

**PRESSURED LANDSCAPES:  
PRESERVING AGRICULTURAL LAND ON THE URBAN FRINGE**

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## ABSTRACT

Title of Thesis:               PRESSURED LANDSCAPES: PRESERVING  
  AGRICULTURAL LAND ON THE URBAN  
  FRINGE

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Rural vernacular agricultural landscapes located on the urban fringe of expanding metropolises are under immense conversion pressure. At the same time, their proximity to urban markets with high demand for locally sourced agricultural products affords them distinct market opportunities. Considering these two inherent qualities of farmland on the urban fringe, the hypothesis for this thesis is this: What are the land use management practices currently available for the preservation of farmland, and how is demand for locally sourced food contributing to the sustainability of agricultural production and farmland conservation on the urban fringe?

Through a literature review of existing national, state, local, and private efforts to support and promote farmland preservation, this thesis research examines current land management practices employed to preserve rural vernacular agricultural landscapes. Additionally, this thesis research explores the increasing consumer demand for locally

grown food as a potential economic tool to conserve farmland by promoting direct-to-consumer markets as part of an overall strategy to support agricultural activity.

A case study is included of Loudoun County, Virginia investigating the local government's land use regulations and incentives, as well as their efforts to promote programs which support local agricultural markets. I conclude that by focusing on local direct-to-consumer markets, agricultural activity can remain profitable even under high development pressure. I advocate for local jurisdictions to exhibit the political will to support comprehensive farmland conservation programs, including land use regulations and incentives, as well as rural economic development support for local direct-to-consumer agricultural markets.

Subject Headings: Farmland conservation, rural-urban fringe, rural vernacular landscapes, Rural Historic Districts, cultural landscapes, land use management, rural economic development, locavore, local agriculture, direct-to-consumer marketing, farmers' markets, community supported agriculture, farm to table, slow food, terroir

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To my family – those who came before and those who will follow.

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## CHAPTER I FARMLAND ON THE URBAN FRINGE

### Introduction: Agricultural Landscapes as Cultural Resources

Our country's agricultural landscapes are the material record of our farming history and traditions. As vernacular cultural landscapes, they are a product of the relationship between ordinary people and the land they occupy and cultivate for their livelihoods. Composed of natural features such as elevation and slope, climate, weather, soil, hydrology, and the flora and fauna of a particular region, they are also an artifact of human interactions with the land. The National Park Service publication *Landscape Lines* defines the characteristics of a cultural landscape as potentially including: "natural systems and features; spatial organization; land use; cultural traditions; cluster arrangements; circulation; topography; vegetation; buildings and structures; views and vistas; constructed water features; small-scale features; and archaeological sites."<sup>1</sup> Most importantly, the vernacular agricultural landscape both incorporates, and is a product of, the processes of people living on and working the land. As Richard Olson explains in *Under the Blade: The Conversion of Agricultural Landscapes*, "Most of the United States is now comprised of what [is referred] to as working landscapes, whose appearance is the result of the interactions of human culture with natural factors including climate, topography, vegetation, and soils."<sup>2</sup>

Rural agricultural landscapes which border rapidly expanding metropolises are

under threat due to the tremendous development pressures which exist as city suburbs expand into their rural surroundings. As the value of land is escalated by increased demand, traditional farming becomes difficult, unprofitable, and unsustainable leaving farmers little choice but to sell their land for development. Loss of this productive agricultural land occurs through the conversion of farmland either for residential or commercial use or the removal of farmland from productivity through the creation of large-lot estate developments. In 1989, The National Trust for Historic Preservation published *Saving America's Countryside: a Guide to Rural Conservation*,<sup>3</sup> responding to a growing recognition that while preservation efforts had been focused on preserving our urban heritage resources, much to their detriment, our rural communities, main streets, and landscapes were being neglected. In *Saving America's Countryside*, the authors reached out across the United States documenting, through multiple case studies, the actions rural communities were taking to preserve their natural resources, cultural heritage, and quality of life.

Many of the tools and strategies suggested in *Saving America's Countryside* have become the standard methods relied upon by the preservation community, planners, and rural community activists. Success stories exist across the country, particularly those of the Main Street and "Barn Again!" programs for revitalizing our country's rural downtowns and repurposing our nation's historic barns. However, since the publication of *Saving America's Countryside*, productive agricultural landscapes located on the urban fringe continue to be under consistent threat of loss. The American Farmland Trust documented this phenomenon 20 years ago as well in its publication *Farming on the*

*Edge*. The loss of farmland through the encroachment of development continues today, despite the efforts of both the public and private sectors. “Many places have undertaken innovative efforts to stem the tide of suburban sprawl and protect valuable farmland and open spaces,” offer Tom Daniel and Deborah Bowers in *Holding Our Ground: Protecting America’s Farms and Farmland*, “By blending financial incentives, voluntary action on the part of landowners, and government land-use regulations these places have tried to maintain what is special about their communities: the appearance, the economy, the character, and the social cohesion.”<sup>4</sup>

### Thesis Statement

My research addresses this thesis question: What are the current land use management tools for preserving farmland under high conversion pressure and how can the demand for locally sourced food contribute to the sustainability of agricultural production and farmland conservation on the urban fringe? My supposition is that a robust farmland conservation program which incorporates multiple land use management tools designed to stabilize land conversion, combined with well supported rural economic development programs which target local direct-to- consumer markets, will result in a successful reduction in the rate of conversion of productive agricultural land on the urban fringe.

Lived-in working landscapes are inherently dynamic; land use management practices should strive to balance preservation considerations while allowing for changes over time that will, and must, occur for these agricultural landscapes to remain economically viable. A field where a farmer once grew feed corn, for example, to remain



economically viable, might now be planted in hops, impacting among other things, the spatial organization and vegetation, as well as the views and vistas. Through considering the confluence of the loss of vernacular agricultural landscapes due to development conversion pressures, and the rise in the demand for local agricultural products, this thesis research explores the current land-use management practices for farmland conservation on the urban fringe. In addition, this thesis research investigates rural economic development efforts to employ direct-to-consumer marketing models to capture the demand for locally-sourced food in order to bolster the economic sustainability of agricultural production of these volatile landscapes.

### Research Methods

My treatise research is based on an extensive literature review of both primary and secondary resources such as books, peer-reviewed journal articles, federal and state governmental agency reports, and private non-profit land trusts publications, in order to identify the current land use management tools and best practices established leaders in the field of farmland conservation currently employ. In addition, I supplemented this research through conversations with local government planners, a state-appointed board member overseeing the application of land use regulations, and a private-practice planner to better understand and evaluate how the tools are applied in practice.

I conducted a thorough literature review of both primary and secondary sources regarding the local food movement, including exploring the key concepts of food sheds, food hubs, and the contribution the French concept of terroir — ‘the taste of place’<sup>5</sup> — might have on supporting regional food distinctions. My research includes an analysis of

reports from the United States Department of Agriculture, the Virginia Department of Agriculture and Consumer Sciences among other primary sources for data on the shifting consumer preference for locally grown produce, and the public policy support local, direct-to-consumer agriculture has gained.

I tested my hypothesis by investigating the state and local farmland conservation measures, as well as private non-profit efforts to preserve the agricultural land of Loudoun County in the Northern Piedmont Region of Virginia. I accomplished this investigation through the review of the policy planning documents of Loudoun County, documenting the changes over time to land use policies as the County reacted to the threats unchecked growth was placing on their environmental and agricultural resources.

Additionally, I communicated via telephone conversations and emails correspondence with Loudoun, Fauquier and Stafford County planning officials, a member of Oregon's Land Conservation and Development Commission, and a private sector planning consultant to determine the policies and regulations currently in use on both the state and local levels to support the preservation of rural agricultural landscapes. I also spoke with a local farming couple who have been farming in Loudoun County for over 30 years about their experiences using direct-to-consumer marketing to sustain their farming business enterprise. Finally, I communicated with the local agricultural development officer for Loudoun County, to establish the measures Loudoun County has taken to support local farmers through agricultural economic development initiatives.

### Overview of Chapters and Content of Research

The remainder of this chapter will contextualize the resource by outlining the

impinging threats, briefly discussing farmland preservation measures currently employed, and providing some background to the emerging local food systems. The following chapters of this treatise examine the conservation of farmland on the urban fringe through both land-use management and economic development efforts. Chapter II investigates existing national, state, and local policies, programs, and regulatory frameworks, in addition to private non-profit efforts to support and promote farmland preservation of these storied rural agricultural landscapes. Chapter III considers the increasing consumer demand for locally grown food as a potentially viable resource management tool to conserve farmland by promoting local direct-to-consumer agricultural markets as part of an overall strategy to support local agricultural activity and farmland conservation.

In Chapter IV, the county of Loudoun, in the Northern Piedmont Region of Virginia, is presented as a case study, documenting the local government land use regulations, conservation easement programs, and other farmland conservation efforts, and investigating the rural economic development programs to promote and support local agricultural direct-to-consumer markets. The Northern Piedmont Region of Virginia, lying just on the outskirts of the Washington D.C. metropolitan area, exemplifies the strain neighboring local governments and populations experience as exurban development encroaches on their landscapes and their lifeways. Chapter V concludes with findings, conclusions, and opportunities for further research.

### Defining the Urban Fringe

The United States Department of Agriculture (USDA) National Resources Inventory (NRI) defines rural land as, “a group of land/cover use categories that includes

cropland, Conservation Reserve Program (CRP) land, pastureland, rangeland, forest land and other rural land.”<sup>6</sup> In contrast, urban land is defined as “land cover/use categories consisting of residential, industrial, commercial, and institutional land; construction sites; public administrative sites; railroad yards; cemeteries; airports; golf courses; sanitary landfills; sewage treatment plants; water control structures and spillways; other land used for such purposes; small parks (less than 10 acres) within urban and built-up areas; and highways, railroads, and other transportation facilities if they are surrounded by urban areas.”<sup>7</sup> The land at the interface of these two contrasting land uses is referred to as the peri-urban area, the rural-urban fringe, or the urban fringe. Land in the urban fringe usually contains a mix of urban, suburban and rural land uses, with lower population densities than urban spaces and more agricultural, forested, or open-space land than suburban spaces.

### Defining the Problem: Farmland Conversion on the Urban Fringe

#### Loss of Farmland through Sprawl Development

Development which takes place on the urban fringe is often aptly referred to as sprawl – it spreads out across the landscape and quickly converts agricultural landscapes into developed land. In the USDA’s 2001 report, *Development at the Urban Fringe and Beyond: Impacts on Agriculture and Rural Land*, Heimlich and Anderson describe the process by which sprawl development converts rural farmland into the new suburbs: “The urban ‘fringe’ is that part of metropolitan counties that is not settled densely enough to be called ‘urban.’ Low-density development (two or fewer houses per acre) of new houses, roads, and commercial buildings causes urban areas to grow farther out into the

countryside, and increases the density of settlement in formerly rural areas.”<sup>8</sup> In *Holding Our Ground: Protecting America's Farms and Farmland*, Daniels and Bowers observe this conversion process as well: “An alarming trend has been the increase in the amount of land used per person, indicating larger house lots and a more dispersed population. By 1990, urban and suburban settlements consumed almost one-third more land per person than in 1970. With the rise of ‘edge cities,’ large shopping and employment centers on the outskirts of metropolitan regions, housing subdivisions have been pushing ever farther into the countryside.”<sup>9</sup> This type of development displaces farmers, disrupts communities, and destroys the former existing agricultural economy.

One benefit to development on the urban fringe is that it opens up the possibility of homeownership to many more people due to the relative inexpensiveness of land and housing in these areas.<sup>10</sup> However, rural estate developments on the other end of the economic spectrum have become increasingly more common, an unintended consequence of rural large-lot zoning. Heimlich and Anderson report that “Nearly 80 percent of the acreage used for new housing construction in 1994-97—about 2 million acres—is outside urban areas. Almost all of this land (94 percent) is in lots of 1 acre or larger, with 57 percent on lots 10 acres or larger.”<sup>11</sup> In *Under the Blade, The Conversion of Agricultural Landscapes*, Olson and Olson found that “Large lot subdivisions have proliferated in many areas of the country. They provide relatively few housing units but have the potential to take large quantities of farmland out of production. Limited agricultural activity may continue on some large lots, perhaps a few cattle or horses or a small orchard. In most areas, large lots are too small to support commercial agricultural

production. In addition, they fragment agricultural regions, reducing the critical mass of farmland necessary for long-term farming, and increasing land use conflicts between the large lot residents and remaining farmers.”<sup>12</sup> At least part of the cause of the rise in large house lots and low-density development can be attributed to outdated zoning regulations which have not done enough to restrict development and encourage the perpetuation of agricultural, resulting in large-lot residential developments dislocating long-established farms and fragmenting farming communities.

#### The Cost of Sprawl to Municipalities

Another adverse effect the conversion of agricultural land has on a community is the public services that encroaching development demands cost municipalities far more than the new residences generate in tax revenue. New roads, schools, fire and police services are all paid for through property taxes, which must rise to meet these new service demands. It is less expensive for a municipality to provide services to a 100-acre farm than to provide support services for the same 100 acres of single-family homes on 1 acre lots. Daniels and Bowers argue that “Protecting farmland is good fiscal policy. While every community is different, a growing number of studies conducted by the American Farmland Trust, Rutgers University, and others show that farmland provides fiscal benefits by generating more in local taxes than it demands in local services. Farmland and open space require few public services, unlike residential development, which puts a heavy burden on local governments to build schools, provide public safety through police and fire service, and develop infrastructure such as sewer and water facilities and roads.”<sup>13</sup>

Additionally, when land is valued at its highest and best use, rising property values typically increase a farm's property taxes disproportionately to the services they require. "Some of the old-timers fear that the school board will seek to increase its budget in a significant way. And because the schools are largely supported by the property tax, the fear is that those holding large parcels of land, namely the farmers, will see higher taxes levied on their property. Unfortunately, the tax burden bears no relationship to the inherent productivity of the land for farming,"<sup>14</sup> Furuseth and Lapping point out. For this reason, as part of a farmland and open space preservation program, municipalities commonly adopt a use valuation assessment, which allows localities to tax farmland and open space for the value of the land in its current use rather than its fair market value.

#### Loss of Prime Farmland

When farmland on the urban fringe is developed, it often results in the loss of some of our country's most productive farmland. In *Plowing the Urban Fringe: An Assessment of Alternative Approaches to Farmland Preservation*, Hiemstra and Bushwick characterize the urban fringe as containing half of our nation's best farmland. "America's best agricultural land is concentrated in urban areas. Over one-fifth of the United States' prime farmland is located within the boundaries of a Standard Metropolitan Statistical Area (SMSA), and another third is located in a county adjacent to an SMSA. Together, this means that over one-half of the prime farmland is in, or very near a metropolitan area. The characteristics that make land suitable for farming also make it attractive for development. Urban growth and suburbanization, therefore, threaten the best agricultural lands,"<sup>15</sup> they assert. Daniels and Bowers concur with the

loss of prime agricultural land on the urban fringe, adding also the loss of productivity with farmland conversion: “In a 1993 study, the American Farmland Trust reported that over half of the nation’s farm product sales came from counties that are either part of a metropolitan area (30%) or adjacent to one (26%) and feeling the pressure of suburban and ex-urban growth.”<sup>16</sup>

### Loss of Rural Farming Communities

All types of development which take farmland out of production, whether it is the denser, less expensive traditional subdivisions or the land-consumptive, more expensive estate development, remove land from agricultural production, impact open space and viewsheds, and change the character of what was once the rural working agricultural landscape. These changes have far-reaching repercussions for the existing community. “At the urban fringe, the preservation of farmland remains one of the most important policy issues facing agriculture...Along with the loss of farmland and open space comes losses in rural lifestyles, wildlife habitat, prime farmland, water and air recharge capacity, pastoral scenery and other important aspects contributing to quality of life which the public deems as important,”<sup>17</sup> assert Adelaja and Schilling in *Contested Countryside: The Rural-Urban Fringe in North America*. Development impacts change the very nature of a community’s identity.

Along with the physical changes to the landscape brought by farmland conversion come changes in the community dynamic, as Olson and Lyson relate in *Under the Blade*: “Working landscapes also preserve current culture in the form of communities. [Wendell] Berry writes that the essential elements of community include the integration of people



and land with the local economy; a greater reliance on local resources and knowledge than on external inputs; and the transfer of values and knowledge between successive generations. Throughout rural America, communities are being destroyed by changes in landscape structure that preclude maintenance of these critical elements.”<sup>18</sup> There is great irony that the qualities that make the urban fringe so attractive – open space, access to natural recreational areas, bucolic settings and the general quality of life – are the qualities that are lost as farmland is converted and the landscape is consumed by development.<sup>19</sup> As Alanen points out in his essay, “Considering the Ordinary: Vernacular Landscapes in Small Towns and Rural Areas,” “In areas where the attractiveness of a vernacular landscape is responsible for the emergence of new (and often non-compatible) development, the very essence of the historic cultural landscape may be severely endangered. This is especially true in agricultural districts where local residents pursue employment in nearby towns and communities or retire from farming: buildings are vacated or modified, typical agricultural practices are discontinued, and land-use patterns change as fields are either abandoned or subdivided to accommodate new development.”<sup>20</sup>

### Impermanence Syndrome

As productive farmland in an area is converted, there is a domino effect regarding the surrounding farms and supporting farm industries. Each farm that is taken out of production creates an increasingly difficult business environment for the remaining farmers. Farmers stop investing in their buildings and machinery as their planning trajectory becomes much shorter in anticipation of the right offer from a developer to sell

their property. Daniels and Bowers describe this phenomenon as ‘impermanence syndrome’: “Farmland protection experts use the term impermanence syndrome to describe the vulnerability of farming to encroaching developments. Farmers are fiercely independent, but if they see a neighboring farmer sell his farm for big dollars to a housing subdivision or shopping mall, they may decide to do the same...As farmers decide to purchase less equipment and allow crop and livestock production to fall, the overall agricultural industry in the area weakens.”<sup>21</sup>

As farming operations decrease, there is a ripple effect in the peripheral industries which serve the farming community, such as equipment sales and service, seed suppliers, butchers, and veterinarians. “The loss of farm neighbors is difficult, not only because we have known their families for generations, but also because as their numbers dwindle we lose the business services that we have come to depend on. For example, when the local veterinarian retired, the person taking over his practice was not very interested in working with large animals found on the farm. Rather he was focused on the more lucrative pet market of our new neighbors who lived in the housing subdivisions cropping up around us,” recount Furuseth and Lapping in *Contested Countryside*.<sup>22</sup>

Farming becomes more and more difficult and less and less economically viable with rising land prices, further to travel for support services, and new non-farming neighbors. Furuseth and Lapping go on to say: “The anticipation of additional development and higher land prices reduces the owner-operator’s planning horizon and discourages investments in equipment, technology, and management...The only investments which are made are short-term where the producer is certain of recouping

their capital.”<sup>23</sup> There is little motivation to make long-term capital investments in resources for a farmer who intends to sell to a developer as soon as the opportunity presents itself. Observe Daniels and Bowers: “In urban fringe areas over the last thirty years, the market value of farmland has increased more because of public investments in roads, schools, and sewer and water lines than because of farmers’ investments in farm buildings and land improvements. As a result, some farmers hope to sell for development to capture an “unearned increment” in the value of their property caused by nearby public service.”<sup>24</sup>

#### Identifying Solutions: Support for Local Farmland Preservation

Local governments, when they have responded to the threat of farmland conversion, have done so through both regulation and financial incentives. Some have implemented urban growth boundaries, limiting utilities to designated areas, in an attempt to channel growth and development to higher-density areas where public services are already available and away from environmental and agricultural resources. Many have created agricultural districts, which offer farmers added protection from nuisance lawsuits from non-agricultural neighbors, and review of the municipal taking of property through eminent domain, as well alleviating some of the real estate tax burdens which escalating land values put on farmers. Others are using incentive programs such as Purchase of Development Rights (PDR) and Transfer of Development Rights (TDR) programs, to restrict development in perpetuity. These programs also give farmers a way to realize the optimum value of their land without sale and use conversion.

