG-TERM VIEW SUPPORTS BROADER IMPACT.

Conservation groups called land trusts acquire and manage property interests in order to shape the land use landscape over the long term. Land trusts use a variety of techniques to achieve their missions including acquiring property interests through purchase or donation. Some even purchase land parcels, add restrictions to them, and then sell them with the perpetual restrictions in place. Most land trusts have specific areas of focus, whether geographic or mission-based, reflecting the extent of their administrative abilities and priorities as an organization. Some land trusts seek to reduce development or increase open space in certain areas while others exist to protect fragile ecosystems or to ensure the existence of working farms in increasingly developed regions.

Conservation easements are easements in gross, meaning that there is no particular tract of land meant to be the beneficiary of the restriction. Instead of a piece of land being the beneficiary, conservation groups and/or public entities—acting as a representative of the public—hold, monitor, and enforce the easement in perpetuity. The restricted land and the neighboring plots may be bought and sold but the restrictions remain. Because restriction, monitoring, and enforcement are meant to continue in perpetuity, the tax regulations dealing with donated conservation easements require qualifying conservation organizations to have sufficient resources to monitor and enforce the easement in perpetuity.⁸ Moreover, the regulations require that easements be transferable only to other eligible donees.⁹

Land trusts leverage their finances by purchasing or acting as donees of conservation easements and are the primary nongovernmental purchaser and donee of conservation easements.¹⁰ As a result, they play a key stewardship role in both the creation and enforcement of land use restrictions. Land trusts that

⁸ See 26 CFR § 1.170A-14(c)(1). (“To be considered an eligible donee under this section, an organization must be a qualified organization, have a commitment to protect the conservation purposes of the donation, and have the resources to enforce the restrictions.”).

⁹ See *id.*; see also 26 CFR § 1.170A-14(c)(2).

¹⁰ *Profile: Easement Holders by State*, NAT’L CONSERVATION EASEMENT DATABASE, <https://www.conservationeasement.us/state-profiles/>.

accept donated easements could potentially help facilitate inflated tax deductions or allow violations of restriction agreements, both breaches of the arrangement provided by taxpayers and policymakers in the tax code. Land trust accreditation has therefore been developed to provide standards and guidance for land trusts to be reliable conservation partners, responsibly stewarding both conservation lands and public resources in the form of tax deductions. The Land Trust Accreditation Commission, a program of the Land Trust Alliance, has become the seal of quality obtained by professional land trusts and is a mark preferred by many donors and their legal advisors.¹¹ The accreditation process is extensive, requiring detailed policies and procedures relating to organization governance, easement acquisition, and compliance monitoring, modification, and enforcement. For example, required property inspection reports must include, among other pieces of information, “[o]bservations related to any potential conservation easement violations or conservation property ownership challenges.”¹²

But land trust resources are limited and site visits are often superficial and infrequent.¹³ Monitoring restrictive covenant compliance can be expensive, especially when restricted lands cover large swaths of property. As a result, land trusts often rely on allies in conservation—volunteers, donors of cash and property, neighbors and governments who can help with monitoring, and landowners who are willing to negotiate in good faith when violations of the easements arise so that expensive litigation can be avoided.¹⁴ And, as described below, the strength and integrity of the land trust are essential to the restriction effort.

¹¹ Because conservation contributions are complex and have a risk of deduction denial, legal counsel needs to be sure that a recipient organization will qualify as an eligible donee under 26 C.F.R. § 1.170A-14(c)(1). In the event of a deduction denial, a donor will still have to reckon with the binding land use restriction.

¹² LAND TR. ACCREDITATION COMM’N, *Accreditation Requirements Manual 27* (2018).

¹³ *Stewardship Compiled Guidance*, LAND TR. ALL., <https://tlc.lta.org/topclass/uploads/documents/398110/Stewardship-guidance-compiled.pdf>. (One site visit per year is common, with volunteers often carrying out the monitoring: “A land trust must inspect its properties regularly — at least once per calendar year and often more frequently.”). WSMR PAO, *One of the Nation’s Largest Conservation Easements*, U.S. ARMY, https://www.army.mil/article/254920/one_of_the_nations_largest_conservation_easements_completed_in_southern_new_mexico. (Easements can total hundreds of thousands of acres). *Handout Drone Monitoring*, N. AM. LAND TR., www.northamericanlandtrust.org/wp-content/uploads/2017/01/NALT-Handout-Drone-Monitoring-MM.pdf. (And increasingly rely on aerial, including drone, imaging to support monitoring efforts over vast areas).

¹⁴ See, e.g., Dr. Adena R. Rissman, *Conservation Defense and Enforcement in the Land Trust Community*, LAND TR. ALL., <https://www.landtrustalliance.org/news/conservation-defense-and-enforcement-land-trust-community> (last visited Feb. 23, 2022). (“Notably, one-quarter (27%, 26 of 97) of the land trusts that ever experienced a legal challenge or violation would have considered pursuing legal action in at least one instance if more funding had been available.”).

A. *The promise of environmental restrictions is often in the long- term shaping of the environmental landscape rather than any immediate impact offered.*

One of the common criticisms of conservation easements is that they reward landowners for refraining from activity they would not engage in anyway.¹⁵ Large sections of rural land, for example, have been restricted through conservation easements. While the landowners enjoyed tax breaks, the land would probably not be developed profitably—an unwise use of public resources, according to the critics. While the valuations used to calculate the tax benefits may be inflated, environmental restrictions are not always supposed to create significant conservation value in the short-term. Tax-advantaged conservation restrictions are perpetual, a time horizon that can cover a variety of market conditions within which the landowner would be interested in developing the property.¹⁶

And because the easements are perpetual, the grantee organizations must also plan for long-term monitoring and enforcement. This can be costly and difficult, particularly with successors in interest who were not motivated to seek out the conservation restrictions and did not directly benefit financially from the original grant of easement. Additional transactions may increase the burden on the responsible organization with more acreage under conservation easement over time while budgets may remain flat or even shrink. Moreover, land trusts are bound by contract and by accreditation principles to carry out adequate monitoring and enforcement. Depending on the facts at issue, an organization's tax-exempt status might even be at risk if it does not carry out its promised duties.