The private sector, as well, has recognized and contributed to rural landscape

conservation. Land trusts and conservation organizations have stepped in to relieve the conversion pressure on rural lands by either purchasing or accepting the donation of conservation easements on land for agricultural use and open space. Yet, with all these preservation efforts focused on agricultural landscapes, farmland on the urban fringes of metropolitan areas continues to be lost at rapid rates. In the ten year period between 1997 and 2007, Virginia lost 649,000 farm acres to development, according to the Virginia Cooperative Extension.<sup>25</sup> That accounts for an approximate 8% loss in harvested, productive agricultural land in a single 10 year period.

Efforts from the preservation community on behalf of rural cultural resources have included generally acknowledging and promoting small town main streets, rural communities, and agricultural landscapes as important heritage resources, and formally recognizing Rural Historic Districts in the National Register of Historic Places as significant cultural landscapes in our national history. Additionally, the National Park Service has developed a public-private partnership program in the form of National Heritage Areas, many of which are traditionally agrarian or have an agricultural component, such as the Hudson River Valley, Blue Ridge, and Shenandoah Valley Battlefields National Historic Districts. Heritage Areas help communities to link cultural resources and heritage tourism while fostering regional pride and identity.

Daniel and Bowers posit that the key to retaining agricultural landscapes on the urban fringe is to support economically sustainable environments for farming through programs which help farmers adapt to the economic and demographic realities of the agricultural markets of the urban fringe: “If farmland is to be protected, it must first be

profitable to operate a farm. One of the most overlooked aspects of farmland protection is helping farmers to stay in business. Farmers must have the protection and freedom to expand or change their operations in order to remain competitive.”<sup>26</sup> This will include expanding into the more profitable direct-to-consumer markets emerging in recent years.

As Lyson, Geisler, and Schlough suggest in their article, “Preserving Community Agriculture in a Global Economy,” “One way to preserve farmland in the United States then is to increase the amount of food and agricultural products that are produced and marketed locally. Land that might otherwise be taken out of farming because it cannot profitably produce for the global marketplace can be kept in production because it serves the needs and tastes of local consumers. In the process of relocalizing at least part of the food system, farmland is transformed from simply a ‘substitutable’ factor of production in a global food economy to an integral part of the local community.”<sup>27</sup> The resurgence of consumer interest in local agriculture – answering the who, where, and how questions consumers are asking about their food – has fostered the emergence of a local food economy which relies on direct-to-consumer markets, a more profitable and more relational business model than traditional commodity farming.

### Rebuilding the Local Food System

As our agricultural landscapes have been disappearing, concurrently there has been an increase in consumer demand for locally grown agricultural products. Over the past two decades, a critique of our national food system has arisen, questioning industrial agricultural practices such as reliance on monocultures and petrochemical insecticides and fertilizers.<sup>28</sup> The National Trust for Historic Preservation has taken a position

opposing the industrial agricultural practice of Concentrated Animal Feeding Operations (CAFOs), citing, among other reasons, “The rise in large-scale livestock production has caused a dramatic drop in the number of smaller family-owned operations, particularly mid-sized family farms.”<sup>29</sup> Additionally, questions have been raised concerning the food industry’s culpability in our national obesity epidemic and the associated health problems through the production and marketing of highly processed foods.<sup>30</sup> As a consequence of this national dialog regarding our corporate industrialized food system, consumer demand for locally grown agricultural products has been expanding, creating huge growth in new direct-to-consumer market opportunities, such as farmers’ markets, Community Supported Agriculture initiatives, and Farm-to-School programs for local and regional small to mid-sized farms.<sup>31</sup>

Furthermore, there has been a growing national conversation regarding our agricultural and food industries. The consumer sentiment is becoming increasingly skeptical of the post-World War II industrial agricultural and food practices, increasing the demand for local, sustainable food. The popularity of authors and titles such as Michael Pollan’s *The Omnivore’s Dilemma*<sup>32</sup>, and *In Defense of Food*<sup>33</sup>; Mark Bittman’s *Food Matters*<sup>34</sup>; Eric Schlosser’s *Fast Food Nation*<sup>35</sup>; and *Salt, Sugar, Fat*<sup>36</sup> by Michael Moss are indicative of the public scrutiny our nation’s industrial agricultural and food production systems are currently undergoing. In response, there has been a growing conversation regarding localizing food systems, creating food security, and supporting sustainable agricultural systems.

In 2010, the United States Department of Agriculture published *Local Food*

*Systems: Concepts, Impacts, and Issues*<sup>37</sup> in order to better understand the alternative local food markets developing as a result of the increased demand for local foods. The report found that nationally, direct-to-consumer agricultural sales more than doubled in the ten year period between 1997 and 2007. On the state level, the report, *Virginia Farm to Table*, produced by the Virginia Cooperative Extension, found that in Virginia, direct-to-consumer agricultural sales increased 72% from 2002 to 2007, and that in 2009, there were over 200 farmers markets and 135 Community Supported Agriculture (CSA) operations in the commonwealth, with that number continuing to grow.<sup>38</sup>

In view of the growth in this segment of the agricultural economy, and considering, by definition, the local nature of this expanding market, this investigation focuses on how local governments can support and promote direct-to-consumer markets, successfully linking the demand for local agricultural products to productive farmland. Ultimately, the perpetuation of the working agricultural landscape on the urban fringe will require multifaceted farmland conservation programs which rely on both incentives and regulations, as well as agricultural economic development programs to create favorable economic climates for agriculture on the urban fringe to survive.

## CHAPTER II FEDERAL, STATE, LOCAL AND PRIVATE CONSERVATION TOOLS

### Introduction

Land use policies, programs, and regulatory frameworks define the legal and governmental context within which farmland conservation takes place. There are several objectives for the preservation of rural landscapes: safeguarding natural resources; protecting valued amenities such as open space, recreational areas, and view sheds; preserving historically significant rural districts and sites; ensuring regional food security; and the preservation of farmland for cultural heritage continuity. No matter what the motivation behind the conservation of rural landscapes, many of the tools available to the preservation community remain the same. This chapter describes the federal, state, local and private land conservation methods available for rural historic preservation and farmland conservation.

### Federal Recognition of Rural Historic Landscapes The National Register of Historic Places

Listing a property, site, or district in the National Register of Historic Places is one of the tools most often employed by historic preservationists to ultimately achieve some level of protection for historic resources, through elevated community visibility and national historic recognition. Although nomination to the National Register of Historic Places is honorary and carries no protection in-and-of-itself, a National Register listing



raises the level of visibility and recognition in the local community for a site. This identification and recognition can, for local government planning purposes, trigger local regulatory protections, steering development away from identified significant historic landscapes.

The National Register Bulletin: *Guidelines for Evaluating and Documenting Rural Historic Landscapes*, defines a rural historic landscape as “a geographical area that historically has been used by people, or shaped or modified by human activity, occupancy, or intervention, and that possesses a significant concentration, linkage, or continuity of areas of land use, vegetation, buildings and structures, roads and waterways, and natural features.”<sup>39</sup> For the purposes of the National Register, rural historic landscapes reflect the everyday use of people working on the land; they are not typically formally designed landscapes. If the landscapes are small and contain no structures, they are usually referred to as historic sites; larger landscapes with buildings or other structural elements are called historic districts. Most will have these distinct, recognizable and recordable characteristics: land uses and activities; patterns of spatial organization; response to the natural environment; cultural traditions; circulation networks; boundary demarcations; vegetation related to land use; buildings, structures, and objects; clusters [the arrangement of elements within a landscape]; archeological sites; and small-scale elements.<sup>40</sup>

Preparing the documentation to nominate a rural historic landscape for the National Register is an arduous task which can take many months, even years to complete, and cannot be done without professional expertise. The Bulletin warns,

“Examination of a rural area frequently requires the combined efforts of historians, landscape historians, architectural historians, architects, landscape architects, archeologists, and anthropologists. Depending on the area, the specialized knowledge of cultural geographers, plant ecologist, folklorists, and specialists in the history of agriculture, forestry, mining, transportation, and other types of land use may also be of assistance.”<sup>41</sup> This level of expertise is often well beyond the resource capabilities of most local governments or private citizens wishing to achieve federal recognition for a historic landscape.

Additionally, the property must meet the Register’s criteria for significance and integrity. Again, from the Bulletin, “Historic integrity, a measure of a property’s evolution and current condition, is also necessary. A comparison of the changes experienced by a group of properties related by common historic contexts helps define the historic characteristics and qualities of integrity that qualify a rural property for listing. *Recent changes that have erased historic characteristics, and do not have exceptional importance, make a property ineligible, even if scenic qualities are still present*” [emphasis added]. This may be a high bar to meet. Working landscapes under development pressures may be forced to make changes in order to remain economically viable. For instance, a traditional tobacco farm might be converted to a vineyard, which could impact all eleven of the character-defining features and certainly effect the stipulated qualifications for a rural district to maintain its historic integrity for National Register listing.

Although listing in The National Register of Historic Places offers no protection from development with the exception of the review process in the case of Federal undertakings, it often brings a great deal of recognition, prestige, and community pride, while elevating the landscape when thinking of preservation priorities for planning purposes. Land which is included in a Rural Historic District listed in the National Register should be among the first to be considered by local governments for local historic overlay district designations, which carry regulatory requirements and restrictions, as well as Conservation Easement programs, Purchase of Development Rights programs (PDRs), or Transfer of Development Rights programs discussed later in this thesis analysis.

#### Farmland Protection and the Federal Government

Historically, the federal government's direct role in farmland preservation has been minimal, leaving land use decisions and the administration of preservation strategies to the discretion of state and local jurisdictions.<sup>42</sup> Since the initiation of a national farm policy in the 1930s, the primary focus of federal efforts has been soil conservation and crop subsidies for major crops such as corn, soybeans, wheat, cotton, and rice.<sup>43</sup> As Owen Furuseth and Mark Lapping argue in *Contested Countryside: The Rural-Urban Fringe in North America*, "While these strategies are important to the health of the agricultural industry, they do little to preserve agricultural land for future use."<sup>44</sup> There have been past efforts by lawmakers to influence land use policy, however, land use issues typically fall under state regulatory purview.

In response to the rapid conversion of agricultural land through unchecked development, Congress, in the early seventies, unsuccessfully attempted to require states to adopt comprehensive statewide land use plans through the Land Use Policy and Planning Assistance Act.<sup>45</sup> Then, in 1979, the Department of Agriculture and the Council on Environmental Quality jointly funded the *National Agricultural Land Study* (NALS), establishing the issue of farmland loss as a national concern.<sup>46</sup> According to Furuseth and Lapping, the study “examined the availability of agricultural land in the U.S., the extent and causes of agricultural conversion, and possible strategies to preserve farmland resources.”<sup>47</sup> Despite the controversy surrounding the findings of NALS concerning the amount of farmland actually needed to maintain projected required rates of agricultural production, and the exclusion from consideration of ancillary benefits of farmland protection such as environmental and aesthetic amenities, support stemming from the NALS findings helped pass the *Farmland Protection Policy Act* (FPPA) in 1981.<sup>48</sup>

The purpose of the *Farmland Protection Policy Act* (FPPA), according to Hal Hiemstra and Nancy Bushwick in *Plowing the Urban Fringe: An Assessment of Alternative Approaches to Farmland Preservation*, was “to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses and to assure that Federal programs are administered in a manner that, to the extent practicable, will be compatible with State, unit of local governments, and private programs and policies to protect farmland.”<sup>49</sup> The Act applies to construction projects on federal land, projects undertaken by a Federal agency excluding those related to national defense, and federally funded construction projects. It does not apply to

federally permitted or licensed projects, construction on land already zoned or otherwise committed for development, or private construction projects.<sup>50</sup>

Tom Daniels and Deborah Bowers explain the act's application in *Holding Our Ground: Protecting America's Farms and Farmland*: "Each federal agency must identify and review all construction projects using federal funds that would result in the conversion of farmland. Each agency must also determine if there are alternative location or project designs that would conserve farmland. And the agency must make sure that, as much as possible, the projects are consistent with state and local government programs and policies and private efforts to protect farmland."<sup>51</sup> However, the law does not require any action on the part of the agency to mitigate the adverse effect. Even if there is a finding of significant farmland conversion, the agency may proceed with the project without modification.<sup>52</sup>

#### The Land Evaluation and Site Assessment System

Additionally, under FPPA, the Department of Agriculture's Natural Resources Conservation Service (formerly the U.S. Soil Conservation Service) developed the Land Evaluation and Site Assessment (LESA) system to rate the quality of potentially impacted land for agricultural uses. Hiemstra and Bushwick explain the process for evaluating land subject to FPPA rules: "Land subject to a governmental proposal is first evaluated by its soil productivity, water conditions, and quality, relative to nearby cropland, for producing pre-selected locally grown crops. The land parcel site is then assessed for its economic and social importance. Sixteen criteria are specified and include proximity to an urban center; availability of infrastructure needed for nonagricultural use;

and whether the site is protected by state or local zoning, tax concessions, or similar laws promoting agricultural use. This site assessment step is designed to protect farmland that has high economic potential for continued production, and to discourage development that is not contiguous to existing urbanized areas.”<sup>53</sup>

Despite this thorough assessment, farmland is nevertheless left vulnerable to conversion, as the FPPA has no regulatory impact beyond evaluation and reporting. Richard Olson and Thomas Lyson, in *Under the Blade: The Conversion of Agricultural Landscapes*, call for the FPPA to be strengthened beyond evaluation to require modifications of projects which would result in significant loss of farmland.<sup>54</sup>

Because of its flexibility as an evaluation tool, LESA has been incorporated into many state and county land planning and farmland protection efforts.<sup>55</sup> Most states have used the LESA evaluation system to create a layer in GIS to map LESA data. Daniels and Bowers state, “[The] LESA map serves two purposes. First, it is driving land planning by both the state [Delaware] and its three counties. It is especially useful for locating public infrastructure to service development and to keep infrastructure away from good farming areas. Second, it is being used to identify where the state should purchase development rights on farmland.”<sup>56</sup> The concepts of urban service areas and purchase of development rights program as methods for preserving farmland will be discussed later in this thesis analysis.

In 1996, the federal government adopted the Federal Agricultural Improvement and Reform Act, creating a matching grant program with funding of \$35 million over seven years, for the purchase of conservation easements on prime or unique agricultural

land.<sup>57</sup> To qualify for the program, according to the American Farmland Trust, “State and local governments were invited to apply for 50-50 federal matching funds to pay for farmland protection transactions. They had to demonstrate a commitment to farmland protection – not just the protection of open space – and pledge matching funds. Easements must include a clause enabling the NRCS to enforce the easements if the state or local holder failed to do so.”<sup>58</sup> Conservation easements will be discussed later in this thesis research.

### State and Local Farmland Preservation Programs

Farmland preservation programs, which can employ both fiscal and regulatory tools, are typically administered through local jurisdictions. Usually, states delegate their regulatory authority over land use to their local governments. A few states, however, have chosen to maintain their authority, and have implemented state-wide land use planning programs to which localities must conform. “Mandatory integrated state programs are more effective than voluntary programs in preserving farmland because all landowners are required to participate in the program,”<sup>59</sup> state Furuseth and Lapping. It is their opinion that state-wide, comprehensive land use programs offer the best strategy for protecting farmland while allowing for growth: “As mandatory integrated state programs can restrict the number of nonfarm uses in agricultural areas without the risk of nonparticipants, they are more likely to protect a larger area of farmland...state programs have been adopted in Oregon, Hawaii, and Vermont.”<sup>60</sup>

States which have not implemented state-wide land use programs delegate regulatory control of land use to their local governments. Most states have some form of

farmland protection, say Daniels and Bowers: “States have authorized the use of agricultural zoning, agricultural districts, differential taxation, and Right-to-farm laws in response to land use conflicts between farmers and newcomers within the countryside.”<sup>61</sup> They continue with the following critique: “But at the edge, where a city or suburb meets the countryside, these incentives and land use controls have not succeeded in protecting farmland for more than a few years. Once the price of farmland rises far above what a farmer will pay for it, development is usually only a matter of time.”<sup>62</sup> Furuseth and Lapping add, “Tax incentives, the most ineffective set of farmland preservation strategies, are offered in every state and province. The ease of implementing tax incentives is one reason for their popularity. Tax incentives programs are voluntary and therefore politically safe, and publicly acceptable. Nonexclusive agricultural zoning is widely used for similar reasons.”<sup>63</sup> They identify political will and lack of funding as the primary reason for local governments’ weak approaches to farmland preservation: “Meanwhile, governments tend to avoid mandatory exclusive agricultural zoning which is politically risky... Similarly, high costs prevent governments from implementing PDR [Purchase of Development Rights] programs despite their proven effectiveness.”<sup>64</sup> Tax incentives, agricultural zoning, and purchase of development rights will be discussed later in this thesis research.

Local jurisdictions may employ a variety of tools and techniques to implement their farmland preservation programs. As mentioned above, some are more effective than others in preserving agricultural lands. Typically, the more tools a jurisdiction has at its disposal, and the better integrated the techniques are with one another, the more



successful the program will be. Furuseth and Lapping list the tools which might be implemented in an integrated farmland protection program, dividing them into two categories, fiscal and regulatory: “Fiscal approaches include programs that involve the use of tax and non-tax financial incentives to achieve farmland retention or actual preservation, while regulatory approaches involve the exercise of police power to foster farmland retention. The fiscal approaches include 1) tax reductions and incentives, 2) transfer of development rights (TDR), and 3) purchase of development rights (PDR). Regulatory approaches that have implications for farmland preservation include 1) agricultural zoning, 2) creation of agricultural districts, 3) requirement of environmental impact analysis, 4) imposition of impact fees, 5) growth management and 6) right-to-farm legislation or ordinances.”<sup>65</sup> Many of these tools will be discussed later in this thesis.