The financial and organizational pressures can create conflicts of interest, with organizations tempted to help donors facilitate donations with outsized tax benefits in order to curry favor among landowners. As a result, the Land Trust Alliance (LTA) and Land Trust Accreditation Commission have taken the leading role in providing standards on a range of land trust matters, from the routine to the complex. For example, the LTA educates land trust leaders facing a donor who appears to be using unreasonably high appraisals as part of their property donation.¹⁷ Although the donee is not permitted to act as the appraiser for easements donated with the expectation of tax deductions,¹⁸ it could still act to

¹⁵ Daniel Pessar, *A Tax Benefit for Organic Farmers*, GREENLAW BLOG OF THE PACE ENV'T LAW PROGRAMS (Feb. 14, 2020), <https://greenlaw.blogs.pace.edu/2020/02/14/a-tax-benefit-for-organic-farmers/>.

¹⁶ Conservation easements may also be made with a bigger picture in mind. For example, an important aquifer or other natural resource may be protected only after all contiguous lands have been acquired or restricted. *See generally*, Daniel Pessar, *Logistical and Tax-Related Obstacles to Coordinating Conservation Land Assemblages*, 51 ENVTL. L. 437 (2021).

¹⁷ Because appraisals are used to support tax deduction claims, donors can receive more tax benefit value for their donation to the extent that the appraisal is increased. However, if a deduction is disallowed by the IRS, the donor will receive no deduction and will still have to reckon with a binding conservation easement. *See generally Graev v. Comm'r*, 149 T.C. 485, 485-99 (2017) (disallowing a deduction for an easement donation).

¹⁸ *See* 26 C.F.R. § 1.170A-13(c)(5)(iv)(C).

facilitate a potentially fraudulent transaction.¹⁹ Although a land trust could try to stay willfully ignorant of the amount of deduction claimed, focusing only on certifying that the property donated is indeed the property described on the form,²⁰ the Land Trust Accreditation Commission does not allow such an approach.

In order to pursue accreditation through the Land Trust Accreditation Commission, a land trust must “[e]valuate the Form 8283 and any appraisal to determine whether the land trust has substantial concerns about the appraised value or the appraisal” and “[d]iscuss substantial concerns about the appraisal, the appraised value or other terms of the transaction with legal counsel and take appropriate action.”²¹ And one of the examples of appropriate action included in the Land Trust Standards and Practices is “refusing to sign the Form 8283.”²² While a donee signature is not a requirement for submitting Form 8283,²³ its absence is a red flag to the Internal Revenue Service (“IRS”) that there may be fraud in the subject transaction and may lead to a readjustment or denial of a deduction.²⁴

Just as there is room for wrongful conduct in the creation of an easement, a restriction’s conservation benefits are realized only to the extent that the terms of the agreement are enforced, thus monitoring and enforcement over the long term is essential. As a result, among the legal requirements for obtaining a tax deduction for a conservation easement donation is that a donation must be made to a donee with “the resources to enforce the restrictions.”²⁵ The regulations do not require the donees to have all of the necessary funding at the time of

¹⁹ Conservation easements cannot be created without an eligible donee on the receiving end of the transaction. See 26 U.S.C. § 170(h)(1)(B); see also, 26 C.F.R. § 1.170A-14(c)(1).

²⁰ See 26 C.F.R. § 1.170A-16(d)(5)(ii) (“The signature of the donee on Form 8283 (Section B) does not represent concurrence in the appraised value of the contributed property. Rather, it represents acknowledgment of receipt of the property described in Form 8283 (Section B) on the date specified in Form 8283 (Section B) and that the donee understands the information reporting requirements imposed by section 6050L and § 1.6050L-1.”). See also, 26 C.F.R. § 1.170A-16(d)(5)(iii) (acknowledging Form 8283 can even be signed by the donee before certain information is entered, including “the appraised fair market value of the contributed property.”).

²¹ *Land Trust Standards and Practices* (Revised 2017), LAND TR. ALL. 18, <http://s3.amazonaws.com/landtrustalliance.org/LandTrustStandardsandPractices.pdf>.

²² *Id.*

²³ See *Instructions for Form 8283* (12/2021), IRS, <https://www.irs.gov/instructions/i8283>. (“In some cases, it may be impossible to get the donee’s signature on Form 8283. The deduction will not be disallowed for that reason if you attach a detailed explanation of why it was impossible.”). See also § 1.170A-13(c)(4)(iv)(C)(2) (calling such a situation “rare and unusual” and providing the example, “if the donee ceases to exist as an entity subsequent to the date of the contribution and prior to the date when the appraisal summary must be signed, and the donor acted reasonably in not obtaining the donee’s signature at the time of the contribution, relief under this paragraph (c)(4)(iv)(C)(2) would generally be appropriate.”).

²⁴ See IRS, CONSERVATION EASEMENT AUDIT TECHNIQUES GUIDE 54 (2018), https://www.irs.gov/pub/irs-utl/conservation_easement.pdf (making it clear that the absence of a donee signature may signal something improper: “Close inspection of Form 8283 may indicate an improper deduction or overvalued conservation easement. Look for . . . [m]issing appraiser or donee signatures . . .”).

²⁵ 26 CFR § 1.170A-14(c)(1).

donation,²⁶ but they do recognize that monitoring and enforcement in perpetuity need to be carried out by organizations with adequate commitment and resources.

II. CONSERVATION RESTRICTIONS ARE ONLY AS EFFECTIVE AS THE PARTIES COMMITTED TO MONITORING, ENFORCING, AND ADVANCING THEM. AS A RESULT, ALIGNING AN ARRAY OF PARTIES TO ENFORCE THE RESTRICTIONS AND ENSURE BROADER ECOSYSTEM HEALTH IS ESSENTIAL FOR LONG-TERM SUCCESS.

Even when a restriction grantor is committed to complying with the terms of an easement, there is a real threat that a restriction could eventually be changed or cancelled. Certain land owners are averse to developing land or impacting ecosystems even in the absence of restrictive covenants, but successors-in-interest, whether buyers, heirs, or otherwise, might have a preference for development.

A. *Changes to conservation easements are usually limited because they can open up the possibility of reducing the intended environmental impact.*

While there is significant concern about compliance when conservation easements are created,²⁷ monitoring and enforcement are critical to realizing the easement's long-term conservation value. The conservation value is in adherence to the covenants of the agreement. For example, one conservation easement contains the following restrictions:

[Section 6.2] Grantor shall not convert the Protected Property to industrial or suburban/residential development or to any other use that is incompatible with maintaining the opportunity for agricultural activity on the Protected Property.

[Section 6.3] Grantor shall not legally or in a "de facto" manner subdivide the Protected Property, which shall include, but not be limited to, any subdivision, short subdivision, platting, binding site plan, testamentary division, or other process by which the Protected Property is divided into lots. . .