### The Comprehensive Plan

According to Daniels and Bowers, there are four main elements which local jurisdictions employ to plan for land use: 1) the comprehensive plan, 2) the zoning ordinance, 3) the subdivision regulations, and 4) the capital improvement program.<sup>66</sup> The comprehensive plan, they continue, “includes an inventory of land uses, an analysis of future needs, a general vision of the community over the next ten to twenty years, and specific goals and objectives to make the vision a reality and assure that needs are met.”<sup>67</sup>

The comprehensive plan is the guiding document for a locality’s land use decisions over the next ten to twenty years, although it is periodically updated to reflect current political, economic, land use and development conditions. The land uses identified in the comprehensive plan are regulated and implemented through zoning

ordinances, division of land is administered through subdivision ordinances, and planned infrastructure is funded through the capital improvement program. “Through comprehensive planning, state, provincial and local governments may regulate land use and facility location, and adopt policies regarding transportation, housing, social issues and other public interest concerns,”<sup>68</sup> state Furuseth and Lapping. They maintain, “The general purpose of comprehensive planning as a farmland preservation strategy is to reduce the relative attractiveness of farming areas for development.”<sup>69</sup> By planning where they would like growth and development to occur, zoning accordingly, and keeping public utilities such as water and sewer restricted to these identified areas, local governments are able to make farmland conversion less attractive to developers.

The comprehensive planning process involves some form of public participation to assess the community’s vision for the future of the county, either through surveying, holding public meetings to solicit input, or appointing a representative advisory committee to help shape the comprehensive plan.<sup>70</sup> Sometimes the vision is more easily agreed upon than the implementation. Daniels and Bowers warn, “In the comprehensive plan process, it is common to hear many people speak about the need to protect ‘rural character.’ By this, they mean open space, the farms, the unhurried pace of life, and the older buildings. Yet when decision makers suggest strong zoning measures, landowners and others often respond, ‘We want to keep our rural character without land use controls or with as little control as possible.’”<sup>71</sup> In the urban fringe, without any regulatory check, such as low-density agricultural zoning, the rural character a community so prizes can quickly be converted to sprawling suburbs. Furuseth and Lapping concluded, “The best

chance for successful farmland preservation may be a comprehensive growth management system which is developed through sound planning and combined with one or more incentive programs and/or land use controls. Integrated programs embodied in comprehensive growth management strategies provide a means for directing development away from farmland and placing it where it is most appropriate.”<sup>72</sup> Additionally, in order to move beyond the conservation of land simply as open space and preserve working rural landscapes, this thesis argues that it is imperative for local governments to also provide economic development support for agricultural activities, as discussed later in this thesis analysis.

#### Urban Growth Boundaries and Urban Service Areas

An urban growth boundary is a land management strategy which directs higher density development away from the rural areas of the urban fringe and toward the suburban-urban core, through appropriate zoning and restricting public infrastructure and facility expenditures to urban service areas. By keeping sewer and water lines out of rural areas, local jurisdictions can disincentivize development in these areas. Daniels and Bowers explain, “The tool that has been put in place to promote more compact development is the urban growth boundary or urban service area. The purpose of a growth boundary or service area is: To contain urban development within planned urban areas where basic services, such as sewers, water facilities, and police and fire protection, can be economically provided.”<sup>73</sup>

An urban growth boundary is one regulatory tool which can be used to implement the comprehensive plan. Through the land use planning process, population growth is

projected out twenty years. This projection should be completed before implementation of an urban service area and growth boundary. The steps involved in this process are identified by Daniels and Bowers: “Before drawing the boundary, the city and county should make three studies: 1) a projection of population growth, housing needs, and land needs for residential, commercial, industrial, and public spaces and buildings. This is the kind of projection and determination of land needs made in a community comprehensive plan; 2) an inventory of public facilities, their capacity, and the projected needs. This is simply a capital improvements program; 3) an estimate of a twenty-year supply of buildable land, taking into consideration topography, land needs, availability of public facilities, and a ‘market factor’ of 10 to 15 percent additional land. The market factor is a margin of safety to make sure that land supplies are not constrained.”<sup>74</sup> Ensuring there is enough buildable land within the service area, and that densities are set high enough to accommodate both residential and commercial long-term growth, is vitally important for the long-term success of the urban growth boundary. “This long-term supply of land avoids artificial shortages that could drive up land prices. On the other hand, the growth boundary should not be drawn so loosely as to designate too much for development and create sprawl,”<sup>75</sup> caution Daniels and Bowers.

The benefits of urban service areas are two-fold: on the one hand, publicly funded services are maximized and implemented efficiently, and on the other, because there isn’t publicly subsidized infrastructure going into the rural areas, growth is curbed and the land remains undeveloped. “Without public sewer and water lines snaking out into the countryside, sprawl onto farmland is curbed. The provision of infrastructure is efficient

and cost effective,”<sup>76</sup> Daniels and Bowers observe. Containing public sewer and water lines in the urban service area is critical to directing development inside the service area and away from farmland. Implementing low-density agricultural zoning outside the urban service area is equally important in preserving rural working landscapes. “The county must implement adequate agricultural zoning or conservation zoning on lands outside of the growth boundary. This will protect not only farmland but also water supplies, wildlife habitat, and sensitive rural lands. Agricultural zoning outside the growth boundary can ensure that large residential and commercial developments do not simply leapfrog over the growth boundary,”<sup>77</sup> Daniels and Bowers assert.

It is important to keep in mind urban growth boundaries and urban service areas are only planned typically for twenty years out in the state of Virginia but are reviewed every five years. A jurisdiction’s land needs are bound to change, especially if the region is one of rapid growth and expansion as exists on the mid-Atlantic coast today. The counties adopting these ordinances must have the political will to hold to them. Olson and Lyson point out the advantages good, long-term growth management can have for both the rural and urban communities: “A hard, fixed edge between development and agricultural land provides a secure interface that enhances the locational advantages of farming on the edge, and allows the formation of long-term relationships between farmers and consumers.”<sup>78</sup>

Farming on the urban fringe is difficult, if not unsustainable, without such assurances provided by urban service areas and low-density agricultural zoning (among other things). Olson and Lyson point out: “Under current economic conditions, farming

cannot compete with development for access to and use of land. Because development pressures are greatest at the urban edge, farming will always be in retreat unless a legislative line is drawn beyond which [intense, urban] development cannot occur.”<sup>79</sup> That legislative line is the urban growth or urban service area boundary. Daniels and Bowers conclude: “Urban growth boundaries, urban service areas, and village growth boundaries hold considerable promise as tools to organize the location of urban-type development. These boundaries can be effective in controlling the location of infrastructure, limiting costly sprawl, and helping to protect greenbelts of farmland and open space around cities.”<sup>80</sup> Additionally, they provide stability in the form of predictability in the regulatory framework for land use which is essential for agricultural business owners to make planning decisions.

### Zoning Ordinances

Zoning ordinances are the primary land use planning tool jurisdictions use to implement their comprehensive plan, and designate land uses. Local governments divide land within their jurisdictions into different zones based on current and projected land uses identified in the comprehensive plan, and then stipulate the development density and activities which can occur within each distinct classification. Zoning ordinances are meant to prevent incompatible uses such as industrial activities located near a school or residential subdivision. They can also be used to proactively channel development to where supporting infrastructure already exists and away from land identified for agriculture, resource protection, or open space use.

Olson and Lyson explain zoning ordinances, and the origins of local governments' authority to enact them, in this way: "The basic premise of zoning is the separation of land uses – each type of land use is given its own zone in which other land uses are prohibited. Conflicts between incompatible uses are thus avoided. Differing compatible uses may be permitted together in mixed zones. The principal legal basis for zoning is the *police power* – the authority of government to enact laws promoting the health, safety, morals and general welfare of its citizens. The police power is conferred on the states by the *Tenth Amendment* to the United States Constitution, and the states, in turn, delegate the police power to local governments."<sup>81</sup> In addition, zoning ordinances can be used to control growth and maximize the efficiency of public infrastructure, assert Daniels and Bowers: "Another purpose of zoning is to promote orderly growth of the community, which will help control the cost of public services and maintain a pleasing appearance. A local government may adopt zoning to implement the county or community comprehensive plan."<sup>82</sup>

#### Local Historic Overlay Districts

Localities may use a special zoning ordinance called a Historic Overlay District (HOD) to designate areas of particular historical importance for special protections through development scrutiny and review. Historic Overlay Districts are areas defined by their historic characteristics that are recognized as being notable and of significance to warrant preservation. These districts can be urban areas, archaeological sites, or rural landscapes. Land use, buildings, and structures in these districts are subject to the underlying zoning ordinance, but development and land use decisions within these

districts receive an additional layer of regulatory scrutiny by a special review board created to monitor the land use and development activities in the Historic Overlay Districts.

The planning resource guide for the state of Virginia, *Managing Growth and Development in Virginia: A Review of the Tools Available to Localities*, describes the effectiveness of Historic Overlay Districts on preserving the integrity of these areas: “The establishment of a Historic Overlay District provides a great deal of authority to a locality in affecting visual character of a neighborhood in terms of architectural and urban design, going well beyond the accepted purview of conventional zoning provisions which deal merely with the height, bulk, use, and intensity of buildings.”<sup>83</sup> Each HOD has its own specific design guidelines which the review board uses to evaluate proposed changes within the HOD. Historic Overlay Districts differ from Rural Historic Districts listed in the National Register of Historic Places. A Historic Overlay District is a local zoning ordinance designation, and therefore, contains regulatory specifications and oversight provisions, while National Register Rural Historic Districts do not offer these same protections. A local government may decide to create a Historic Overlay District in order to give regulatory protection to a National Register Rural Historic District, but they are not obligated to do so.

### Agricultural Zoning

An effective farmland protection program, for agricultural land which has not been placed in a Historic Overlay District, begins with the agricultural zoning ordinance. Daniels and Bowers declare, “Agricultural zoning is the most common land use



technique for limiting the development of farmland...Agricultural zoning has become the first line of defense in most communities with successful farmland protection programs.”<sup>84</sup> For most local governments, the ability to limit development in agricultural areas through agricultural zoning is one of the strongest tools for supporting the continuation of agriculture on the urban fringe. “Although protecting the farmland base is but one part of maintaining a viable farm economy, the farmland is one factor over which local governments have some control,” Daniels and Bowers continue, “Local governments can’t influence national farm policy, for example, but through zoning, localities can provide a future for agriculture by protecting the land base that allows agriculture to happen. Agricultural zoning is attractive because it is inexpensive to put into place, and it can quickly protect thousands of acres.”<sup>85</sup> However, the minimum lot sizes must be large enough to support agricultural uses, and agricultural zoning should be used outside the Urban Service Area where sewer is restricted, in order for the zoning to be effective.

There are two types of agricultural zoning: exclusive zoning and non-exclusive zoning. Exclusive agricultural zoning happens far less frequently because it is so restrictive in the land use activities allowed. Nonexclusive zoning is by far the more widely used agricultural zoning; because of its flexibility, it is the most politically palatable. As Daniels and Bowers explain, “In an exclusive farm zone, landowners may construct only farm buildings or farm-related housing...This type of agricultural zoning avoids the problem of leapfrog and buckshot development that can fragment farmland. Development is kept at a distance and conflicts between farms and nonfarm neighbors are

kept to a minimum.”<sup>86</sup> There are few jurisdictions which use exclusive agricultural zoning. Furuseth and Lapping posit, “As most municipalities have a growth mentality as opposed to a ‘preservation’ mentality, few have incorporated [exclusive] agricultural zones into their zoning bylaws...Local agricultural zoning ordinances are most often ‘nonexclusive’ meaning they limit, rather than prohibit, nonfarm development in an agricultural zone...Nonexclusive agricultural zoning is more popular than exclusive agricultural zoning, most likely because it [agricultural use] is not mandatory and therefore more politically acceptable.”<sup>87</sup> As stated earlier in the discussion on the comprehensive plan, most citizens are in favor of preserving the rural character of a place, but they resist restrictive land use controls on their own property.

Nonexclusive agricultural zoning is more palatable because it attempts to balance agricultural uses and other land uses including some development; therefore, it can take many forms. Olson and Lyson provide the following catalog of the possible configurations a non-exclusive agricultural zoning ordinance might take: “Agricultural zones [may] include: Large lot zones where only one dwelling unit is permitted on each parcel with minimum parcel sizes mandated from 10 acres to 200 acres or more; area-based allocation zones where the number of permitted dwellings is based on the size of the overall parcel, but where the lots are required to be small (1-3 acres) and clustered so as to preserve the maximum amount of farmland; exclusive agricultural zones where only farming activities and associated residential and commercial uses are permitted; conditional use zones where only farming activities are permitted by right, but other activities may be permitted as special uses upon an affirmative showing that they will not

conflict with the agricultural uses.”<sup>88</sup> Lot sizes that are large enough to maintain the continuation of agricultural uses are of primary importance in agricultural zoning.

### Minimum Lot Size

As explained previously, the primary focus of non-exclusive agricultural zoning, or minimum lot size zoning, is not to restrict allowed activities. Rather, its objective is to ensure lot sizes large enough to sustain agricultural uses and to discourage non-agricultural development. As Daniels and Bowers explain, “The most common type of agricultural zoning is called minimum-lot-size zoning, which says that a farm cannot be broken into parcels below a certain size for farming purposes...The idea is that if a minimum lot size is large enough, it should be too expensive for residential buyers. Also, a large minimum lot size should help keep farmland in blocks big enough to farm profitably, either individually or as a group.”<sup>89</sup>

This second point is important. To create a favorable and supportive economic environment for farming to occur, there must be enough agricultural activity for the services which support farming to remain in an area. Daniels and Bowers state, “To be effective, an agricultural zone should apply to enough contiguous or nearly contiguous farms to allow efficient farming and to support the feed mills, hardware and seed stores, farm machinery dealers, and food processing and transportation businesses. This will help retain agriculture as an industry in the local economy.”<sup>90</sup> They maintain, “Often zoning is not designed to protect farmland in large blocks. Even in the countryside far away from public sewer and water, it is not uncommon to find farmland zoned for one acre and two-acre minimum lot sizes. This type of zoning is really large-lot residential

zoning, which is aimed at enabling the farmer to sell the farm piece by piece until it is all gone from farming.”<sup>91</sup>

As exemplified in this last scenario, farmers are often opposed to large-lot agricultural zoning, asserting that this sort of zoning restricts their rights as landowners to dispose of their property as they see fit. They would like to maintain the right to subdivide their land not only for philosophical reasons (i.e. property rights) but for pragmatic reasons, as well. “Many farmers are unenthusiastic about agricultural zoning because it restricts the use of their land without offering compensation. The concern of farmers over private property rights is really a matter of wanting to have options. Most farmers have the majority of their wealth tied up in their land and view their land as both a retirement fund and an insurance policy,”<sup>92</sup> express Daniels and Bowers.

Olson and Lyson contend that the more robust the agricultural economy, the more likely farmers are to support agricultural zoning as a way of protecting their farms. On the other hand, when farmers are struggling, subdividing land and selling off lots can offer an infusion of quick cash to keep a farm afloat. Olson and Lyson offer, “Farmers who are making money and intend to stay in agriculture are more likely to support strict agricultural zoning. They see such zoning as a way to help maintain the critical mass of farmland and to isolate farmland from conflicts with other land uses. Farmers who are in financial distress are less likely to support such zoning. They wish to preserve all of their options including the sale of their land for development.”<sup>93</sup> Economic development programs which support the local farming economy should incentivize farmers to support large-lot agricultural zoning.

### Strategies for Combatting Impermanence Syndrome

An opposing scenario to financial distress is often motivating a farmer to convert their land for development, leading to a disinvestment in property improvements. When rising demand for land has inflated land prices well beyond their agricultural value and encroaching suburban development has caused conflict with non-farming neighbors and destabilized the farming community, there is a point where farming no longer makes economic sense and farmers stop making capital investments in anticipation of selling their land for development. This phenomenon is referred to as ‘impermanence syndrome.’ “The anticipation of additional development and higher land prices reduces the owner-operator’s planning horizon and discourages investments in equipment, technology, and management,” say Furuseth and Lapping. “The only investments which are made are short-term where the producer is certain of recouping their capital. Thus, important to an agricultural production region is land use stability and minimum uncertainty about the long-run profit outlook,”<sup>94</sup> they conclude.

Daniels and Bowers describe impermanence syndrome as a process, rather than an event, happening to a farming community under development pressure: “The impermanence syndrome is not an all-or-nothing situation but a matter of degree, involving at least four factors. The more of these factors that exist at the same time, the greater the likelihood that farmland will be sold for development: 1) proximity to public sewer, water, and major roads; 2) proximity to shopping and job centers; 3) more farmland is rented than owner-operated; [and] 4) weak financial condition of the landowners.”<sup>95</sup>

Furusetth and Lapping expound, “This progression of events manifests itself in the so-called ‘impermanence syndrome’ in which the remaining agricultural operators become pessimistic about the future of agriculture and the next generation of farmers leaves pursuing other careers. At this point, additional incentives are required such as the purchase of the owner’s development rights.”<sup>96</sup> Urban growth boundaries which exclude public sewer and water lines in agricultural zones, large minimum lot agricultural zoning, along with purchase or transfer of development rights programs, and local government agricultural economic development programs, discussed later in this thesis research, are some of the most effective tools the preservation community can use to achieve land-use stability for agricultural land on the urban fringe and assuage impermanence syndrome.

#### Agricultural Districts

Agricultural districts require a separate ordinance beyond the agricultural zoning ordinance. They are voluntarily participatory and vary in their structure of benefits and restrictions from locality to locality. As Olson and Lyson explain, “Agricultural district programs should not be confused with agricultural zoning. Agricultural districts are voluntary associations of farms in a particular geographic area formed to keep land in agriculture...Farmland owners join agricultural districts for fixed, renewable terms.”<sup>97</sup>

Daniels and Bowers list the potential benefits of participation in an agricultural district: “In a district, landowners may receive: property tax relief...; limits on sewer, water, and drainage taxes; exemption from local nuisance ordinances that would restrict normal farming practices (which strengthens the right-to-farm), and possible alteration of local regulation of farming operations; a state-level review of any proposed eminent

domain action within the district; limits on the extension of public sewer and water lines into the district; limits on the annexation of farmland by a city; eligibility to sell development rights to a county or state.”<sup>98</sup>

Furusetth and Lapping assess agricultural districts in this way, “Agricultural districting is generally praised for its political, public and landowner acceptability, its low operating costs, its suitability to perpetuating commercially viable farming enterprises, and its ability to avoid farm-nonfarm conflicts. The biggest drawbacks of agricultural districting programs are that they are voluntary and therefore dependent on landowner participation.”<sup>99</sup> When used in combination with other land use management tools, however, Daniels and Bowers argue that agricultural districts can be an effective tool in discouraging agricultural land conversion: “Agricultural districts can be used together with agricultural zoning or a purchase-of-development-rights program, or both. Agricultural zoning without the added protections of an agricultural district could leave farm vulnerable to eminent domain and legal suits over normal farming practices. A voluntary agricultural district combined with the regulatory power of an agricultural zone sends a powerful message to developers to look for other land to develop.”<sup>100</sup>

### Right-to-Farm Laws

Right-to-farm laws supplement the incompatible use protections and minimum lot sizes of agricultural zoning, and the possible tax benefits and protection against state actions of agricultural districts, with the added protection of limiting the ability of non-farming neighbors to file nuisance claims against farmers. Often, urban transplants are bothered by the early-morning sounds, slow-moving equipment on the roads, and rather

pungent smells of farming activities. As Furuseth and Lapping explain, “Particularly on weekends they are disturbed by the noise from the operation of farm machinery and by some of the odors from their neighbor’s dairy operations or hog lots... In this environment, farmers must work hard to fend off new ordinances which would circumscribe how they farm and be prepared to face lawsuits based upon the principles of nuisance law.”<sup>101</sup>

For this reason, state Daniels and Bowers, “Every state has a Right-to-farm law that attempts to provide farmers with legally defensible protection from nuisance suits for standard farming practices.”<sup>102</sup> Furuseth and Lapping go on to point out, “Whereas right-to-farm laws do not directly translate into farmland preservation, they are critically important in areas where farmers are in proximate contact with non-farm neighbors since they preclude frivolous legal actions and save farmers the time and financial costs of litigation. Similarly, implementation of right-to-farm legislation fosters a culture of agriculture that is an essential element for the continuance of viable farms and the maintenance of farmland.”<sup>103</sup>

### Real Estate Tax Relief

Some form of real estate property tax relief is offered by all fifty states to decrease the burden on farmers as an economic incentive not to convert their land for development. Furuseth and Lapping attest to the necessity of tax relief being part of a broader farmland protection program: “While not tantamount to farmland preservation, farmland property tax relief is an essential aspect of any effort to retain agriculture on the urban fringe. All states have some form of property tax reduction or differential that helps



to retain farmland. These include preferential or use value assessment and circuit breaker approaches.”<sup>104</sup> They concede that tax incentives alone are insufficient to stop farmland conversion, though: “Tax incentives, the most ineffective set of farmland preservation strategies, are offered in every state and province. The ease of implementing tax incentives is one reason for their popularity. Tax incentives programs are voluntary and therefore politically safe, and publicly acceptable.”<sup>105</sup> The development of land on the urban fringe requires increased public services such as utilities, roads, public safety, and schools, which usually leads to increased taxes through both rising land valuations and tax rates. The following is a discussion of the different forms of real estate tax relief programs local jurisdictions implement to make taxation more equitable for farmers who may own a lot of land but do not necessarily require the public services real estate taxes help pay for.