[Section 6.4.1.2] The total area of the Protected Property covered by Improvements of any kind and Impervious Surfaces shall be limited to no more than two (2) percent of the area of the Protected Property . . .²⁸

²⁶ See *id.* ("A qualified organization need not set aside funds to enforce the restrictions that are the subject of the contribution.").

²⁷ See generally *Carpenter v. Comm'r*, 103 T.C.M. (CCH) 1001 (T.C. 2012) and *Belk v. Comm'r*, 105 T.C.M. (CCH) 1878 (T.C. 2013) (showing taxpayers included post-restriction flexibility into easements which the tax court determined was inconsistent with a finding of perpetuity).

²⁸ E.g., rooftops, concrete and asphalt surfaces, residential buildings, and paved areas both within and outside building envelopes. *Grant Deed of Agricultural Conservation Easement*, Walla Walla

While changes or cancellations of conservation easements might sometimes be necessary,²⁹ unjustified changes to land use are inconsistent with the conservation purpose of the restrictions, with the tax code, and with the treasury regulations which require conservation purposes protected in perpetuity.³⁰ The federal tax regulations provide for the possibility of easement extinguishment when conditions arise which “can make impossible or impractical the continued use of the property for conservation purposes.”³¹ The Land Trust Alliance also has a robust set of easement amendment principles.³² But easement efforts can rarely meet these high standards, even if state laws regulating easement amendments are satisfied by donees.³³ Conservation easements are almost always designed to limit development and thus easement extinguishment or amendment, a move that might open up avenues for development, are almost never possible.

Land trusts risk being perceived as unfaithful stewards if amendments are made irresponsibly.³⁴ Among the seven Land Trust Alliance easement amendment principles are number six, “[b]e consistent with the documented intent of the grantor and any direct funding source” and number seven, “[h]ave a net beneficial or neutral effect on the relevant conservation values protected by the easement.”³⁵ These principles reflect the caution due when changes to perpetual commitments are being considered. Moreover, amendments are often pursued without the

County Auditor’s Office Recording Department (State of Washington), Recording number 2011-04646 (dated 06/15/2011).

²⁹ In case of a pressing public need and an exercise of eminent domain, for example.

³⁰ *See, e.g.*, 26 U.S.C. § 170(h)(5)(A) (“A contribution shall not be treated as exclusively for conservation purposes unless the conservation purpose is protected in perpetuity”). *See also* 26 C.F.R. § 1.170A-14.

³¹ 26 C.F.R. § 1.170A-14(g)(6)(i) (“If a subsequent unexpected change in the conditions surrounding the property that is the subject of a donation under this paragraph can make impossible or impractical the continued use of the property for conservation purposes, the conservation purpose can nonetheless be treated as protected in perpetuity if the restrictions are extinguished by judicial proceeding and all of the donee’s proceeds (determined under paragraph (g)(6)(ii) of this section) from a subsequent sale or exchange of the property are used by the donee organization in a manner consistent with the conservation purposes of the original contribution.”).

³² *See Amending Conservation Easements: Evolving Practices and Legal Principles*, LAND TR. ALL. at 25, https://tlc.lta.org/topclass/uploads/documents/3415/Amending_Consevation_Easements_2nd_edition.pdf.

³³ *See* I.R.S. General Information Letter 2013-0014 (Sept. 18, 2012) www.irs.gov/pub/irs-wd/13-0014.pdf. (making clear that although state law dictates property law and “State law may provide a means for extinguishing an easement for State law purposes [. . .] the requirements of § 170(h) and the regulations thereunder must nevertheless be satisfied for a contribution to be deductible for Federal income tax purposes.”). *See also* *Belk v. Comm’r*, 774 F.3d 221, 228 (4th Cir. 2014) (“§ 170(h)(2)(C) requires that the gift of a conservation easement on a specific parcel of land be granted in perpetuity to qualify for a federal charitable deduction, notwithstanding the fact that state law may permit an easement to govern for some shorter period of time. Thus, an easement that, like the one at hand, grants a restriction for less than a perpetual term, may be a valid conveyance under state law, but is still ineligible for a charitable deduction under federal law.”)

³⁴ Nancy A. McLaughlin, *Keeping the Perpetual in Perpetual Conservation Easements*, NONPROFIT LAW PROF BLOG, lawprofessors.typepad.com/nonprofit/2015/12/keeping-the-perpetual-in-perpetual-conservation-easements.html (last visited Dec. 13, 2015).

³⁵ LAND TRUST ALLIANCE, *supra* note 32.

involvement of important stakeholders such as the IRS and the initial easement donor. And because billions in tax dollars and tens of millions of acres of restricted property are at stake in amendment principles and procedures, any erosion to the perpetuity of easement restrictions could increase the likelihood of future development at countless sites.³⁶

III. WORKING LANDS WITH CONSERVATION RESTRICTIONS THAT DO NOT ADEQUATELY SUPPORT PROFITABLE BUSINESS ACTIVITY AND FLEXIBILITY DO NOT SUCCEED IN ATTRACTING BUSINESSES AS LONG-TERM CONSERVATION PARTNERS.

Conservation easements are valuable, in large part, to the extent that the subject properties will be monitored and the restrictions enforced. As a result, finding landowners that support the conservation missions, especially those with resources, dramatically increases the likelihood of compliance with a conservation easement over the long term without significant cost to the easement grantee. The limited resources of land trusts and the pressure that they face to ensure compliance at subject properties makes a partnership with a supportive land user essential. As well, because there are countless actions and omissions that can undermine ecosystem health that do not violate the easement restrictions, finding easement grantors that can achieve their business goals while adhering to the easement terms is important.

A. *Conservation easements requiring organic practices on working farms can create long-term issues for owners, tenants, and land trusts if they do not allow sufficient management flexibility to maintain business profitability.*

Organic farming production continues to accelerate in the United States and around the world.³⁷ The operational costs of organic farming tend to be higher than those of conventional farming yet higher prices for products with adequate certification tend to make up for the difference.³⁸ However, although many farmers are well-positioned to transition to organic farming and maintain those

³⁶ See Nancy A. McLaughlin, *Extinguishing and Amending Tax-Deductible Conservation Easements: Protecting the Federal Investment After Carpenter, Simmons, and Kaufman*, 13 FLA. TAX REV. 217, 272–276 (2012), (the authors present an analysis of court cases that erode the IRS’s ability to enforce the perpetuity requirement).