#### Use Value or Differential Tax Assessment

Use value assessment taxation programs allow localities to assess and tax farmland for its value in its current use, agricultural, rather than on the value of the land in its potential highest and best use, the standard valuation measure. In areas under high development pressure, this can mean a significant reduction in real estate taxes assessed on a property shrinking the tax burden for landowners who wish to keep their land in agriculture. Olson and Lyson explain further, “There are three different forms of differential assessment – preferential assessment, deferred taxation and restrictive agreements. Each type can result in substantial tax savings for farmers, which may allow a farmer to stay in business and avoid selling out to developers.”<sup>106</sup>

Furusetth and Lapping maintain that “Differential tax assessments attempt to reduce the tax burden farmers face so that farming remains a profitable occupation.”<sup>107</sup> They go on, “Farmland assessment [programs]...allow for the assessment of farmland at its use value in agriculture, a value which is generally much lower than the market value of the property, particularly at the urban fringe. Land values are typically high at the urban fringe. Consequently, without use value assessment, taxes on farmland would be prohibitively high and hinder farm viability...Use value assessment brings farmland taxation down to a level more commensurate with farmland’s consumption of local services and farmers’ ability to pay.”<sup>108</sup>

Daniels and Bowers explain how the determination of farmland value is made: “The farm use-value is determined from soil productivity ratings included in the Natural Resources Conservation Service soil surveys and from net income per acre. Commonly, state tax offices or agriculture departments estimate farmland value by computing annual net income per acre capitalized by an interest rate that reflects the return on capital in other investments.”<sup>109</sup> They continue, “Most states require farmland owners to apply for tax relief, showing a minimum acreage (usually 10 acres) and proof that the land is being actively farmed. However, there is no penalty to the landowner for withdrawing from the preferential assessment program or for converting farmland to nonfarm use,”<sup>110</sup> with preferential assessments.

### Deferred Taxation

Unlike purely preferential assessment programs, there are penalties for farmland conversion under deferred tax and restrictive agreements programs. As referenced above,

a difficulty with purely preferential assessment programs, Daniels and Bowers indicate, “...is that it may offer property tax breaks to land speculators and farmers acting as speculators who are waiting for the land to ‘ripen’ in value before selling for development.”<sup>111</sup> Without the safeguard of a rollback penalty if the land is converted, preferential assessment programs are easily manipulated, say Olson and Lyson: “Differential assessment programs have frequently been abused by land speculators who buy farmland, lease the property to a neighboring farmer, and pocket the tax savings while waiting for the best time to sell or develop the property. Some programs recapture a portion of the unpaid tax if the property is developed, others do not.”<sup>112</sup> Daniels and Bowers advocate for deferred taxation programs rather than the simple preferential assessment because of the mechanism in place to check the manipulation of the tax benefit program: “Twenty-nine states offer deferred taxation to farmland owners. Deferred taxation combines preferential assessment with a rollback penalty to recapture some or all of the property tax benefits if the land is converted to a nonfarm use. That is, property taxation based on the farmland’s highest and best use is deferred until the land is no longer used for farming.”<sup>113</sup>

### Restrictive Agreements

Another way of guarding against the abuse that can occur in a purely preferential tax program is through the use of restrictive agreements, where the landowner agrees to remain farming the land for a certain period of time in order to receive the tax benefits. If the land is converted, the landowner must pay back the taxes that would have been owed if the land had been assessed for its highest and best use. Daniels and Bowers explain,

“[Some] states use restrictive agreements to provide preferential assessment through a legally binding contract...In the agreement, the landowner consents to restrict the use of the land for a specific period of time in return for preferential taxation or for a freeze on the actual amount of property taxes owed. Most contract periods run for 10 years, and a rollback penalty is imposed if the land is converted to a nonfarm use before the contract expires.”<sup>114</sup> However, this penalty is not typically enough of a deterrent against conversion when land prices are high enough, as is often the case with farmland under development pressure.<sup>115</sup>

### Circuit Breaker Tax

The circuit breaker is a different approach to giving preferential tax treatment to farmers, but it is tied to the farmer’s actual income and income taxes. As Furuseth and Lapping explain, “The circuit breaker approach is also utilized to preserve farm viability and, hence retain farmland. Under this approach, a farmer receives an income tax credit for property taxes that are in excess of a specified percentage of household income.”<sup>116</sup> Furthermore, they continue, “The tax value is scaled according to the personal income and property tax burden of the farmer, thereby providing lower income farmers with the greatest savings.”<sup>117</sup>

### Tax Relief Conclusions

Tax relief works best as a farmland conservation measure when it is used in conjunction with the regulatory measures previously discussed. At a minimum, agricultural land receiving tax benefits should be zoned for agricultural use, argue

Daniels and Bowers: “Simply put, if land is receiving a farm use-value tax break, the land should be zoned as farmland. Otherwise, preferential assessment, without agricultural zoning to limit development potential, is a recipe for farmland conversion.”<sup>118</sup> Ideally, however, they say, “[A] package of planning, zoning, and deferred taxation is likely to be more successful in retaining land in farming than reliance on property tax breaks alone.”<sup>119</sup>

Furuseth and Lapping echo this sentiment, calling for a comprehensive farmland conservation management strategy which incorporates regulatory measures and economic incentives: “No matter what criteria are used to measure effectiveness, most land use analysts agree that tax incentives are the least effective farmland preservation tool, while comprehensive integrated strategies, which incorporated both incentives and land use controls, offer the most promise for long-term preservation. In addition, most agree that mandatory, rather than voluntary, strategies offer better protection for farmland.”<sup>120</sup>

### Purchase of Development Rights

A Purchase of Development Rights (PDR) program is an incentive program states and local jurisdictions can implement for farmland conservation. PDRs restrict the ability of farmland to be developed by compensating the landowner the difference between the value of the land if it were sold for development and the value of the land if it remained in agriculture. A conservation easement is then placed on the deed, permanently restricting the land from development. “In PDR programs, farmers whose land is located in areas planned for long-term agricultural use are paid the difference between the value of their land for development purposes and its value for farming. Conservation easements

are then placed on the farmland restricting its use to farming and related purposes, usually in perpetuity,” explain Olson and Lyson. “The farmers retain ownership of their land subject to the restrictions and continue to farm. The land can be sold or willed to an heir, but the easement restrictions run with the land and are binding upon all future owners.”<sup>121</sup>

To better understand how PDRs work, a helpful description often used in the literature is to think of landownership as owning a bundle of rights, which can be separated from each other to be sold or leased by another interested party. With PDRs, the right that is sold is the right to develop the land, and the interested party purchasing that right is usually either the state or local government. Daniels and Bowers explain, “When landowners sell development rights to their local or state government, they give up only the right to develop their land. They retain all other rights and responsibilities that go with landownership, such as the right to sell the property and liability for property taxes. Despite the government’s investment in the land, it remains private property and no public access is allowed. But landowners must practice good stewardship, and the property will occasionally be visited and inspected by the agency holding the development rights.”<sup>122</sup>

### Benefits to the Farmer

For the farmer who wishes to remain farming their land but is feeling the pressures of encroaching development – rising land values, rising taxes, loss of community and support services – the cash infusion PDRs bring can be a great relief and provide enough compensation to continue farming. “Selling development rights is a way

to obtain cash from the land, a way out of being land rich and cash poor without giving up any part of the farm or the family's way of life," say Daniels and Bowers.

"Landowners typically use the payment to pay off debts, invest in the farm, or set up a retirement fund," they continue. "A farm with no development rights remaining may be assessed lower for property tax purposes. Also, the sale of development rights reduces the value of the farm for estate tax purposes, making it easier to pass the farm to the next generation."<sup>123</sup>

Furusetth and Lapping enumerate the benefits of PDRs to a farmer: "...the purchase of development rights programs can facilitate a number of situations including: 1) retirement from agriculture – sell the development rights but retain and live on the land; 2) intergenerational transfers and estate planning whereby a family member can continue the farm operation and the other siblings are reimbursed with the development rights; 3) the purchase of the land for agricultural purposes with the development rights removed; and 4) an internal source of credit for the farmer."<sup>124</sup>

### Public Benefit

Ideally, Olson and Lyson assert, "The most successful PDR programs will likely be those that purchase development rights in areas already subject to a good comprehensive plan and restrictive agricultural zoning. The planning will have reduced the rise of values by keeping public infrastructure out of the agricultural area. The zoning will have regulated away part of the farmland's development value leaving less to be compensated by the PDR program."<sup>125</sup> However, Furusetth and Lapping paint a more realistic picture of when PDR programs are typically implemented: "By the time urban

development reaches the level where PDR becomes appropriate as a farmland retention technique, several forces have been put in motion. The outward movement of urban development into agricultural regions has been reflected in the rising market value of farmland for several years. This, in turn, raised taxes on the land initially and eventually on both land and buildings through an increase in the effective tax rate to provide local services to the new urban residents. This tends to discourage investment in new and improved buildings,”<sup>126</sup> as farm owners bide their time waiting for their land to be converted. This phenomenon, known as ‘impermanence syndrome,’ was discussed previously in this thesis analysis.

For local jurisdictions, PDR programs, when used in conjunction with regulatory tools such as agricultural zoning and agricultural districts, can be an effective way to support the continuance of the agricultural landscape and economy. Furuseth and Lapping list the goals of PDR programs for local jurisdictions: “1) maintain a minimum critical mass of prime farmland; 2) encourage agricultural producers to expand their operations to a size that will minimize costs; 3) ensure that there will be sufficient business volume to maintain the agribusiness infrastructure; 4) provide for the adoption of appropriate technology; 5) serve as a source of internal credit; 6) facilitate the transfer of farmland as farmland; and 8) stabilize the land base and create an atmosphere of optimism.”<sup>127</sup> Olson and Lyson explain the need to target farmland for PDRs in order to address the formation of a critical mass of farmland to be preserved to support a positive economic climate: “Isolated, fragmented farms cannot function well. They need to be part of a functioning agricultural landscape. Preservation programs such as Purchase of



Development Rights that obtain easements for individual farms must be targeted to areas where a critical mass of farmland and farm infrastructure can still be maintained.”<sup>128</sup>

Daniels and Bowers believe PDRs can create an environment where the critical mass of farmland needed to sustain an agricultural economy can be achieved: “[I]n a farm community of, say, a five-mile radius, when a few farmers sell their development rights, they can influence and inspire others. Eventually, several landowners can create a block of contiguous preserved farms that can mean the difference in the community succumbing to sprawl or remaining agricultural. In counties where PDR has been practiced for ten or more years, regions of preserved farms have begun to emerge and are stabilizing local agricultural economies. Because the land is restricted in perpetuity, the result is substantial – with the cost of buying the easement paying for itself in less development to service, and active farming economy, and a beautiful landscape year after year, decade after decade.”<sup>129</sup> Some of the criticisms of PDR programs are they are too expensive to operate, especially on the urban fringe where the value of land is high, and public funds are used to pay a private individual for their development rights.

#### Transfer of Development Rights

Because farmers are directly compensated for the potential value they forfeit by giving up the development rights of their land, PDR programs are costly to operate. They are often funded through state and local bonds or dedicated real estate transfer taxes.<sup>130</sup> “To avoid the high cost of PDR programs,” say Furuseth and Owens, “some jurisdictions have adopted [Transfer of Development Rights] TDR programs whereby development rights in an agricultural preservation district are transferred to a designated development

district. Despite their low costs and proven effectiveness, TDR programs are relatively rare in North America, possibly because of their administrative complexity.”<sup>131</sup>

Transfer of Development Rights (TDR) programs are conceptually similar to PDRs in that they separate the development rights of property from the property itself. In the case of TDRs, the jurisdiction is not the entity purchasing the development rights; rather, the development rights are sold to a developer seeking a higher density zoning on a parcel in an area the jurisdiction has specified for development. Daniels and Bowers explain the workings of TDR programs as follows: “A local government creates a market in development rights by defining ‘sending areas’ designated for preservation and issuing transferable development rights ‘tickets’ to landowners in sending areas. Landowners receive transferable development rights based on the number of acres owned, such as one right per 5 acres. The transferable development rights cannot be used to develop land in the sending area. Instead, the government identifies ‘receiving’ areas and requires that developers who wish to build at increased densities in the receiving area first purchase a set number of transferable development rights tickets from the landowners in the sending areas.”<sup>132</sup> “The landowners who purchase the development rights are then permitted to develop their receiving zone properties to higher residential or commercial densities than would otherwise be allowed. When properly implemented, the program will create a market in the development rights,”<sup>133</sup> Olson and Lyson conclude.

#### Necessary Conditions for a Successful TDR Program

As previously stated, TDR programs are administratively complicated. A jurisdiction contemplating implementing a TDR program will need to meet certain

regulatory conditions before TDRs can be initiated. “The transfer of development rights, unlike other farmland protection tools, really cannot be used just by itself. In fact, TDR requires several complementary tools in order to be successful,” explain Daniels and Bowers. “As a first step, the county or municipality must have a comprehensive plan that identifies, on a map, areas of farmland and open space for protection and places where future growth can be accommodated. Next, zoning ordinances must downzone land in the protection areas (the TDR sending areas) to reduce the possibility of nonfarm development,”<sup>134</sup> they continue.

In order for TDR programs to be successful, Daniel and Bowers maintain, “zoning should also encourage development in the growth area (the TDR receiving areas). Land in the sending area should qualify for farm use-value property taxation to reflect the limited use of the land. And agricultural districts in the sending areas are useful to strengthen the right-to-farm and discourage the intrusion of public sewer and water.”<sup>135</sup> They conclude, “The transfer of development rights is perhaps the most challenging farmland preservation technique to design and implement. One farmland protection expert jokingly refers to TDRs as the ‘nuclear power’ of the farmland protection movement: If TDRs worked as well in practice as they do in theory, all of our farmland protection problems would be solved.”<sup>136</sup>

### Land Trusts and Conservation Easements

#### Land Trusts

Land trusts are private, non-profit organizations which exist to ensure the perpetuation of natural and cultural resources for future generations. Land trusts often

work in cooperation with state and local governments to coordinate conservation and preservation efforts. “A land trust receives an official tax-exempt status from the Internal Revenue Service under section 501(c) (3) of the Internal Revenue Code. Land trusts are considered educational and ‘charitable’ organizations with bylaws, a board of directors, and a paid or volunteer staff,”<sup>137</sup> according to Daniels and Bowers. “The mission of each land trust is defined in its bylaws. Some land trusts seek to protect land that has natural, scenic, or recreational value,” they go on. “Other land trusts focus on protecting historic landscapes and buildings. And still others are involved in protecting farm or forest lands. The American Farmland Trust, for example, has the dual purpose of stopping the loss of productive farmland and promoting farming practices that ensure a healthy environment.”<sup>138</sup>

The primary land conservation tool of land trusts for the protection of farmland is the conservation easement. Land trusts maximize their resources for the preservation of land by “purchasing a conservation easement, by accepting the donation of a conservation easement, or through a bargain sale of part cash payment part donation, a land trust acquires an interest in a property. This way, the land trust can protect land at a cost far below its fair-market value,”<sup>139</sup> say Daniels and Bowers. Accordingly, they continue, “A land trust may receive gifts of property and donations of development rights and a land trust may purchase property and development rights to land. (Land trusts prefer to use the term conservation easements rather than development rights.) And a land trust may resell land and conservation easements, usually to a local, state, or federal government agency. Because a land trust is a tax-exempt organization, donations of

money, property, and conservation easements qualify as federal income tax deductions for the donors.”<sup>140</sup> The donation’s qualification for federal income tax benefits is a great economic incentive for many landholders to place conservation easements on their properties.

### Conservation Easements

A conservation easement is an agreement where a landowner voluntarily gives up some or most of the development rights on a property that they possess by-right in order to ensure the property’s conservation in the future. Conservation easements are legally binding deed restrictions and can be tailored to the unique natural, cultural, or historical qualities of a specific piece of property which are in need of protection. They are usually established in perpetuity and remain with the deed as the land passes to new ownership.

Conservation easements can be made either through donation, purchase (PDR) or lease. Because a landowner is giving up development rights on a property, they often expect a return for that forfeiture. Some local and state governments have set up funds using the sale of bonds in order to purchase conservation easements, called purchase of development rights, or PDRs, as discussed previously in this thesis analysis. By and large, though, non-profit land trusts conduct most conservation easement transactions through accepting donations of conservation easements and monitoring existing easements to ensure compliance.

Daniels and Bowers explain what an easement is and how it functions to protect land from conversion: “The conservation easement is a formal document that describes the restrictions on the use of land. The easement is attached to the deed and runs with the

land either in perpetuity or for a period of time specified in the easement document. The landowner still owns the land, but the easement remains on the deed whether the land is sold or passed on through inheritance. The easement document can be tailored to the specific desires of the landowner who is selling or donating the easement, but generally, it will tightly restrict the type and amount of development allowed on the property.”<sup>141</sup>

#### Tax Benefits for the Donation of Conservation Easements

According to Daniels and Bowers, “Section 170(h) of the Internal Revenue Code permits a charitable deduction to be taken against income taxes for the value of conservation easements. The value of an easement is determined by subtracting the fair market value of the property subject to the easement from the fair market value of the property before the easement is donated.”<sup>142</sup> In order to qualify for the federal income tax deduction, conservation easements must be valued by a professional appraiser. Daniel and Bowers offer: “The purchase or donation of a conservation easement must include a professional appraisal of ‘easement value,’ which is the difference between what the property can fetch on the open market without an easement and what the property would be worth with and easement on it.”<sup>143</sup>

Another economic benefit for placing donating a conservation easement, explain Daniels and Bowers, includes a possible reduction in real estate taxes, “There also may be a reduction in property taxes once a conservation easement has been placed on the property. Property tax assessments are typically based on the highest and best use of a property. If the use of the land has been restricted to agriculture and open space, then the assessed value of the property should be reduced accordingly.”<sup>144</sup> Olson and Lyson add

the benefit of favorable estate tax regulations for land with conservation easements on the urban fringe: “Section 508 of the Taxpayer Relief Act permits the exclusion from a decedent’s taxable estate of up to 40% of the value of land subject to a conservation easement...this exclusion is limited to easement lands located within 25 miles of a metropolitan area, national park, or national wilderness area, or within 10 miles of a national urban forest.”<sup>145</sup> Olson and Lyson conclude, however, that “Despite the tax breaks, there are limits to the amount of farmland that will be preserved through the donation of easements. Easements are voluntary. Some farmers, or their heirs, desire to cash in on the farm’s development value. They often view that value as their retirement policy. If only a few farmers in a given area donate easements, the patchwork of farms left when the others sell out may not provide the critical mass needed to support a viable agriculture.”<sup>146</sup>

#### Farmland Preservation Pitfalls

As previously mentioned, agricultural zoning is characterized by large lot sizes, with the objective of ensuring lot sizes large enough to sustain agricultural uses and to discourage non-agricultural development. The farmland conservation literature addresses two scenarios which arise from using non-exclusive large-lot zoning as a mechanism for farmland conservation, which initially seem in conflict with the continuation of active farming. The first is the creation of residential estates which remove land from active agricultural production. The second is the proliferation of hobby farms in agricultural areas, which I believe to be a manifestation of a shift in the emergent agricultural economy on the urban fringe, away from traditional commodity farming and toward a

model reliant on agritourism and direct-to-market sales.

### Rural Estates

Because agricultural zoning is predominantly non-exclusive, large lot size is the defining characteristic of most agricultural zoning. Unfortunately, very often minimum lot sizes are set, to coin a phrase, ‘too big to mow and too small to plow.’ Daniels and Bowers warn, “Lot sizes of five and ten acres encourage the creation of ‘rural estates.’”<sup>147</sup> This phenomenon of the conversion of agricultural land into rural estates has been a criticism of PDR programs, as well. A 2002 study by the United States Department of Agricultural identified this conversion as a problem with PDR programs:

Almost since their inception, programs to purchase development rights have faced issues surrounding the conversion of preserved parcels to residential ‘estates.’ Persons with sufficient wealth purchase selected preserved parcels, and then, using provisions permitting the presence of a landowner dwelling, have constructed ‘mansions.’ Often, the farmland associated with the preserved parcel is no longer farmed by the new landowner, nor does the new landowner make the farmland available for rent to active farm operators. In essence, the new landowner obtains land for his large-lot ‘mansion’ at agricultural use value and does not pay the ‘development value’ that would be required to obtain a similar lot that had not been preserved. When this happens, it effectively precludes the land from ever being farmed again, since most farmers will not have sufficient financial capital to purchase land for farming with significant non-farm improvements to the house and landscape. In such cases, taxpayer money was used to retain land in large-lot residential uses.<sup>148</sup>

Daniels and Bowers suggest for land on the urban fringe to remain in agricultural production rather than simply preserved as open space, traditional land conservation methods might not be enough: “Above all, a community must decide whether its goal is to protect working farmland or to protect open space. If farmland protection is the goal, the community should employ techniques to encourage the continuation of farming as an



industry. Protecting farmland also does protect open space, which is often important for public support. But if farms cannot remain profitable, they will be developed and open space will diminish.”<sup>149</sup> A functional, sustainable agricultural economy is crucial for the preservation of working landscapes on the urban fringe. The working landscape might, by necessity, adopt particular characteristics which are the manifestation of adaptations to existing markets in close proximity to its urban neighbors, such as the rise in hobby farming.

### Hobby Farms

Another issue which appeared in the literature on farmland preservation is that of the supposed conflict between commercial farming and ‘hobby’ farms. Daniels addresses the conversion of large-scale commercial farming operations into smaller ‘hobby’ farm operations in his evaluation of Oregon’s use of urban growth boundaries and exclusive agricultural zoning in its statewide land-use planning program, both discussed previously in this thesis analysis. Daniels states, “...Oregon’s program appears to have been successful in keeping the state’s farmland from being converted to nonfarm uses. [However], the proliferation of small hobby farms raises concerns about the future viability of commercial farming operations, which must compete for the same farmland. It remains to be seen whether Oregon can maintain a critical mass of commercial farms in agricultural zones over the long run, especially in the Willamette Valley. If not, the Oregon program may prove to have preserved farmland for hobby farms at the expense of commercial operations.”<sup>150</sup> In a personal communication with Mr. Jerry Lidz, a member of Oregon’s seven-member Land Conservation and Development Commission (LCDC),

he noted the issues the LCDC is now grappling with, particularly in the Willamette Valley, are issues of agritourism conflicts such as how many events a winery may hold in one year, and whether to allow restaurant and other commercial retail enterprises in the agricultural zones.<sup>151</sup>

Daniels and Bowers posit that in the time it took Oregon localities to finally implement all of its municipalities' urban growth boundaries and land use plans, "...Oregon experienced the greatest increase of any state in the number of hobby farms (farms of less than 50 acres that produce less than \$10,000 a year in farm products)."<sup>152</sup> In a separate personal communication with the author, Milton Herd, a private planning consultant in Northern Virginia, commented, "... a lot of places would consider that to be success...Just think, a whole county (200,000 acres) of 50-acre farms would look a lot like the landscape of 1850 (before machinery allowed for large farms), and would produce [more than] \$20 million in products..."<sup>153</sup>

Daniels and Bowers suggest a rather large minimum lot size for land in the agricultural zones in order to prevent the conversion of commercial farming to the smaller hobby farms: "We advise that the farm size be only slightly smaller than the average farm size in the township or county. This will help prevent the subdivision of commercial farms into hobby farms in the agricultural zone. The smaller the minimum farm size allowed, the higher the price of farmland is likely to be because of competition from hobby farmers and urban refugees."<sup>154</sup> In a personal communication with the author, Mr. Herd again countered the idea that the conversion of commercial farming (or commodity farming) to smaller 'hobby' farms would lead to the decline and ultimate

demise of agriculture on the urban fringe. “This is an interesting concept because at the urban fringe, the ‘hobby farms’ can be a key to success of the local farming industry,” Herd elaborated. “Another interesting concept – in Loudoun, these ‘hobby’ farmers have created a farm economy that is *larger* than that of the ‘real’ farmers that they pushed out.”<sup>155</sup> Loudoun County will be discussed in further detail, as a case study, in this thesis analysis. In other words, as development encroaches on farmland, land prices increase and farm sizes decrease. The same economic conditions spurring the development, though, create markets for agricultural products and provide opportunities for off-farm income. If given strong urban growth boundaries and agricultural land use regulations, farmland conservation easement or PDR programs, and agricultural economic development support, rural working landscapes can remain a part of the urban fringe.

### Conclusion

This chapter describes the federal, state, local and private land conservation tools and methods available for rural historic preservation and farmland conservation. Federal recognition of Rural Historic Districts in the National Register of Historic Places is honorary only but may lead to local regulatory protection through the creation of a zoning overlay district with similar boundaries. However, working landscapes are inherently dynamic, and farmers often must make significant changes in order to remain economically viable. These changes can affect the qualities of integrity causing a property’s ineligibility for National Register listing.

Most farmland preservation programs are administered locally. Local government farmland preservation programs are often a mix of both regulatory methods and financial

incentives. Regulatory means include urban growth boundaries, agricultural districts, and exclusionary and non-exclusionary agricultural zoning. Financial incentive mechanisms include use-value taxation programs, Purchase of Development Rights (PDR) programs and Transfer of Development Rights (TDR) programs which provide farmers a method of receiving the full value of their land of its highest and best use without having to actually convert the property out of an agricultural use. Private land trusts execute a similar incentive program with the purchase of development rights through conservation easements. As Daniels and Bowers point out, “A conservation easement does not guarantee that a farm will remain a farm because it cannot require that land be actively farmed; the land may revert to open space, especially in suburban communities. The economics of farming in a region and nationwide will determine whether land stays in farming.”<sup>156</sup>

The key to preventing the conversion of active farmland into residential or commercial development or even open space is to support agriculture not only through strategic land use management but through agricultural economic development, as well. Keeping farming profitable is a crucial part of the conservation equation. “If farmland preservation is the goal, a local government will be wise to create incentives for agricultural economic development...Counties and municipalities should be willing to invest in forming farmers’ markets and to allow some farm-based businesses in their zoning ordinances to help farmers remain on the farm,” <sup>157</sup> conclude Daniels and Bowers. What this might look like will be examined in the following chapters.

## CHAPTER III LOCAL FOOD SYSTEMS

### Introduction

This chapter contrasts the current global industrial food system and the emerging alternative local food systems. This chapter will explore how the global industrial food system has been detrimental to the small and mid-sized family farmer, forcing consolidation of farms or forcing out entirely small farms which cannot compete in the global marketplace. Not only has farmland been consolidated, power and control of the agricultural industry have been aggregated to a relatively few multinational corporations, leaving local farmers little control over production and little access to markets for their produce. From this environment, alternative local food systems recently emerged, relying on direct-to-consumer marketing and producer-consumer relationships to facilitate economic and social ties. These alternative food systems are strongest in areas where there is an urban population to create enough consumer demand to sustain the alternative market. This chapter describes these direct-to-consumer markets and how they might be beneficial to the preservation of farmland on the urban fringe.

### The Global Industrial Food System

Prior to World War II, most of our nation's food was produced for local markets. According to the United States Department of Agriculture (USDA) in *Local Food Systems: Concepts, Impacts, and Issues*, "In the early 1900s, nearly 40 percent of

Americans lived on farms...and much of the food bought and consumed in the United States was grown locally... Aside from canning, dehydrating, salting, or smoking, few foods were processed or packaged, and fruits and vegetables, fish, and dairy products typically traveled less than a day to market.”<sup>158</sup> In “Preserving Community Agriculture in a Global Economy,” Lyson, Geisler, and Schlough state that technological advances in the preservation of food greatly increased the distances which food could travel to market: “Early in the 20<sup>th</sup> century, most farm products, especially fruits and vegetables, were consumed in and around the region where they were produced. Production and consumption of food were [sic] fixed to a locality. The development of the canning and packaging industry, however, allowed certain foods to travel great distances without spoiling. Frozen food technology further contributed to the uncoupling of production from consumption.”<sup>159</sup>

These technological advances in food processing and preservation, along with advances in transportation such as the construction of our Interstate Highway System, and the development of refrigerated rail cars and trucks, gave rise to the modern global industrial food system we participate in today. As explained in *Local Food Systems*, “Following World War II, the U.S. food system shifted from local to national and global food sources. Regional and global specialization—spurred by lower transportation costs and improvements in refrigerated trucking—reinforced transition to nonlocal food systems. With improved transportation, perishable items such as meats, eggs, fruits, and vegetables, as well as some perishable processed products like orange juice, could be shipped across the globe at affordable prices.”<sup>160</sup>

### Regional Specialization

Along with the emerging global distribution of agricultural products came regional agricultural production specialization and homogenization. Local environmental conditions have always been a determining factor in crop selection, but specialization is carried to an exclusionary extreme for the global market. As explained in *Local Food Systems*, “Land and climate, coupled with technology, helped determine the pattern of regional and global specialization. Fruit and tree nut production became concentrated predominantly in California as well as in Florida and a handful of other States because those states provided the best climate and environment. Geographic concentration also was influenced by the availability of feasible alternatives to commodities that farmers could no longer produce competitively. For example, with the decline of the cotton industry in the South, the broiler industry expanded through the use of production contracts.”<sup>161</sup> Production contracts will be discussed later in this thesis analysis.

In “A National Policy for Farmland Preservation,” Olson, Olson, and Lyson assert that due in part to regional production specialization and homogenization, “Most food in America is consumed far from where it is grown; 17% of what we eat is imported from other countries. Many states import more than 80% of their food, and the food in an average U.S. meal travels 2000 miles before it is eaten.” They continue, “Six multinational corporations control half of the U.S. food market.”<sup>162</sup> This is illustrative of Kloppenburg, Hendrickson, and Stevenson’s assertion in “Coming in to the Foodshed” that the global industrial food system is both dispersed and consolidated: “Ironically, the global food system is at once decentralized and centralized. It is decentralized inasmuch as production tends to be globally dispersed and any given food item is likely to have

been grown and processed far from its point of consumption. The food system is centralized in the sense that any given agricultural product is grown in an increasingly limited number of areas on a decreasing number of farms, and is processed and retailed by a narrow set of transnational agribusinesses in which economic and political power are being progressively concentrated.”<sup>163</sup> This corporate business model for food production and distribution has changed the structure of farming in the past half-century, uncoupling farmers from communities, and food and food traditions from place.

### Agribusiness Consolidation

Tom Lyson, in *Civic Agriculture: Reconnecting Farm, Food, and Community*, expounds further on the consolidation of control over our nation’s food system by a handful of multinational companies: “During the latter half of the twentieth century, large multinational food processors became dominant in the food sector of the American economy as they gained control over large segments of the food system. Today, the ten largest multinational corporations account for over 60 percent of the retail purchases of food in the United States.”<sup>164</sup> Lyson maintains, “Driving the global-industrial system of farming is the continual search by agribusiness firms for areas of low-cost production. In a global system of food production, labor and capital flow to places where maximum profits can be extracted.”<sup>165</sup> As we will see, this quest to maximize profits comes at the expense of small to mid-sized farms and farmland.



## Farm Consolidation

In order to stay competitive in the global market, many small and mid-sized farms and food processors have been forced to expand, merge or simply quit. The consolidation and regionalization of production are evident in the changing characteristics and makeup of our nation's farms. "Agriculture since 1950 has been characterized by large decreases in the number of farms and farmers, and a corresponding increase in average farm size," Lyson, Geisler, and Schlough point out. "Smaller, family-labor farms have declined substantially in number as larger, increasingly industrial-like operations have become the primary source of food and other agricultural products. The proportion of Americans involved in farming has fallen below 2 percent,"<sup>166</sup> (see Table 1). It is now at one percent,

Characteristic	1950	1982	1992	2007 <sup>167</sup>	2012 <sup>168</sup>
Number of farms	5,388,000	2,240,976	1,925,300	2,204,792	2,109,363
Average farm size (acres)	216	440	491	418	434
[Total acres of farmland]	[1,163,808,000]	[986,029,440]	[945,322,300]	921,603,056	915,463,542
Farm population	23,048,000	5,620,000	4,632,000	3,281,534	3,180,074
Farm population as a percent of US total	15.3	2.4	1.9	$\frac{3,281,534}{301,200,000} = 1.1$	$\frac{3,180,074}{314,100,000} = 1.0$

Table 1: Structural changes in U.S. agriculture since 1950,<sup>169</sup> USDA Agricultural Census as of the last census (Table 1). Lyson, Geisler, and Schlough continue, "The trend in farm number and size has been associated with a concentration of land and production in relatively few hands, and highly skewed distribution of land between large and small farms. In terms of gross sales, approximately 90% of U.S. agricultural output is produced by only 522,000 farms."<sup>170</sup> Using the 1992 census figures shown in Table 1 that would

mean 27 percent of farms in America produces 90 percent of the total annual agricultural output.

### Contract Farming

One way corporations have been able to consolidate and dominate production is through the method of contract farming which shifts the risks of production to the farmer while requiring strict adherence to methods and inputs which benefit the corporation. According to Lyson, Geisler, and Schlough, contract farming has risen rapidly to become standard practice in many sectors of the global agricultural industry. They outline four types of contracts corporations have with farmers: marketing, production, production management, and resource providing. Marketing contracts are similar to a sales contract, where the farmer agrees to sell their product to a particular processor. Production contracts specify certain practices that the farmer must adhere to in order for a processor to purchase their product. If the contract specifies a certain input must be used when producing the product, it is called a production management contract. If a contract requires the farmer to purchase a specific input from the processor, it is called a resource providing contract. Although none of these contract scenarios result in the farmer giving up ownership of their farmland, in each successive contract described, the farmer must give up an increasing amount of control over the production process.<sup>171</sup>

Lyson, Geisler, and Schlough suggest that contract farming has been a contributing factor in the consolidation of small and mid-sized farms: “Contract farming also supports increased farm size. Economies of scale dictate that processors are more inclined to work with large farmers whenever possible. A processor’s ability to award or

refuse a contract may have contributed to differences in profitability between large and small producers, and accelerated the process of farm concentration.”<sup>172</sup> Tom Lyson, in *Civic Agriculture*, laments, “As American agriculture turns down the path of the new century, we see that the independent, self-reliant farmer of the last century is rapidly disappearing from the rural landscape. Farmers, who were once the backbone of the rural economy, have been reduced to mere cogs in a well-oiled agribusiness machine.”<sup>173</sup> With contract farming, a farmer gives up control over inputs, production methods, and price, which are all set by the agribusiness corporation.

#### Concentrated Animal Feeding Operations (CAFOs)

In 2009, The National Trust for Historic Preservation took a position opposing the industrial agricultural practice of Concentrated Animal Feeding Operations (CAFOs) citing, among other reasons, “The rise in large-scale livestock production has caused a dramatic drop in the number of smaller family-owned operations, particularly mid-sized family farms.”<sup>174</sup> Concentrated Animal Feeding Operations (CAFOs) apply industrial production techniques to raise thousands of animals in confined spaces. They typically consist of large utilitarian metal buildings and enormous manure retention ponds. “Traditional farm structures and methods have no role in this type of operation. As small and medium-sized producers are forced out, historic farms are sold and consolidated, and many historic farm structures are abandoned or demolished,”<sup>175</sup> Jennifer Sandy writes, in the 2009 *Forum* article “Factory Farms: A Bad Choice for Rural America.”