³⁷ See Organic Standards, Agricultural Marketing Service, United States Department of Agriculture, <https://www.ams.usda.gov/grades-standards/organic-standards#Crop>. Organic farming is an approach to farming meant to reduce adverse environmental impact like soil erosion and nutrient depletion. (Requirements for obtaining organic certification from the United States Department of Agriculture’s National Organic Program can be found at 7 C.F.R. Part 205 and include “no prohibited substances applied to [land] for at least 3 years before the harvest of an organic crop,” use of “organic seeds and other planting stock when available,” and the absence of prohibited synthetic fertilizer, “genetic engineering, ionizing radiation and sewage sludge”). See also USDA Organic Integrity Database, <https://organic.ams.usda.gov/Integrity/Reports/Reports.aspx>. (For statistics about the increase in organic farming activity).

³⁸ Robert King & Gigi Digiaco, *The Financial Roller Coaster of Transition*, OREGON TILTH (January 11, 2017), <https://tilth.org/stories/the-financial-roller-coaster-of-transition/>.

practices over the long term, many are not. For some, the only way to make their farming business sustainable is to pursue conventional farming practices.³⁹ As a result, restricting farms to organic farming using conservation easements may ultimately do more harm than good.

There are barriers to successful organic farming. First, the mandatory three-year transition period during which a farm implements organic practices but cannot yet certify produce as organic tends to be an obstacle for many farms considering the transition to organic farming.⁴⁰ Second, some farmers do not have a developed market for organic products at a higher price point. Finally, organic farming requires significant knowledge of appropriate management practices that not all farmers have. Ensuring that a farm's key personnel are adequately trained and informed may not be simple.

Most conservation easements are perpetual⁴¹ and yet conversations about these arrangements often focus on short term costs and benefits. For example, one criticism of tax and other benefits to landowners for conservation restrictions is that some landowners would not have developed their land anyway.⁴² This is sometimes true,⁴³ at least in the short term. Development restrictions on working lands, however, are often compatible with agribusinesses that do not need to develop the land with significant impervious structures and surfaces. As described

³⁹ This may be a function of the farmers' knowledge of the conventional farming business and unfamiliarity with organic farming; size, location, climate, and soil profile may also play a role. *Module V Section D: The Economics of Organic Agriculture*, CTR. FOR INTEGRATED AGRIC. SYS., <https://cias.wisc.edu/curriculum-new/module-v/module-v-section-d/> (last visited Apr. 5, 2022). ("During organic transition crop yields usually decline. However, after five or more years of organic management, yields on many organic farms recover to the same level or sometimes higher levels than when the same fields were under conventional management. There are two explanations for this decline and recovery. First, it takes several years for organic management practices to build soil health, populations of beneficial organisms, and the other ecosystem services that organic agriculture relies on. Second, it takes several years for the farmer to learn how best to manage his or her organic system. In essence, during the first few years the transitioning organic farmer is a beginner to the organic system, even if he or she has years of experience with conventional practices.").

⁴⁰ *Id.* See David Granatstein & Elizabeth Kirby, *Current Status of Certified Organic Agriculture in Washington State: 2019*, WASHINGTON STATE UNIV. EXTENSION, https://s3-us-west-2.amazonaws.com/tfrec.cahnrs.wsu.edu/wp-content/uploads/sites/9/2020/11/WA_OrgStats_ann_rev_2019.pdf (presentation of the organic market. Markets for organic products, while growing, still constitute a small fraction of the overall market and might not justify—from a farm's economic perspective—a transition to organic).

⁴¹ LAND TRUST ALLIANCE, *supra* note 8. See § 1.170A-14(a). (Donated conservation easements must be perpetual in order to qualify for federal tax benefits. Conservation groups purchasing conservation easements are rarely interested in using scarce funds to purchase non-perpetual interests. They may also be barred from doing so by mandate or policy).

⁴² Peter J. Reilly, *Conservation Easement Tax Deductions And Valuation Abuse*, FORBES ONLINE (Jan. 14, 2016), <https://www.forbes.com/sites/peterjreilly/2016/01/14/conservation-easement-tax-deductions-and-valuation-abuse/?sh=1dfd3cfc5f63>. ("If you own property that you would like to have preserved from future development, the contribution of a qualified easement is about as close as you can come to a free lunch in the tax arena. You get a tax deduction for not doing something that you did not want to do anyway and you may also save on property taxes and estate taxes.").

⁴³ PESSAR, *supra* note 15.

in Part II, conservation easements can co-exist with profitable land cultivation. But an arrangement that benefits both business and conservation priorities is not inevitable—land restrictions can include acute limitations on the ability to cultivate and harvest land profitably.

While some farmers may have a medium- or long-term focus on one or two crops, many farms frequently shift their production towards new practices or crops.⁴⁴ For example, a farm which integrates crop rotation into their planning might split the tillable land into six sections and implement

a six-year rotation: oat/clover/spelt → spelt/hay → hay → hay → corn → soybean and then back to oat/clover/spelt. . . [and] establish alfalfa-grass hay by overseeding it into spelt in the spring. They plow hay in the fall before corn to allow the sod to break down, and they sow an oat cover crop to protect the soil over the winter. They plant red clover with oat to provide a boost of [nitrogen] for the following spelt crop.⁴⁵

Farmers must be prepared to respond to a host of market, climate, and business challenges with as many tools as possible. And given that land leases and purchases are made with a long-term perspective in mind,⁴⁶ farmers want to know that the land is positioned for business success even in the face of changing markets or environmental factors (e.g., pests, weeds, or water availability).

This makes restrictions on farming methods or crop mix an additional hurdle for farmers who cannot predict the exact crops they will plant and methods they will use over the long term.⁴⁷ Therefore, there is a smaller pool of farmers available to sign a purchase and sale agreement or a long-term lease for property with the landowner who had entered into such conservation easements or whose predecessor had done so. This translates into a business issue for farmers thinking about relocating, building, or changing their agribusiness. And, to the extent the business operator is not the landowner as well, the organic provision reduces the resale value of the land as well, as future landowners face the prospect of lower rents or higher vacancy.

⁴⁴ See *Infra* Appendices 1-3. (In contrast, certain agribusinesses maintain a much longer-term horizon. The timber industry, for example, plans over multiple-decade time horizons and makes sure that its working land conservation easements allow sufficient flexibility for profitable long-term harvesting. Because timber businesses sustain cycles of harvesting, planting, and cultivating, clear-cutting can co-exist with a host of environmental restrictions on the land).

⁴⁵ Charles L. Mohler & Sue Ellen Johnson, *A Complete, Step-by-Step Rotation Planning Guide*, SUSTAINABLE AGRIC. RSCH. & EDUC., <https://www.sare.org/Learning-Center/Books/Crop-Rotation-on-Organic-Farms/Text-Version/A-Crop-Rotation-Planning-Procedure/A-Complete-Step-by-Step-Rotation-Planning-Guide#Table5.4>.

⁴⁶ *Farmland Ownership and Tenure*, U.S. DEP'T AGRIC. ECON. RSCH. SERV., <https://www.ers.usda.gov/topics/farm-economy/land-use-land-value-tenure/farmland-ownership-and-tenure/> (Nov 17, 2020). (41 percent of acres rented out by non-operator landlords have been rented to the same tenant for over 10 years).

⁴⁷ See *Infra* Appendix 5 (for a sample crop rotation schedule).

Conservation easements are highly customizable before they are granted⁴⁸ and parties can agree to a broad range of restrictions, with a range of impact on business interests.⁴⁹ One such restriction, requiring organic farming practices on the land, can have significant unintended implications when viewed over a long-time horizon. Requiring organic farming is certainly attractive to conservationists who are interested in furthering the protection of unique soils, clean water, and other natural resources. Organic requirements appeal to individuals and groups focused on biodiversity and the health of holistic ecosystem health. Not only is the adoption of organic production methods growing, but there is also a developed industry of certifying agents authorized to certify businesses to USDA organic standards.⁵⁰ Easement recipients can require landowners to provide annual organic certification from a third-party agent, ensuring compliance with organic standards without requiring the conservation group to have significant organic-related technical expertise on staff. For example, see below an excerpt from the organic farming requirement of one conservation easement from 2011, restricting 178 acres of farmland in Washington State:

6.17.2. Beginning with the first anniversary of the Effective Date, and on or before each subsequent anniversary of the Effective Date, Grantor shall deliver to Grantee a copy of a certificate of organic operation, issued by a certifying agent, and evidencing that: (a) all crop production on the Protected Property utilizes a system of organic production and is part of a certified operation; (b) all processing and handling of agricultural products on the Protected Property is part of a certified operation; and (c) any livestock operation on the Protected Property utilizes a system of organic production and is part of a certified operation. Each such certificate of organic operation shall be issued within the twelve (12) month period immediately preceding such Effective Date anniversary date.

6.17.3. When used in this Section 6.17, the terms agricultural products, certificate of organic operation, certified operation, certifying agent, crop, livestock, organic production and processing shall have the meaning as set forth in the National Organics Program, 7 C.F.R. 205, as amended from time to time.⁵¹

⁴⁸ See *Infra* Appendix 4 (for some examples of items that easement donors and sellers include, or opt not to include, in the easement).

⁴⁹ See 26 U.S.C. § 170(h)(1)(C). (While deduction-eligible donations must include a qualifying conservation purpose, they can include additional restrictions as well. For example, a donor might insist that a farm be closed on Saturdays, or restricted to growing apples, or managed by an individual named Tanchum. But all such provisions could ultimately result in restricted land sitting vacant because of the shortage of farmers willing or able to comply with the requirements).

⁵⁰ *Organic Integrity Database*, U.S. DEP'T AGRIC. AGRICULTURAL MKTG. SERV., <https://organic.ams.usda.gov/integrity/Certifiers/CertifiersLocationsSearchPage.aspx>.

⁵¹ GRANT DEED OF AGRICULTURAL EASEMENT, *supra* note 28.

The land trust that initiated, drafted, and accepted this easement could ensure farming methods and materials were in compliance without auditing the details of the landowner's farming practices because the grantor (landowner) was required to submit a copy of its USDA-approved organic operation certificate. As a result, adding organic farming provisions to conservation easements appears to be a powerful and simple way to promote organic farming methods over the long term. But convincing landowners to include organic farming provisions can be difficult. Landowners receive tax deductions or sale proceeds from the restriction mostly in exchange for limiting or completely restricting development on site—most of the value arises from that part of the restriction.⁵² In contrast, the impact on property value coming from restricting the types of permissible farming is often marginal in areas with high development pressure that are often the focus for land trusts and other conservation initiatives.⁵³ Landowners may be reluctant to agree to a restriction that impacts long-term use of the land in exchange for little marginal financial benefit. Additionally, organic farming restrictions may not be desirable for the conservation group because they can prove difficult to monitor and enforce.⁵⁴

Despite the benefits that come along with organic farming provisions in conservation easements, these perpetual land use restrictions come with three main risks. First, farmers operating on restricted lands must be willing and able to sustain a profitable enterprise using only organic methods in perpetuity. Landowners will likely consider not only the effect of the organic provision on their own farming plans but also its effect on their ability to sell or lease their land in the future. The conservation easement is perpetual and the operating business will likely need to sell or lease the land at some point, even if that eventuality is decades (or centuries) in the future. But a conservation group insisting on an organic provision might see the landowner opt not to restrict the property which could result in the opportunity for development being left open over the long term.⁵⁵

Second, land might sit fallow because of the organic requirement if an unanticipated market or environmental factor alters the farmers' business plan. Many farmers rent, rather than own, at least a portion of the land they farm.⁵⁶ Farmers typically pay a fixed amount or a percentage of their revenues to landowners and both tenant and landowner benefit from long-term relationships. However, depending on the size, location, and conditions of the farmland,

⁵² See §1.170A-14(h)(3)(i) (an introduction to the before and after approach to valuing conservation easements).

⁵³ *Id.*

⁵⁴ As seen in the excerpted provision above, monitoring of compliance with organic requirements can often be contracted away by requiring NOP certification, itself requiring monitoring by the NOP certifying agents.

⁵⁵ Whether as a donee or purchaser of the conservation restriction.

⁵⁶ See 26 U.S.C. § 170(h)(1)(C).

landowners might find it difficult or impossible to obtain an organic farming tenant willing to lease land on acceptable terms.⁵⁷ Particularly, if a pest or weed issue were to arise that a farmer could not adequately manage with organic methods, it could make the property less feasible for farming by other farmers and possibly impact neighboring properties as well. This would be unfortunate especially because many of the farmers who could be interested in leasing the land might be committed to certain practices that are consistent with the organic farming practices or other priorities of the conservation group.⁵⁸ But without being prepared to obtain the U.S. Department of Agriculture (“USDA”) National Organic Program (“NOP”) certification—or whichever standard would be required in the easement documents—the tenant would not be able to satisfy the requirements of the provision excerpted above.⁵⁹ Ultimately, the aspirational organic provision could result in the land remaining uncultivated.⁶⁰

Finally, even conservation groups using organic provisions in easements could face difficulties. If a farmer were to operate the restricted land consistently with the spirit of the organic provisions while violating the technical requirements of the easement—or simply neglecting a small portion of the easement requirements in order to keep the farm profitable—the conservation group might face a quandary. On one hand, lax enforcement could allow non-“organic” but still mostly-sustainable farming activity, but would put the conservation group at risk of not getting its accreditation renewed,⁶¹ or losing its tax-exempt status.⁶² On the other

⁵⁷ This situation could also come as a surprise if an organic farming tenant decided to close or to move years or decades after the conservation restriction was put into force and the landowner at that time was unable to find a replacement tenant.