According to Sandy, the rise in CAFOs provides another example of the consolidation of production that has taken place in the American agricultural system:

“The EPA has estimated there are now [2009] more than 20,000 factory farms nationwide, a 30 percent rise since 2003. The American Public Health Association estimates that 54 percent of livestock in the country is now confined on just 5 percent of livestock farms...The Government Accountability Office estimates that the number of CAFOs in the U.S. more than tripled between 1982 and 2002. The growth in factory farms has forced thousands of independent farmers out of business by decreasing the sale price of animals. In the hog industry, for example, about one-quarter of all U.S. producers went out of business between 1998 and 2000, leaving only 50 producers controlling one-half of all hog production.”<sup>176</sup>

Livestock production is one of the sectors in the global agricultural industry in which contract farming has been implemented, resulting in the economic squeezing of small and mid-sized farmers. Sandy states that “while contracts appear to reduce risk for the farmer, they can have negative consequences. Construction of new CAFO facilities leaves farmers with debt, and there are often no provisions barring the buyer from canceling contracts early, leaving the farmer with the debt burden and an empty facility.”<sup>177</sup> Sandy concludes, “Because they are owned by large national companies, factory farms typically purchase feed and supplies from outside the community and only minimally contribute to the local economy, also making them a poor economic development choice for rural America.”<sup>178</sup> CAFOs are how contract farming manifests itself in animal production and another example where the farmer assumes all the risks of production, but has very little say in product, methods, inputs or price resulting in low profits margins and farm consolidation

## Food Security

In *Civic Agriculture*, Tom Lyson summarizes the United States' current modern agriculture system as follows: "Agriculture and food production is being restructured in the United States...large-scale, well-managed, capital-intensive, technologically sophisticated, industrial-like operations are becoming tightly tied into a network of national and global food producers. These farms will be producing large quantities of highly standardized bulk commodities that will feed into large national and multinational integrators and processors. A few hundred very large farms will account for most of the gross agricultural sales."<sup>179</sup> Evidence of this predictive statement was previously provided in the discussion on agribusiness consolidation. Lyson goes on to warn, "Communities would do well not to cede control of their agricultural sector to large, export-oriented, commodity farms and not to rely solely on big-box supermarkets for their food."<sup>180</sup>

This heavy reliance on the importation of much of our food through the global food system has created a condition of nation-wide food insecurity, where most of our communities and regions cannot feed themselves. Lyson, Geisler, and Schlough stress that most of the country is food insecure: "While the structure of agriculture has obvious ramifications for rural communities [see the previous discussion regarding farm consolidation, contract farming, and CAFOs], it is no less important for urban communities, particularly in terms of food security – the ability of a country or region to feed itself. By this definition, most regions of the United States are not food secure. They cannot feed themselves but are dependent on a global food system and the transport and

processing of much of their food at long distances. Even production and processing that occurs locally is generally not under local control. It is instead controlled by a handful of multinational corporations that have no allegiance to any particular country or people.”<sup>181</sup>

This reliance on the global industrial food complex leaves us, as a society, reliant on a food system that seeks corporate profits above all else, and has no regard for community wellbeing, cultural sustainability, or people’s livelihoods. Lyson, Geisler, and Schlough suggest that the key to creating regional or community food security is to relocalize at least part of the food system for a given region: “Although structural changes in agriculture are taking their toll on community food security, it is possible with proper forethought and planning to relocalize parts of the food system, especially in the peri-urban areas around large metropolitan centers. However, *communities can buffer and shelter themselves from the global food system only if they preserve an adequate farmland base. Successful relocalization can help to stabilize the farmland base* [emphasis added].”<sup>182</sup>

As shown by Lyson, Geisler, and Schlough in this last passage, there is a positive relationship between food security, relocalization of the food system, and farmland protection with broader societal implications. Olson, Olson, and Lyson in “A National Policy for Farmland Preservation,” also observe this relationship between the close proximity of farmland, local food systems, and food security in relation to urban centers: “Food security is enhanced by participation of the residents in a local food system which in turn requires adequate farmland in proximity to each city and town. To a resident of New York City, an acre of farmland at the city’s edge contributes more to the food

security and economy of the city than an acre of land in California or Mexico. A local economy is strengthened by adding value to locally grown food rather than importing processed meals. *Food security depends on the relocalization of agriculture, and this requires land* [emphasis added].”<sup>183</sup> Additionally, when a resident of New York City purchases produce from a farm in the Hudson River Valley, that customer has made a personal connection to a familiar geographical place and is more likely to care about what happens there.

As previously discussed, the last half of the twentieth century brought great changes to our agricultural system as we have moved away from local to global food sources, through the advancement of agricultural industrialization. “These structural changes,” say Lyson, Geisler, and Schlough, “have important implications for how land is treated, including the likelihood of its conversion to non-agricultural uses. These structural trends also present a major challenge to the food security of American communities. We believe that a shift of these trends toward a relocalization of agriculture is required to ensure food security, and that the preservation of farmland by each community is essential to successful relocalization.”<sup>184</sup> By relocalizing at least some part of the food system, we can reclaim our independence from an impersonal corporate food system through the interpersonal exchange between farmer and customer which reinforces community, and the economic exchange which supports farmers in their livelihoods.

### Effects on Farmland Conversion

As stated above, the structural changes in the agricultural system of the past half-century have made it more difficult for farmers to remain farming, and more likely for agricultural land under development pressure to be converted to other uses. Lyson, Geisler, and Schlough identify those factors arising from our modern global food industry which influence a farmer's decision to convert their farm: "The shrinking of the portion of the food dollar that goes to farmers makes farming less profitable...Contracts are a shaky prop for farmers—if the corporate processor shifts production elsewhere for whatever reason, the farmer may be forced out; the decoupling of a population from local land as their food source reduces their incentive to protect their farmland from development; the reduction in labor use on industrial farms, the decline in local value-added food processors, and the export of most agricultural profits out of the community means that fewer people have an economic stake in land other than for development."<sup>185</sup>

Another factor tipping the scales toward conversion is the loss of community and farming support services as surrounding farms either consolidate or fold. "As large corporations have gained more control over agricultural production and food marketing and organized both on a more global scale, local food system infrastructures have become more fragmented and homogenized,"<sup>186</sup> say Gillespie, Hilchey, Hinrichs, and Fenestra, in "Farmers' Markets as Keystones in Rebuilding Local and Regional Food Systems." Halweil and Prugh, in *Home Grown: The Case for Local Food in a Global Market*, quote Andy Fischer, director of the U.S.-based Community Food Security Coalition, commenting on fragmentation and the loss of farm services in local communities: "'It's



not easy to find the local packing house or slaughterhouse or cannery. In most communities, the dairy is gone, the cheesemaker is gone, even the bakery is gone, because of intense consolidation and mergers in agribusiness.”<sup>187</sup>

Multinational companies have no commitment to communities or to the farmers with whom they contract. Similar to the experience of the secondary economic sector of American manufacturing in recent years, the primary sector activity of agricultural production can be and is often exported—if food can be grown less expensively somewhere else; multinational agribusiness companies are incentivized to move production to the less-expensive location. Lyson, Geisler, and Schlough observe, “A global industrial food system has no need to protect a specific piece of farmland from development. As long as the supply of land for producing the commodities needed by large agribusiness firms is plentiful around the world, there is little incentive to support local measures to preserve farmland.”<sup>188</sup> They continue, “There is nothing in the global industrial food system that promotes the long-term preservation of agricultural land. In the emerging global economy, farmland loss will continue, and with it the disappearance of the means for communities to regain local control and food security.”<sup>189</sup>

In *Civic Agriculture*, Tom Lyson offers a prescription to the disconnectedness and disempowerment of the global industrial food system, by suggesting through relocalization of their food systems, communities can change the dynamic of agricultural economic instability, farmland loss, and food insecurity: “Communities can buffer and shelter themselves from the global food system only if they develop the needed infrastructure, maintain a sufficient farmland base, and provide enough technical

expertise so that local farmers and processors can successfully compete in the local marketplace against the highly industrialized, internationally organized corporate food system.”<sup>190</sup> The next section will explore what the development of local food systems would entail.

### Alternative or Local Food Networks

#### Relocalization of the Food System

Echoing Lyson, in “Coming in to the Foodshed,” Kloppenburg, Hendrickson, and Stevenson surmise our national food system situation as such: “We are embedded in a global food system structured around a market economy which is geared to the proliferation of commodities and the destruction of the local. We are faced with transnational agribusinesses whose desire to extend and consolidate their global reach implies the homogenization of our food, our communities, and our landscapes. We live in a world in which we are ever more distant from each other and from the land, and so we are increasingly less responsible to each other and to the land.”<sup>191</sup>

As bleak a picture as Kloppenburg, Hendrickson, and Stevenson have painted for the current state of our food system, they also provide a solution similar to Lyson’s to counteract the distancing effects of the global industrial food system, which is to relocalize at least a portion of our food systems: “Recognizing the ecological and social destructiveness of the globally-based food system, a variety of analysts have suggested an alternative founded on respect for the integrity of particular socio-geographic places. Counterposed to the global food system in such analyses are self-reliant, locally or regionally based food systems comprised of diversified farms using sustainable practices

to supply fresher, more nutritious foodstuffs to small-scale processors and consumers to whom producers are linked by the bonds of community as well as economy.”<sup>192</sup>

In 2002, Neil Hamilton observed that this relocalization of our food systems had already begun to take place. In "Putting a Face on our Food: How State and Local Food Policies can Promote the New Agriculture" Hamilton states, "One of the more powerful and promising trends in America's food culture in recent years has been the growing appreciation for locally produced foods and the recognition of the need to support local farms. This trend, the larger consumer's concern for food quality and safety and of the farmer's desire for more income, is reflected in a variety of developments." Hamilton continues, "The growing number of farmers' markets, the strong consumer demand for fresh, seasonal and often organically grown produce, the increasing attention given by leading chefs to local produce, and the growing array of direct farm marketing opportunities such as community supported agriculture (CSA), all reflect this trend." Hamilton concludes, "The human forces driving these developments are powerful, such as the search for high quality safe food, the desire to create more community in an otherwise rapidly industrializing society, and the need to make connections with people, nature, our food, and the land are part of this process.”<sup>193</sup>

The 2010 report from the USDA's Economic Research Service, *Local Food Systems: Concepts, Impacts, and Issues*, identified consumer demand as driving the relocalization of the food system: "Recently, developments in the mainstream food system have been accompanied by growth in local food systems, or a relocalization of the food system. Evidence suggests significant demand for locally produced foods." The

report goes on, “About four out of five respondents to a 2006 national survey said they purchased fresh produce directly from growers either occasionally or always. Other recent national surveys also reflect high consumer interest—about half of respondents said they purchased food directly from farmers either by visiting farmers’ markets, joining a CSA, or buying direct from the farmer.”<sup>194</sup>

The report also provides the reasons consumers provide for seeking out local food: “The most recent national data [from a 2009 study by the Food Marketing Institute] suggests that while local food consumers are demographically diverse, they are very similar in their motivations for buying local. The majority of respondents to a national study cited freshness (82 percent), support for the local economy (75 percent), and knowing the source of the product (58 percent) as reasons for buying local food at direct markets or in conventional grocery stores.”<sup>195</sup>

### Direct-to-Consumer Marketing

Producers have responded to this increased demand for local food by circumventing the conventional outlets of the global industrial food system and marketing directly to consumers through farmers markets, consumer supported agriculture and farm stores. In *Local Food Systems*, the USDA reports, “Direct-to-consumer marketing amounted to \$1.2 billion in current dollar sales in 2007, according to the 2007 Census of Agriculture, compared with \$551 million in 1997,”<sup>196</sup> more than doubling over a ten year period.

Derr and Dhillon, in “Purchase of Development Rights Program, the Northeast Experience,” suggest farms on the urban fringe are ideally situated to capture this

emerging and expanding direct-to-consumer market for local food: “The initial impact of urbanization is to raise production costs, but as development proceeds, another potential critical mass starts to form, that being the opportunity to sell agricultural products through direct marketing. Through this activity, the agricultural producer can capture more of the consumer dollar by providing value added services such as quality, convenience, selection, and reduced transport costs. Thus, as production costs go up, they are offset by added revenue.”<sup>197</sup>

“Access to urban markets is crucial to farms engaged in direct sales,” states the USDA’s report *Local Food Systems*. “There were 71,400 direct-sales farms located in metro counties, and 44,100 were located in rural counties adjacent to metro counties. Together, these farms accounted for 84 percent of all farms engaged in direct sales. Farms in metro and adjacent areas earned nearly \$1.1 billion from direct sales to consumers—or 89 percent of all direct sales income. Direct sales per farm decreased for farms located progressively further from metropolitan counties; averaging \$10,987 for farms located in metro counties, \$6,767 for farms in rural counties adjacent to metro counties, and \$6,090 for farms in remote rural counties.”<sup>198</sup> Thus, the opportunity of direct marketing presents itself to farms closest to urban centers through the alternative market created and supported by the density of an urban population.

Additionally, from the USDA’s report, we learn small farms located on the urban fringe appear to rely heavily on direct-to-consumer sales: “Local food markets typically involve small farmers, heterogeneous products, and short supply chains in which farmers also perform marketing functions, including storage, packaging, transportation,

distribution, and advertising. According to the 2007 U.S. Census of Agriculture, most farms that sell directly to consumers are small farms with less than \$50,000 in total farm sales, located in urban corridors of the Northeast and the West Coast.”<sup>199</sup> The report goes on to say, “In 2007, direct-to-consumer sales accounted for a larger share of sales for small farms, [farms with less than \$50,000 in total farm sales], than for medium-sized farms [total farm sales of \$50,000 to \$499,999] and large farms [total farm sales of \$500,000 or more].”<sup>200</sup> Vegetable farmers specifically targeted the local food market: “Produce farms engaged in local marketing made 56 percent of total agricultural direct sales to consumers while accounting for 26 percent of all farms engaged in direct-to-consumer marketing.”<sup>201</sup>

Richard Olson, in “A Landscape Perspective on Farmland Conversion,” summarizes the connection between direct marketing of local food supporting local economies, and the preservation of farmland in this way: “Economic opportunities include direct marketing through farmer’s markets, Community Supported Agriculture (CSA), and the high-value vegetable and nursery crops...These strategies not only provide economic diversity and a better chance of keeping protected rural land in farming, but also develop links between the farm and urban community that offer the best long-term hope of preserving agricultural landscapes.”<sup>202</sup>

### Community Supported Agriculture (CSAs)

A popular form of direct marketing mentioned previously is community supported agriculture (CSAs) arrangements. CSAs rely on subscriptions memberships from customers who pay farmers in advance of the growing season for shares or allotments of

whatever the farmer produces. Sometimes the farms will deliver the weekly allotments or often the member will go to the farm or designated location to pick up their allotment, reinforcing the social as well as the economic relationship between the farmer and the customer.

According to the USDA, the concept of community supported agriculture originated in the 1960s in Switzerland and Japan.<sup>203</sup> The reported growth of CSAs has paralleled the growth of consumer interest in locally grown food: “In 1986, there were 2 CSA operations in the United States. By 2005, there were 1,144 CSAs compared to 761 in 2001, an increase of 50 percent.”<sup>204</sup> That market expansion would continue, the USDA report predicted, “In early 2010, estimates exceeded 1,400, but the number could be much larger.”<sup>205</sup>

In *Home Grown: The Case for Local Food in a Global Market*, Halweil and Prugh describe the reciprocating beneficial relationship which develops between the farmer and the customer in a CSA system: “Beyond the standard economic benefits of dealing directly with the customer, the up-front payment bolsters the farmers’ cash flow. Because subscribers expect to receive whatever crops are thriving, the farmer has a guaranteed outlet for in-season produce and unexpectedly big yields...The subscriber gets produce that doesn’t have to travel far or have a long shelf-life, and therefore is likely fresher, tastier, harvested at the peak of ripeness, and yet not fumigated, refrigerated, or packaged.”<sup>206</sup> They go on to describe indirect benefits such as the opportunities created to exchange information and raise social awareness for food and farm related issues: “Subscription schemes and farmers’ markets can also both play a role

in raising awareness of food-related issues among consumers, using newsletters or simple conversation to share recipes, nutrition advice, or information on political issues that affect farming.”<sup>207</sup>

### Pick-your-own Operations and Farm Stores

There are opportunities for direct marketing to consumers through farm stores, roadside stands, and pick-your-own operations, particularly if they are readily accessible to an urban population. The USDA describes these ventures thus: “Roadside farm stands and on-farm stores operate year round from a permanent structure, or only during harvest periods from a truck, trailer, or tent. In urban areas, mobile fruit and vegetable vending provides opportunities for local produce to be introduced as impulse purchases for consumers in public areas such as parks and on city sidewalks,”<sup>208</sup> just as any other street cart vending temptation. These mobile produce vendors also bring fresh, local produce to areas which are underserved by the mainstream grocery markets, says the USDA: “Mobile vendors offer opportunities to provide underserved communities with fresh produce in locations where brick-and-mortar stores are not feasible, and can be adept at providing culturally appropriate food items,”<sup>209</sup> making these area much more food secure.

With the pick-your-own model, rather than the farmer bringing the produce to the customers, the customers go to the farm for the recreational experience, say Bryant and Johnson in *Agriculture in the City's Countryside*: “‘Pick-your-own’ farming has developed extensively in North America and Western Europe. In major metropolitan regions, they can be seen as a response to three sets of factors: 1) The high cost and



scarcity of agricultural labor...near major metropolitan centers; 2) The farm's perception that a larger portion of the consumer dollar spent on the food ends up in the farmers' pocket, because the intermediaries in the selling chain have been eliminated; and 3) The urban dweller's desires for fresh, high-quality produce at a reasonable price combined, for some people, with a desire for a 'rural', open air experience.”<sup>210</sup>

### Farmers Markets

“Building on the strong historical tradition of public markets in North America and with modest governmental support for their development and promotion today, farmers' markets tend to be one of the first manifestations of a relocalizing food system,”<sup>211</sup> according to Gillespie, Hilchey, Hinrichs, and Fenestra, in “Farmers' Markets as Keystones in Rebuilding Local and Regional Food Systems.” They emphasize both the economic and social benefits of the direct market producer-consumer relationship farmers' markets create: “As social and economic institutions farmers' markets have the potential to be keystones in rebuilding local and regional food systems. Most fundamentally, they make local food visible in public spaces on a regular basis. This trait puts local food on the map and cultivates public awareness of local food production and producers.”<sup>212</sup>

According to the USDA, farmers' markets are located in a common area in a community, and take place on a recurring basis throughout the growing season, though some are year-round. Farmers usually pay a space fee for a location to sell their goods in the market, and the fee typically covers the entire season. Some markets have a fee based on the percentage of a farmer's sales. All fees go toward market management expenses

such as a market manager's salary, advertising, licensing fees and local permits. The USDA notes that historically, farmers' markets were a prominent feature in cities: "They were once the core focal point for selling fresh products in urban centers, but their significance gradually declined as cities grew larger and more mobile,"<sup>213</sup> and our food system grew more homogenized, dispersed, and globalized.