⁵⁸ E.g., a commitment to avoiding the use of certain herbicides or inorganic fertilizers.

⁵⁹ See 7 C.F.R. 205.101(a). (A conservation easement like the one quoted above would require NOP certification. A farm in compliance with NOP farming requirements could fail to obtain certification for several reasons including not paying the required annual fee, not allowing a proper inspection, not pursuing the NOP certification and pursuing a similarly restrictive (e.g., Certified Naturally Grown) or more restrictive (e.g., Biodynamic) certification regime. As well, farmers are allowed under the Organic Laws to label their products as organic without certification as long as the sales volumes are under a certain threshold and all of the land use requirements are met).

⁶⁰ *Regenerative Organic Certified*, RODALE INST., <https://rodaleinstitute.org/regenerative-organic-certification/>. (an introduction to Regenerative Organic standards. In contrast, a future in which a more conscientious standard of cultivation, such as the Regenerative Organic standards promoted by the Rodale Institute, becomes more mainstream would result in restricted lands held to a lower standard than newer market or regulatory standards). See Gosia Wozniacka, *Can California’s Organic Vegetable Farmers Unlock the Secrets of No-Till Farming?*, CIV. EATS (March 30, 2021), <https://civileats.com/2021/03/30/can-californias-organic-vegetable-farmers-unlock-the-secrets-of-no-till-farming/>. (The organic approach also contrasts in certain important ways with other ecosystem health systems such as reduced-till or no-till agriculture. While the latter boasts certain soil health benefits, it often utilizes herbicides. And while the former does not use herbicides, it often relies on tilling.).

⁶¹ See, e.g., *Accreditation Requirements Manual*, LAND TR. ALL., https://www.landtrustaccreditation.org/storage/downloads/2021/requirements/2021_requirements_manual.pdf.

⁶² See *How to lose your 501(c)(3) tax-exempt status (without really trying)*, INTERNAL REVENUE SERV., <https://www.irs.gov/pub/irs->

hand, strict enforcement could result in vacant farmland, yet another outcome that does not advance the vision of sustainable farming activity. As discussed above, amending conservation easements can be challenging to undertake. Although adding an amendment to the perpetual restriction might be possible depending on the circumstances and the relevant state law, it could represent a breach of the trust placed by the public in conservation groups as land stewards. As well, the specific restrictions that come along with organic certifications might pose obstacles to certain ecosystem health priorities. For example, certain herbicides might be essential tools in an effort to restore habitats but could be prohibited under the terms of organic restrictions.

Ultimately, a land trust would have the power and responsibility to enforce the strict terms of the agreement and most landowners would enter conservation restriction agreements assuming that the terms of the agreement would be strictly enforced. The understanding that the organic easement restriction could significantly hinder the farm's ability to be profitable over the long term would play an important role in the calculus of whether to enter into such an agreement.

And conservation priorities could suffer with land sitting vacant. For example, noxious weed infestations on unmanaged lands can quickly spread to nearby properties as well. Formerly-cultivated lands do not immediately return to their natural state, and can be slow to bring back into agricultural production.⁶³ Cultivation and investment can mitigate soil erosion from wind and water⁶⁴ and active management can keep invasive species at bay.⁶⁵ As well, the environmental benefits of local farm production and the recreational and educational values domestic working lands can provide, are all priorities that agribusinesses can make real.

tege/How%20to%20Lose%20Your%20Tax%20Exempt%20Status.pdf. (for example, if the IRS found that the organization refrained from enforcement activity in order to advance private interests rather than advancing the organization's exempt purpose).

⁶³ Forest Isbell, David Tilman, Peter B. Reich & Adam Thomas Clark, *Deficits of biodiversity and productivity linger a century after agricultural abandonment*, NATURE ECOLOGY & EVOLUTION (October 28, 2019), <https://www.nature.com/articles/s41559-019-1012->. ("By 91 years after agricultural abandonment, despite many local species gains, formerly ploughed fields still had only three quarters of the plant diversity and half of the plant productivity observed in a nearby remnant ecosystem that has never been ploughed.")

⁶⁴ *Soil erosion: An agricultural production challenge*, IOWA STATE UNIV. EXTENSION AND OUTREACH, <https://crops.extension.iastate.edu/encyclopedia/soil-erosion-agricultural-production-challenge>.

⁶⁵ RCW 17.10.140 (Amended in 2021) <http://lawfilesex.leg.wa.gov/biennium/2021-22/Pdf/Bills/Session%20Laws/House/1355-S.SL.pdf>. (Recognizing the threat of invasive species, Washington state laws requiring landowners to eradicate or control certain noxious weeds to prevent their incidence and spread, in some cases with particular regulations governing weeds within a certain number of feet of adjacent land uses, navigable rivers, and other enumerated uses).