With the rise in demand for local produce, however, farmers' markets have made a dramatic comeback: "From as few as 100 in the 1960s, U.S. farmers' markets increased to 1,755 by 1994 when the United States Department of Agriculture assembled its first national farmers' market directory. Over the next decade (1994-2004) the number increased more than 100 percent to 3,706"<sup>214</sup> Gillespie, Hilchey, Hinrichs, and Fenestra state. The USDA support those statistics as well: "The number of farmers' markets rose to 5,274 in 2009, up from 2,756 in 1998 and 1,755 in 1994, according to USDA's Agricultural Marketing Service."<sup>215</sup>

Anthony Veerkamp, in "'Slowfood,' 'Slowcities,' and their Lessons for Rural Preservation," points out that historic preservationists involved in the Main Street Program have used farmers' markets as a way to bring people to historic main street districts, bridging urban and rural preservation: "Today, Main Street programs are making the connections between locally grown food and downtown revitalization as well. Farmers' markets are bringing social and economic vitality, along with healthy food, to hundreds of small downtowns around the country. Last summer, the Virginia Main Street program organized a conference on 'Nourishing Downtown,' which included sessions on starting farmers' markets, encouraging local restaurateurs to serve local food and locate

in historic buildings, and ideas for attracting ‘culinary tourists’ to Main Street.”<sup>216</sup>

Gillespie, Hilchey, Hinrichs, and Fenestra also stress the economic benefits of product diversification farmers’ markets can provide for local farmers: “They (farmers’ markets) can encourage enterprise diversification and business incubation, crucial processes for developing viable small businesses and building more broad-based consumer interest and commitment.”<sup>217</sup> By providing an outlet for small farms, they assert, farmers’ markets support the entire local food market structure: “As farmers’ markets support the economic prospects of smaller farms and other food producers, they maintain crucial infrastructure for local and regional food systems—-independent farms and regional working landscapes. Farmers’ markets can provide this maintenance by serving as informal business incubators that nurture entrepreneurship, diversification, and expansion of small farms and food enterprises.”<sup>218</sup>

“Farmers’ markets are perhaps the most obvious example of farmers taking back some of the profits captured by agribusiness, and the most obvious outlet for people wanting to support local farms. Farmers’ markets not only help the farmer retain a greater share of what is spent on the food—growers retain more of every dollar they take in, compared with selling their goods to the wholesale market...”<sup>219</sup> say Halweil and Prugh in *Home Grown: The Case for Local Food in a Global Market*. Farmers’ markets are clearly a key economic piece in the relocalization of the food system for any region. Strengthening the economic argument for relocalization of the food system, Lyson argues, “Dollars spent for locally produced food and agricultural products circulate

several times more through the local community than money spent for products manufactured by multinational corporations and sold in national supermarket chains.”<sup>220</sup>

#### Farm-to-Institution Contracts

In "Putting a face on our food: How state and local food policies can promote the new agriculture," Neil Hamilton writes, “One promising opportunity within state food policy concerns expanding institutional use of locally grown food. These programs find their history in state efforts relating to market development, assistance to small farmers and direct marketing, and various agricultural diversification attempts. Almost every state operates some form of state-based identity and promotion campaign, such as “Jersey Fresh,” “Pride of New York,” and “A Taste of Iowa.”<sup>221</sup> Virginia has similar programs; “Virginia Grown” which promotes all of Virginia’s agricultural products and “Virginia’s Finest” which promotes Virginia’s specialty foods and beverages.

Hamilton maintains that state and local efforts to promote local agricultural products should apply to the state and local government institutions: “The premise of an institutional purchasing initiative is if public funds are used to buy food for public institutions, such as hospitals, schools, and correctional facilities, then state and local governments should consider how publicly funded food purchases can support local farming and marketing goals. The issue of how to expand institutional use of local food has been the subject of several innovative state and local policy developments in recent years.”<sup>222</sup>

### Farm-to-School Programs

“The form of institutional purchasing currently receiving the most attention, and perhaps holding the greatest promise for farmers, is the ‘farm to school’ programs underway in many states,” reports Hamilton. “The premise is that by connecting local farms with local schools, more economic activity can be funneled into the local food economy and the food offered to children can be fresher and higher quality. In addition, local connections can provide valuable opportunities to educate children about the source of the food and operation of the farming sector. The potential for the programs has led USDA to develop initiatives to support the efforts.”<sup>223</sup> The USDA states the goals for such programs “...are to provide children with access to fresh fruits and vegetables, and promote relationships between schools and farms that can strengthen over time.”<sup>224</sup>

As reported by the USDA in *Local Food Systems*, “Farm to school programs have grown rapidly over the last decade. The National Farm to School Network, a collaboration of groups supporting farm to school programs, estimated that there were 2,051 farm-to-school programs in the United States in 2009; twice as many as in 2005-06. As of August 2009, they estimated that 41 States had some kind of farm to school program, and 8,943 schools in 2,065 districts participated.”<sup>225</sup> Virginia’s First Lady, Dorothy McAuliffe, has made school nutrition and improving access to Virginia’s locally grown agricultural products one of her goals during her husband’s administration.<sup>226</sup>

### Farm to Hospital Programs

The USDA report *Local Food Systems* also identified hospitals as institutions which are poised to take advantage of the locally grown agricultural market: “Hospital

and foodservice administrators note that healthcare institutions can influence better eating habits through purchasing local foods for use in cafeteria or food court service and patient meals. Local seasonal produce can be less expensive than nonlocal purchases, and featuring local foods has been found to increase sales at hospital cafeterias, and represents a potential strategy to attract employees and patients.”<sup>227</sup> Other Farm-to-Institution opportunities include farm-to-assisted-living-facilities and farm-to-prison programs.

#### Farm-to-Table Demand in the Restaurant Industry

Chefs have been early adopters and promoters of relocation of our food system, in large part because cooking with local-sourced ingredients translates into using the freshest ingredients. Alice Waters of Chez Panisse Restaurant in Berkeley, California, Nora Pouillon of Restaurant Nora in Washington, D.C., and Dan Barber of Blue Hill in New York, are among the chefs who have lead the industry’s refocus on fresh, sustainable, locally-sourced foods. In “Sustaining local agriculture” the authors share the focus of the culinary professional organization, Chefs Collaborative: “In 1998, a US Chefs Collaborative ‘Woodstock’ introduced chefs from across the nation to heirloom varieties, taught them about the dangers of pesticides, and encouraged them to meet farmers, support urban gardens, and work with schools on nutritional issues. The *New York Times* quoted a chef saying ‘I will never again look at a glass of wine or a plate of food and not wonder how it was grown.’”<sup>228</sup>

The trend of using locally-sourced produce on the menus persists, the USDA’s reports in *Local Food Systems*: “Surveys conducted by the National Restaurant

Association (NRA) suggest increasing interest in local foods by restaurants and their patrons. An annual survey of professional chef members of the American Culinary Federation found that locally grown produce ranked first in hot trends for 2010, and locally sourced meats and seafood ranked second. Eighty-eight percent of chefs rated locally grown produce as a hot trend, 10 percent considered it a ‘perennial favorite,’ and 2 percent ranked it as ‘yesterday’s news.’ The local-foods trend has become particularly popular at fine-dining establishments. According to NRA’s 2008 operator survey, 89 percent of fine-dining operators served locally sourced items, and 90 percent believed it will become more popular.”<sup>229</sup>

#### Terroir and Geographical Indications

As just discussed, in looking for a way to opt out of the global industrial food system producers and consumers have created what is referred to in the literature as ‘alternative food networks’ which are primarily identified through the direct-to-consumer methods of marketing previously described. The alternative food systems or networks have arisen predominantly in the United States (US) and the United Kingdom (UK), according to Sarah Bowen and Tad Mutersbaugh, in “Local or Localized? Exploring the Contributions of Franco-Mediterranean Agrifood Theory to Alternative Food Research.” Bowen and Mutersbaugh compare these alternative food networks to the food systems based on the concept of terroir which are employed predominantly in the European Union (EU) countries of France, Spain, and Italy, but in other European countries as well. They write, “In Mediterranean Europe, by contrast [to the direct marketing system in the US and UK], scholars and activists have concentrated on regulatory frameworks like

geographical indications (GIs) and social movements like the Slow Food movement, each of which privileges the linkages between the ‘terroir,’ or taste of place, of particular regions and the foods and drinks produced there.”<sup>230</sup>

Philip Ackerman-Leist, in *Rebuilding the Foodshed: How to Create Local, Sustainable, and Secure Food Systems*, attributes the adoption of the geographic indication system by the European Union as reflexive to the homogenization that was taking root through the multinational trade distribution systems of the EU. He writes, “The European Economic Union’s efforts to level the playing field among its members in terms of regulations and trade often shoved aside the traditions and specialties of centuries.”<sup>231</sup> Through the ideological concept of terroir already existing in their cultures, Europeans possessed a way to indicate and articulate what they saw as being lost, and ultimately a way to gain some regulatory control over certain aspects of their food cultures. Ackman-Leist continues: “[Many places in] Europe sensed the gravity of the losses and began to lay claim to protecting their foodways and associated infrastructure, with at least some degree of success. Europeans clearly saw what we had lost in the United States in decades prior, and many of them also resented the fact that we had unleashed our hounds of homogenization on them with the export of fast-food chains and supermarket economics. For the Europeans, the threat was more than a loss of foods—it was a loss of culture rooted in place.”<sup>232</sup>

### Terroir and Provenance

In “Goût de Terroir: Exploring the Boundaries of Specialty Agricultural Landscapes” Duncan Hinchley provides this definition of terroir and goût de terroir: “In



its simplest terms, terroir is a traditional French culinary ethos based on the belief that some agricultural products, particularly wine, are inextricably linked to their place of production. The classic example of terroir is how the sensory attributes of wine—its flavor, color, and fragrance—reflect the environmental conditions in which the grapes are grown. Wine grapes grow well only in certain landscapes with unique soil and climate conditions yielding what many vinophiles profess to be the defining characteristics of the product—the taste of place or *goût de terroir*.<sup>233</sup>

In “Geographical Indications, Terroir, and Socioeconomic and Ecological Sustainability: The Case of Tequila” Sarah Bowen and Ana Valenzuela Zapata further expound on the definition of terroir adding a cultural dimension, as well: “Although the French word ‘terroir’ is literally translated as ‘terrain, soil, land, ground, or earth,’ the cultural concept of terroir, as it relates to food and wine, is understood as the product of interacting natural and human factors. The deeply rooted traditions and cultural practices that have contributed to the development and evolution of particular foods and flavors are thus also viewed as central to terroir.”<sup>234</sup>

In the United States, the concept of food being connected to a specific place where it is produced might best be described as ‘provenance.’ The USDA report *Local Food Systems*, frames provenance through the lens of alternative food networks and direct-to-consumer markets: “The term “provenance,” which describes the method or tradition of production that is attributable to local influences, seems to capture the essence of this component of the local food definition. Local food systems have also been synonymous with small farms that are committed to place through social and economic

relationships. Social embeddedness in the sense of social connections, mutual exchange, and trust is viewed by some as an important feature of direct agricultural marketing.”<sup>235</sup> Contrasting provenance with terroir, the report goes on to say, “The European concept of ‘terroir,’ or ‘sense of place,’ encompasses characteristics of both locality foods and provenance. It refers to a geographical area through the name of the product, brand, or signals of quality, and to the reputation of the place in terms of culture, history, and other features.”<sup>236</sup>

### Geographical Indications

Geographical indications are a regulatory framework used to delineate and protect the integrity and authenticity of a product rooted in geographical space, traditional craft, and cultural traditions. According to Bowen and Zapata, “Geographical indications (GIs) are place-based names (e.g., Champagne, Roquefort) that convey the geographical origin, as well as the cultural and historical identity, of agricultural products. GIs are protected under a wide range of institutions and arrangements and are found throughout the world. Although the oldest and most well-developed systems of GI protection are found in Europe (France, Italy, Spain), in recent years, developing countries have increasingly begun focusing on GIs as a tool to foster rural development and protect local products and traditions.”<sup>237</sup>

By definition, geographical indications are place-based. This spatial framework has the potential for relocalization and specialization of specific products, Bowen and Zapata contend: “GIs hold the potential of re-linking production to the social, cultural, and environmental aspects of particular places, further distinguishing them from

anonymous mass-produced goods and opening the possibility of increased responsibility to place.”<sup>238</sup> They point out, as an additional benefit, GIs can protect the specific elements of place which contribute to terroir: “Terroir is linked to the unique biophysical properties of particular places—for example, altitude, microclimate, native plant species, and soil type—and GI schemes that privilege terroir can be designed to protect these resources, which are seen as essential to the specificity of the product.”<sup>239</sup>

### Terroir in the United States

Bowen and Mutersbaugh move beyond Europe to identify where and how the concept of terroir might be found: “American conceptualizations of terroir extend from artisanal cheese producers in Wisconsin and Vermont, who refer to the way their farms’ native grasses and soils imbue their cheese with unique tastes, to New England oyster producers’ references to ‘merroir,’ an oceanic adaptation of terroir.”<sup>240</sup> Amy Trubeck, in her seminal work *The Taste of Place: A Cultural Journey into Terroir* provides a broader application of terroir, “Because our food and drink come from the earth, they must somehow speak to those origins. This is perhaps the universal element of terroir. If you possess the local knowledge, by birth or design, the taste of place can reside anywhere. All that is needed to cultivate it is a certain attention to the environment where the food and drink are grown, the skill to nurture those grapes, mangoes, or other products, and finally, the ability to discern their local tastes in the mouth.”<sup>241</sup>

This characterization, however, dismisses the cultural aspects of terroir – the human input of craft processing, heritage cultivation practices, and the dynamic between the producer and consumer that develops through the expectation of a quality product.

Trubeck further refines the definition of terroir to include these qualities: “A close examination of how terroir and goût du terroir are seen in everyday values and practices relate to food and drink in several regions of the United States reveal a strong connection to what Warren Belasco aptly call a ‘countercuisine,’ the response to our fully industrialized food system that began more than thirty years ago.”<sup>242</sup>

Trubeck points to the concept of authenticity as an indicator of the cultural aspects of terroir: “The uses of authenticity when related to food and drink rest on assumptions about the superiority of traditional practices; historical persistence somehow guarantees a higher quality of food and drink.”<sup>243</sup> She concludes: “Our times are characterized by the industrialization and globalization of our food supply: in Europe and the United States eating has never been less connected to where people live and how people farm...If we want to have a relationship to food based on location, we must *make it happen*.”<sup>244</sup>

### Back to the Farmland

Tom Daniel and Deborah Bowers, in *Holding Our Ground: Protecting America's Farms and Farmland*, relate “The Northeast has relatively little publicly owned land and is densely settled, particularly along the Boston-to-Washington corridor. The large, growing, and affluent population has sprawled across the landscape, making open space and farmland increasingly scarce.”<sup>245</sup> However, as we have seen, these factors combine to create an accessible and ripe market for small to mid-sized farmers who wish to opt out of the conventional agricultural systems in favor of the alternative, direct-to-consumer market. As Richard and Allen Olson reiterate in “Farmland Loss in America,” the

proximity of farmland on the urban fringe to the urban market is an important factor in relocalizing the food network system: “Any farmland bordering a major urban area is unique in terms of its proximity to that city. More than half the value of U.S. farm production is generated in counties in or near urban areas...Farmland statistics at the national or state level tell only a small part of the story. Losses that are trivial at a national scale may be devastating at a local scale.”<sup>246</sup>

Newman, Powell and Wittman, in the article “Landscapes of Food Production in Agriburbia” recount a study of Barcelona, which “investigated the connection between the preservation of land for agriculture in peri-urban areas and the development of alternative food networks, which involve short supply chains and interaction between producers and consumers, with farmers' markets as a common example.”<sup>247</sup> They tell us that the study “found that with strong farmland preservation regulations in place, and substantial support from government agencies, peri-urban agriculture could both help solidify alternative food networks and strengthen the economic position of farmers.”<sup>248</sup>

This same position is echoed by Kloppenburg, Hendrickson, and Stevenson in “Coming in to the foodshed.” The authors state, “It is difficult for most city dwellers to be concerned about preserving farmland unless the destruction of farmland directly affects their food supply or unless they know and care for the land being paved over. Awareness of and affection for one's place can forestall the ethical distancing so characteristic of the global food system. In the foodshed, collective responsibility for stewardship of people and of the land becomes a necessity rather than an optional virtue.”<sup>249</sup> By relocalizing at least part of the food system, an economic and social

relationship is established and reinforced between producer and consumer, farmer and patron, rural and urban.

“One way to preserve farmland in the United States then, is to increase the amount of food and agricultural products that are produced and marketed locally,”<sup>250</sup> Lyson, Geisler, Schlough assert in “Preserving Community Agriculture in a Global Economy.” They continue, “Land that might otherwise be taken out of farming because it cannot profitably produce for the global marketplace can be kept in production because it serves the needs and tastes of local consumers. In the process of relocalizing at least part of the food system, farmland is transformed from simply a ‘substitutable’ factor of production in a global food economy to an integral part of the local community.”<sup>251</sup> Lyson, Geisler, Schlough conclude with this thought: “Complete local or regional self-sufficiency is neither practical nor desirable. Undoubtedly there is some level of equitable international and inter-regional trade that is beneficial to both exporting and importing communities. However, the balance between local self-sufficiency and global dependence needs to come back towards the local, rather than continuing on its present trajectory towards the global. Only in this way can we stem the continued erosion of our farmland base.”<sup>252</sup>

### The Mid-Atlantic

In 2002, Halweil and Prugh described the plight of farmland in the Mid-Atlantic in their report for Worldwatch Institute *Home Grown: The Case for Local Food in a Global Market*: “As local farmland declined in importance and profitability in the Mid-Atlantic, thousands of farmers in Virginia, Pennsylvania, and Maryland went under and

farm communities dried up, many of them replaced by subdivisions and asphalt. The landscape declined in diversity as the remaining farms specialized in one or two crops to service distant markets rather than provide a range of foods for locals. The economic landscape also declined in diversity as many food businesses—from local grocers and bakers to local canneries and caterers—were replaced by a handful of national conglomerates.”<sup>253</sup>

They made the following predictive statements about the future of agriculture and farmland preservation in the Mid-Atlantic region: “The long-distance food habit is slowly beginning to weaken, under the influence of a young, but surging, local foods movement in the Mid-Atlantic and elsewhere. Politicians and voters in the counties surrounding Washington, D.C., have supported aggressive measures to protect farmland using tax credits, conservation easements, and greater emphasis on mass transit.”<sup>254</sup> Additionally, “Since protecting farmland means little if farmers continue to go out of business, many Mid-Atlantic residents and organizations are bringing back local food markets, which not only help sustain the local farm economy but also build solidarity between farmers and their urban neighbors.”<sup>255</sup>

### Conclusion

This chapter investigated the global industrial food system which came into dominance after World War II through advances in transportation and storage technology. This system has been detrimental to the small diversified farm, creating the consolidation of farmland, the aggregation of power to a small number of national and multinational companies, and the homogenization of our foodscapes. An alternative to

the global industrial food system was created by consumer demand for perceived safer, healthier and economically sustainable choices offered by local food networks. Local food networks use direct-to-consumer marketing as outlets to deliver their products to their customers and are primarily small to mid-sized farms near urban centers able to take advantage of their proximity to these markets. In the European Union and elsewhere, some agricultural products have been identified with global indicators, further linking their production to a particular place and cultural practice. Alternative food networks have been identified as creating positive economic climates in which small diversified farms on the urban fringe can remain sustainable if the right land-use policies and agricultural economic development programs exist. Halweil and Prugh single out the Mid-Atlantic as an example of a rapidly expanding region with tremendous growth pressure on its farmland surrounding the suburbs. The next chapter will examine one such Mid-Atlantic county, Loudoun County in the Northern Piedmont Region of Virginia, to see which land-use policies and agricultural economic development programs have been enacted, and to evaluate their success in preserving farmland on the urban fringe of Washington D.C.



## CHAPTER IV

### CASE STUDY: LOUDOUN COUNTY, VA

#### Introduction

As a case study for the management of growth and the protection of rural landscapes on the urban fringe, this chapter is comprised of an examination of the land use policies and practices in the latter half of the twentieth century and the rural economic development initiatives implemented at the beginning of the twenty-first century in Loudoun County, Virginia. This examination will demonstrate that conservative land use planning as well as a strong rural economic development program which supports and promotes agriculture on the urban fringe, are both important elements for the retention of working agricultural landscapes in this volatile geographic space.