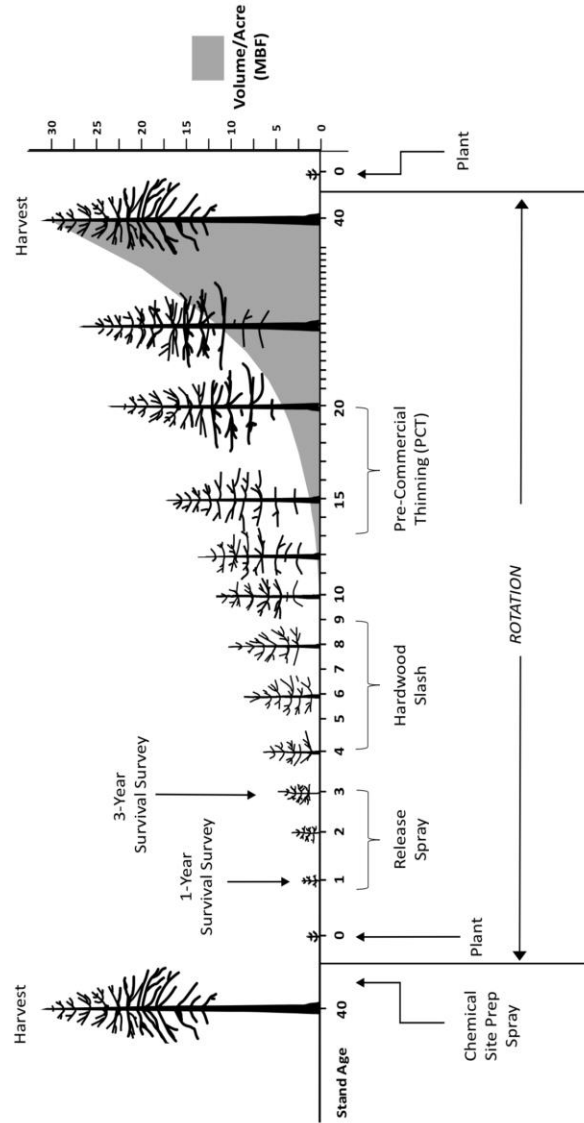
CONCLUSION

Long-term land use planning requires long-term stewardship. Although conservation easements are a powerful tool for enshrining restrictions into law, broader ecosystem preservation requires stewards willing and able to support conservation priorities. Agribusinesses can play a key role in stewardship given their operational expertise, interest in long-term productivity of the land, and staying power within profitable ventures. Thus, even highly-restrictive land use restrictions, such as organic farming requirements, can be supported by businesses as long as cultivating the subject lands can be profitable over the long term. But without proper structuring to allow for business success, land trusts that commit to enforcing overly-restrictive provisions in perpetuity should be prepared for difficult decisions in the future. Because easement contract provisions, the Land Trust Accreditation Commission requirements, and federal tax laws and regulations bind land users and easement beneficiaries to the technical specifications of conservation easement restrictions, a land trust may one day be forced to choose between its legal obligations and its conservation mission. Strict enforcement of organic farming provisions may lead to reduced conservation benefits if land sits vacant because of the NOP rules binding on land use. But lax enforcement, allowed in order to preclude vacancy or easement amendment, may undermine the credibility of the land trust and its stewardship mission to protect land forever.⁶⁶

⁶⁶ *The Accreditation Seal*, LAND TR. ACCREDITATION COMM'N, <https://www.landtrustaccreditation.org/about/about-the-seal> (accessed 3/24/20). ("Land trusts help conserve land that is essential to our health and well-being. When land trusts agree to protect land for the benefit of the public, in most cases they do so by promising that the protection is forever. The accreditation program verifies that the land trust has the policies and programs in place to keep this promise, either by caring for the land itself or transferring the land to an entity that can.").

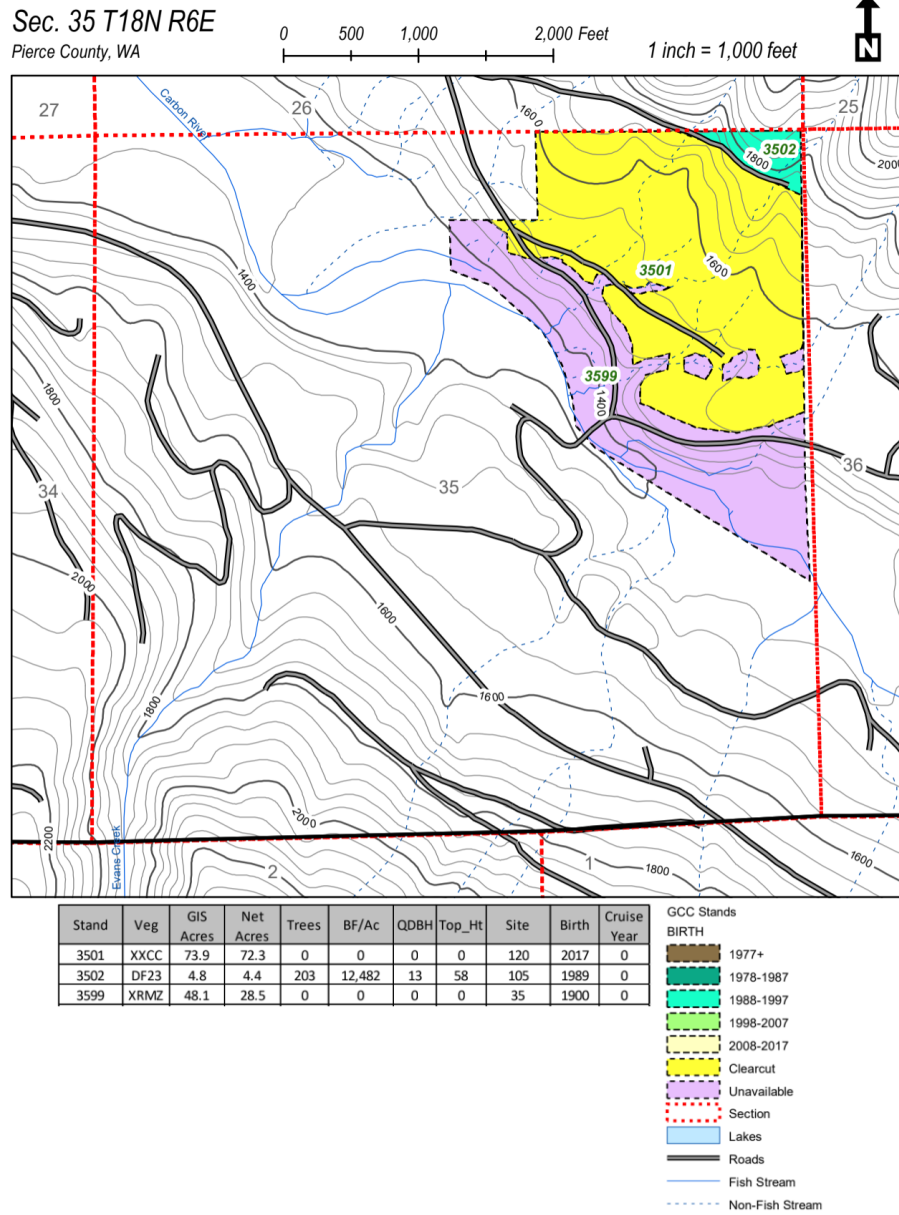
APPENDIX 1: EXAMPLE OF A DECADES-LONG WORKING FOREST HARVEST SCHEDULE⁶⁷

FIGURE 1: Management timeline of a Green Crow conifer stand in Western WA.



⁶⁷ Reed Wendel, *Green Crow Manley Moore Property Forest Stewardship Plan* (Mar. 2018), Aerial Photos/Property & Resource Maps.

APPENDIX 2: FOREST MANAGEMENT PLAN MAP SHOWING CLEARCUTTING OF 72.3 NET ACRES (APPROXIMATELY 28,000 TREES AT 400 TREES PER ACRE)⁶⁸



⁶⁸ *Id.*

APPENDIX 3: FOREST MANAGEMENT PLAN AERIAL SHOWING CLEARCUTTING OF 72.3 NET ACRES (APPROXIMATELY 28,000 TREES AT 400 TREES PER ACRE)⁶⁹

Sec. 35 T18N R6E
Pierce County, WA

0 500 1,000 2,000 Feet
1 inch = 1,000 feet



⁶⁹ *Id.*

APPENDIX 4: RIGHTS PROPOSED TO BE RETAINED OR RELINQUISHED BY
 LANDOWNER PARTICIPATING IN THE NORTH CAROLINA FOREST LEGACY
 PROGRAM⁷⁰

RETENTION OR RELINQUISHMENT OF PROPERTY RIGHTS – Carefully and fully complete the following section. The information you supply may directly affect the desirability of the property, its appraised value and desirability for acquisition. Note that checking "RETAIN" does not limit your ability to negotiate price and options in the future; it merely assists the Forest Legacy Committee in evaluating your parcel.

Indicate which of the following interests you desire to retain or relinquish. All other rights may become the property of the State of North Carolina upon successful completion of negotiations between the State of North Carolina and you. Provide a brief explanation as to why or for what purpose certain rights are being retained.

RETAIN	RELINQUISH	
<input type="checkbox"/>	<input type="checkbox"/>	Timber and wood product rights
<input type="checkbox"/>	<input type="checkbox"/>	Water rights (Water rights are limited to on-site use. Sale or conveyance of water off-site is not permitted.)
<input type="checkbox"/>	<input type="checkbox"/>	Prohibit public access
<input type="checkbox"/>	<input type="checkbox"/>	Hunting
<input type="checkbox"/>	<input type="checkbox"/>	Fishing
<input type="checkbox"/>	<input type="checkbox"/>	Camping
<input type="checkbox"/>	<input type="checkbox"/>	Hiking or other passive recreation
<input type="checkbox"/>	<input type="checkbox"/>	Bicycling
<input type="checkbox"/>	<input type="checkbox"/>	Horseback Riding
<input type="checkbox"/>	<input type="checkbox"/>	Mineral rights - NOTE: If applicant desires to retain mineral rights, please provide an explanation of the extent of those retained rights and purpose for retaining mineral rights.
<input type="checkbox"/>	<input type="checkbox"/>	Grazing in existing clearings
<input type="checkbox"/>	<input type="checkbox"/>	Farming in existing non-forested areas
<input type="checkbox"/>	<input type="checkbox"/>	Construction of roads
<input type="checkbox"/>	<input type="checkbox"/>	Motorized access
<input type="checkbox"/>	<input type="checkbox"/>	Expansion of existing improvements
<input type="checkbox"/>	<input type="checkbox"/>	Mushroom/Ginseng/Craft Material Collection
<input type="checkbox"/>	<input type="checkbox"/>	Other: _____

3

⁷⁰ N.C. FOREST LEGACY PROGRAM APPLICATION for FY 2023, N.C. FOREST SERV., <https://www.ncforestservice.gov/fsandfl/PDF/ForestLegacyApplication.pdf>, pp. 3-4.

APPENDIX 5: SAMPLE CROP ROTATION SCHEDULES⁷¹

Real Fields on Real Farms: Sample Four- and Five-Year Vegetable Crop Rotations				
		Calvert's Gift Farm Jack Gurley, Md.	Even Star Organic Farm Brett Grohsgal, Md.	Four Winds Farm Polly & Jay Armour, N.Y.
Y1	Winter	Garlic	Crimson Clover	Oats
	Spring	Winter Squash	Tomatoes OR Peppers	Potatoes OR Tomatoes ^a
	Summer			
Y2	Fall	Spinach	Red Clover	Straw mulch
	Winter		Winter Brassicas	
	Spring	Red Clover	Winter Squash (in alternate beds)	
	Summer	Soybeans		Okra – Flowers – Basil
Y3	Fall	Oats	Winter Brassicas	Straw mulch
	Winter		Vetch	
	Spring	Fava Beans	Cucurbits	Beans
	Summer	Brassicas	Crimson Clover	
Y4	Fall	Vetch	Lettuce (strip crop)	Compost
	Winter	Tomatoes	Winter Brassicas	
	Spring		Red Clover	Direct-Seeded Quick Crops / Small-Seeded Greens / Radishes
	Summer	Garlic	Red Clover	
Y5	Fall	Return to Year One	Red Clover	Cucumbers (mulched with straw)
	Winter		Winter Brassicas	
	Spring	Return to Year One	Lettuce (strip crop)	
	Summer		Return to Year One	Return to Year One
	Fall	Return to Year One	Return to Year One	Return to Year One

KEY		<ul style="list-style-type: none"> • "Fallow" indicates a deliberate period of bare soil, often with frequent cultivation to kill weeds. • Split boxes indicate strip crops or split beds. • Intercrops with crops from more than one family are represented by a dark gray background. • Cash crops are indicated by black text, cover crops and fallows by white text. 	<p>^a This rotation switches between potatoes and tomatoes in alternate cycles.</p> <p>^b This rotation is designed around alternate beds.</p>
<i>The boxes below show the color codes for plant families in the rotation diagrams.</i>			
Grasses – Poaceae	Legumes – Fabaceae	Brassicas – Brassicaceae	Nightshades – Solanaceae
Lettuce – Asteraceae	Alliums – Liliaceae	Carrot – Apiaceae	Miscellaneous
			Cucurbits – Cucurbitaceae
			Fallow
			Beets, spinach – Chenopodiaceae
			Grass-legume mix
			Mulch
			Intercrop
			Cash Crop
			Cover Crop

⁷¹ CHARLES L. MOHLER ET AL, CROP ROTATION ON ORGANIC FARMS: A PLANNING MANUAL 49 (Charles L. Mohler & Sue Ellen Johnson eds., 2020), <https://www.sare.org/wp-content/uploads/Crop-Rotation-on-Organic-Farms.pdf>.