Loudoun County is located in the Northern Piedmont Region of Virginia, on the outskirts of the Washington D.C. metropolitan area, and has experienced substantial development pressure spurred by the growth and expansion of the city's suburbs. Loudoun County has historically been predominantly agrarian and has been affected by urban sprawl consuming farmland and open space for the past fifty-plus years. In response to ever-increasing development pressures, the county put into place land use measures to attempt to channel growth to desired locations and limit growth in areas identified for resource protection, either as environmentally sensitive or as rural agricultural resources. Rich in historic resources, the county contains two National

Heritage Areas, Journey Through Hallowed Ground and the Mosby Heritage Area, as well as 69 individual sites listed in the National Register of Historic Places and 18 historic districts, two of which are Rural Historic Districts, Catoctin and Goose Creek Rural Historic Districts. In addition, there are six locally designated Historic and Cultural Conservation Districts and one Historic Roadways District. This chapter examines the county's land use planning and zoning efforts, and rural historic resource protection mechanisms to investigate what effect these measures have had on the preservation of historically rural agricultural landscapes.

Loudoun County's current agricultural economic development initiatives, part of its overall economic development strategy to support a viable, sustainable rural agricultural economy, are also considered. Loudoun County recognizes that its rural landscapes, located predominantly in its western portion, are part of what makes the County such an attractive place to "Live, Work and Play," (a catchphrase used by Loudoun County in promotional materials). In recent years, in addition to its conventional economic development program of promoting and recruiting industrial, office and retail businesses in urban and suburban areas, Loudoun redirected its rural economic development efforts to support and promote a sustainable rural agricultural economy as a way to encourage the perpetuation of agrarian activities and maintain its rural vernacular landscapes.

#### Selection of County Case Study

Loudoun is extremely dynamic with a great deal of development pressure, but also a history of foresighted planning and supportive agricultural programs. Loudoun

County was chosen as a case study because it is an excellent illustration of a historically agrarian county, on the fringe of a major rapidly expanding metropolitan area, impacted by the growth of the suburbs, but fighting to maintain its historically agricultural identity. Loudoun County has a long history of balancing the tensions of growth and development, and land conservation and historic preservation, and so serves as an example of a community managing this duplicitous dynamic.<sup>256</sup>

### Data Sources

The data for this research came from both primary and secondary sources. In most cases, the data used in this study were collected from government sources including planning documents, zoning regulations, economic development studies, and farmland preservation program information. Telephone interviews were conducted with two Loudoun County government offices, as well as a site visit and interview with a Loudoun County vegetable farmer. Most of the statistics cited in this chapter were obtained from the Department of Commerce's Census of Agriculture while some were obtained through county documents. Illustrative maps were obtained from Loudoun County's GIS and Mapping Department.

### Land Use Preservation Strategies and Rural Economic Development Efforts

Loudoun County is located less than 60 miles west of Washington D.C. As a part of Washington's expanding metropolitan area, the county has experienced tremendous development pressure in the last half of the twentieth century continuing into the first half of the twenty-first century. Our nation's capital's sprawling suburbs have extended past

the western edge of its neighbor, Fairfax County, and into eastern Loudoun County, swelling its population in recent years. Loudoun County's population more than doubled between the years 1990 and 2000, from 86,129 to 169,599, doubling again in the past fifteen years, from 169,599 in 2000 to 353,300 in 2014, and is projected to increase by another approximately 15% to 417,947 by 2020,<sup>257</sup> making the County one of the fastest-growing counties in the country.<sup>258</sup> Through foresighted land use planning, the western part of the county remains predominantly in scenic open space and productive farmland. However, since the mid-1960s with the construction of Dulles Airport and the interceptor sewer serving it which opened the Broad Run Watershed to suburban development, Loudoun County has lost close to 118,000 acres of farmland.<sup>259</sup> The threat and reality of land use conversion increasingly encroaches on its rural agricultural landscapes. According to Charles Poland, in *From Frontier to Suburbia: Loudoun County, Virginia*, "Farming significantly declined in eastern Loudoun during the last half of the 1950's due in large part to the construction of Dulles International Airport on an extensive portion of eastern Loudoun. [In order to build the airport,] five hundred residents on 5,000 acres in Loudoun and 3,000 acres in Fairfax were dislocated and evicted from their homes and property in 1958."<sup>260</sup> Poland goes on to characterize the subsequent construction of the airport and sewer services as creating the economic climate which spelled the death of farming in eastern Loudoun: "The construction of Chantilly Airport, later officially named Dulles International Airport, not only destroyed the remaining vestiges of...farming in southeastern Loudoun but also accelerated the demise of farming in eastern Loudoun to the north of the airport because of extensive purchases of land by

corporations for commercial development.” Poland asserts that once the construction of the airport and interceptor sewer were inevitable, land speculators drove the real estate market to the extent that supporting agricultural zoning in the area was no longer justifiable: “The impact of the construction of the airport, land speculation for future commercial and industrial development, and the realization that agriculture had ceased as a significant way of life in most of eastern Loudoun led the Planning Commission of Loudoun to zone the vicinity around the airport for commercial development.”<sup>261</sup> Thus, the development trajectory of the eastern-southeastern portion of the county was established and an urbanized pattern of development was set.

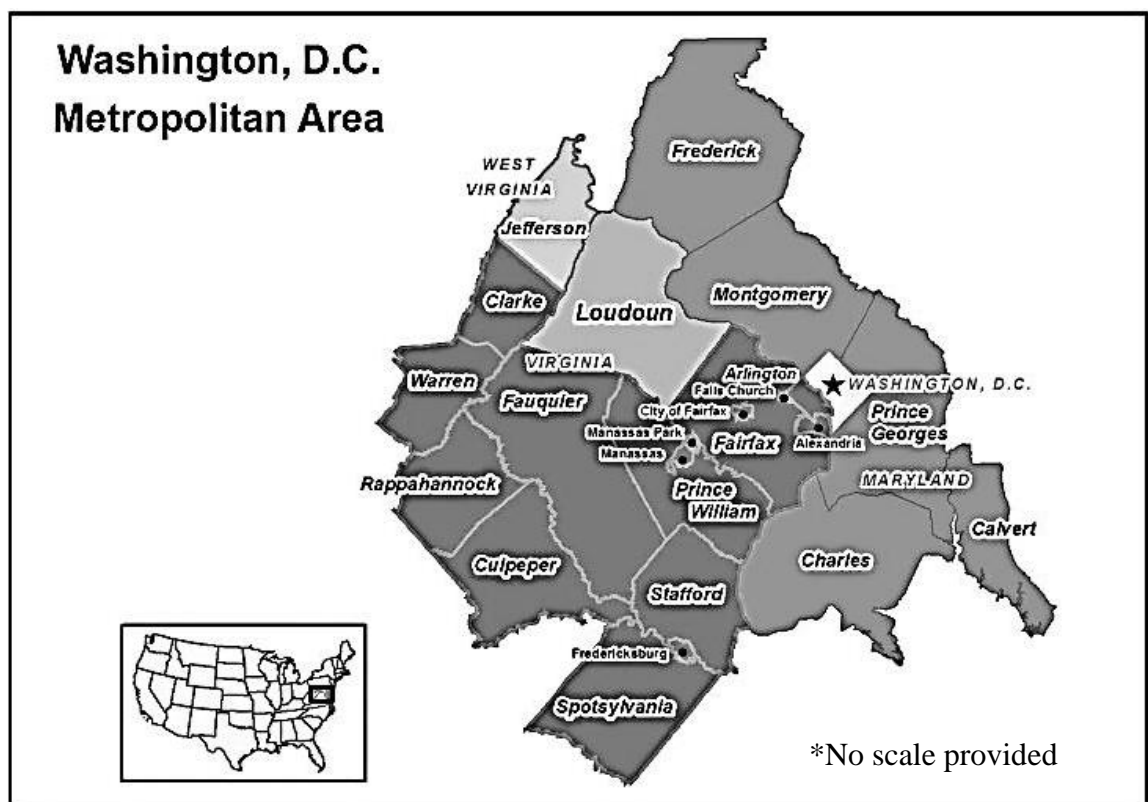


Figure 1: Washington, D.C. Metropolitan Counties, Courtesy of Loudoun County Office of Mapping and Geographic Information, 2016<sup>262</sup>

### Loudoun County Land Use Planning

In 1979, the County adopted a new Resource Management Plan, the foundational element of the County's Comprehensive Plan,<sup>263</sup> the goal of which was "to establish a growth management program which is designed to reduce the negative fiscal, community and environmental impacts associated with unmanaged growth."<sup>264</sup> The Resource Management Plan recognized the imperative to address the impact that unplanned growth and development was having on the County's resources: "Since 1960, the population and housing stock of Loudoun County has nearly tripled and may double in the next decade. The developed area of the County has expanded to a similar degree. The resulting environmental degradation of streams and rivers, soil erosion, loss of productive agricultural land, and impairment of the historic and scenic qualities of the County cannot be allowed to continue if the County is to retain its high-quality living environment."<sup>265</sup>

The 1979 Resource Management Plan, for the first time, included an extensive inventory and analysis of the County's resources, data which was used to "provide a detailed foundation for the recommended policies and programs"<sup>266</sup> of the Plan. The Plan identified eight land use management areas for the County: 1. Environmentally Critical, 2. Environmentally Sensitive, 3. Agricultural Long-term, 4. Agricultural Short-term, 5. Rural Residential, 6. Village Center, 7. Potential Community Development, and 8. Community Development.<sup>267</sup> The 1979 Resource Management Plan proposed limiting the extension of utility lines, both public water and sewer, through Environmentally Critical, Environmentally Sensitive, Agricultural Long-term, Agricultural Short-term, and Rural Residential areas, directing utility services to Village Center, Potential Community

Development, and Community Development areas,<sup>268</sup> essentially creating Urban Growth Areas by grouping new development around existing towns where services were already provided.

Loudoun County's current General Plan was adopted in 1991, revised in 2001, and amended through 2016. The County is presently undergoing the revision process for a new Comprehensive Plan for the future of Loudoun. According to the county's website, "The Comprehensive Plan is the set of policy documents adopted by the Loudoun County Board of Supervisors intended to serve as a guide for development over the next 20 years and is the foundation for amendments to the Zoning and Subdivision ordinances to ensure the county's goals are implemented through the regulatory process."<sup>269</sup> The 2001 Revised General Plan set in place a Smart Growth planning philosophy originally initiated by the 1979 Resource Management Plan and the 1991 General Plan, of channeling growth to desirable, cost-efficient areas, and limiting development in rural areas. The 2001 Revised General Plan reduced the number of total build-out projections from the previous comprehensive plan by about forty-five percent. A significant portion of that reduction was targeted the Rural Policy Area, where estimated housing build-out was planned to decrease from an anticipated 58,444 residential units to 12,542 residential units.<sup>270</sup>

#### Urban Growth Boundaries and the Rural Policy Area

The 2001 Revised General Plan recognized the importance of agriculture in Loudoun County's social and economic history and the significance of open space as a defining characteristic of the rural western portion of the county. The Rural Policy Area consists of 227,904 acres, representing about sixty-seven percent of Loudoun County's

total land (333,558 acres<sup>271</sup>), and contains large and small farms, vineyards, bed and breakfast lodging, and other businesses which support rural life and historic and scenic tourism. The most significant policy tool set forth in the 1979 Resource Management Plan and reaffirmed in the 1991 General Plan and 2001 Revised General Plan, was limiting public sewer service to land within the urban and suburban policy areas. However, the A-3 zoning density in the rural policy area allowed for by-right large-lot development due to the good drainage of the soils for individual septic fields. Although Loudoun had always valued its rural character, it had not been able to successfully protect its rural area from development conversion through sewer service limitations and incentives such as the Land Use Taxation program initiated in the early 1970s. The 2001 Revised General Plan made significant changes to the way the County would control growth and development in the Rural Policy Area.

The Rural Policy Area land use pattern and design strategy are fundamentally committed to retaining the rural area as an essential asset of Loudoun County. Since the implementation of the 1979 Resource Management Plan, the County had relied on a variety of voluntary development options such as conservation easements and tax incentives to entice desired development patterns, rather than regulating development into specific patterns to protect the Rural Policy Area. The 2001 Revised General Plan represented a significant shift in this strategy, as a result of the decline of traditional farming and the rapid conversion of agricultural land. As discussed in the following sections, many of the changes called for and ultimately implemented in the 2001 Revised General Plan to conserve rural land and open space in the Rural Policy Area required



changes to the residential development densities allowed in the zoning regulations.

### Zoning Ordinances and Agricultural Zoning

Before the Revised General Plan was adopted in 2001, Loudoun County had an Agricultural Zoning of A-3, allowing one dwelling per 3 acres. As a policy set forth in the 1979 Resource Management Plan, the county does not provide public sewer to identified environmental and agricultural areas, so the land on the lots must adequately drain, or “perc,” to support a septic drain field. Prime agricultural lands have excellent drainage capacity, which allowed for the fast-paced conversion of rural lands into large-lot subdivisions, brought on by the growth pressures of the region. As stated in the Rural Policy Area Chapter of the 2001 Revised General Plan, “The A-3 zoning, which allows one house on 3 acres, was established in 1959 to allow farmers to break off individual home sites in order to raise capital for their working farms. No one imagined at the time that traditional farming in Loudoun County would be replaced by a sprawl pattern of 3-acre lot development on the hills and pastures of former farms. Since then, the County has adopted a variety of plans and policies to preserve the rural area without changing the underlying A-3 zoning. All of these efforts have failed to slow rural residential development.” In response, the 2001 Revised General Plan called for downzoning most of the land then zoned A-3.

### Minimum Lot Size

As shown on the Rural Policy Area map (Figure 3), Loudoun County created two distinct Rural Residential/Agricultural Zones. In the southwest region of the county, a

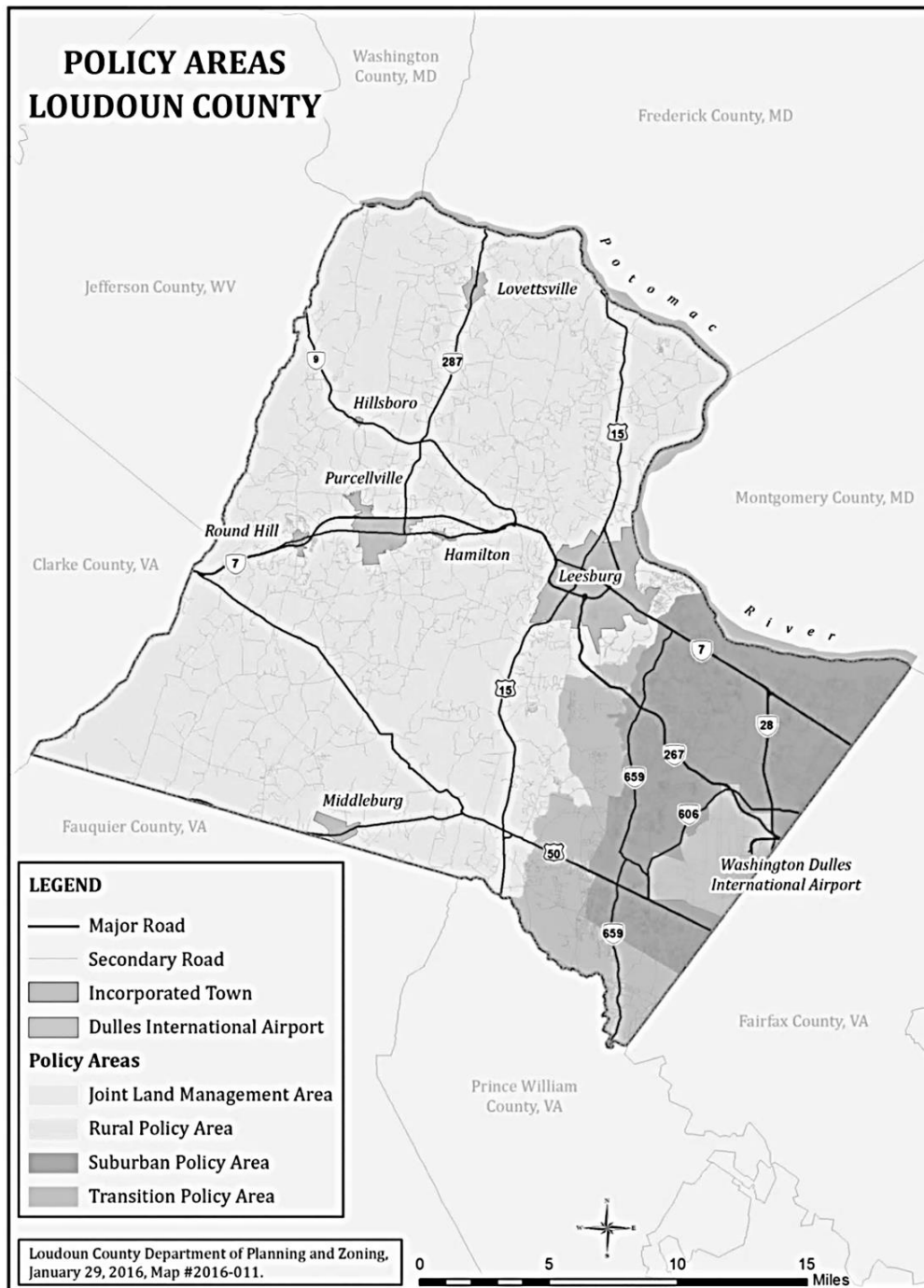


Figure 2 Loudoun County Policy Areas, Courtesy of Loudoun County Office of Mapping and Geographic Information, 2016<sup>272</sup>

larger lot pattern had already been established. A significant portion of the land was under conservation easement and several agricultural districts had been established with fifty-acre lot size minimums. As explained in the Rural Policy Area Chapter, this area “is the center of Loudoun’s equine industry and an important part of the rural economy. It surrounds Middleburg, a major tourist attraction, and includes many historic structures and sites including important Civil War sites of cultural importance and tourist interest. It covers a substantial portion of the Mosby Heritage Area and the Beaverdam Historic Roadways District.” In this sub-area, the Revised General Plan called for a base density of forty acres per lot, or cluster development at the equivalent of one dwelling per fifteen acres.

The remainder of the Rural Policy Area had a mix of land use patterns. To accommodate the existing land uses, smaller farm production, and future rural residential development in this sub-area the Revised General Plan called for a base density of twenty acres per lot, with development options to cluster or spin-off residential lots at the equivalent of one dwelling unit per 5 acres. In 2005, on a technicality, the Virginia Supreme Court overturned the downzoning set in place by the new zoning ordinances for land conservation in the Rural Policy area.<sup>273</sup> The downzoning was subsequently reinstated in 2006,<sup>274</sup> and upheld by the courts in 2008.<sup>275</sup>

### Agricultural Districts

The 2001 Revised General Plan’s Rural Policy, in order to support agriculture and open space as long-term land uses in the Rural Policy Area, encourages the voluntary participation in programs such as the Agricultural and Forestal District Program and Land

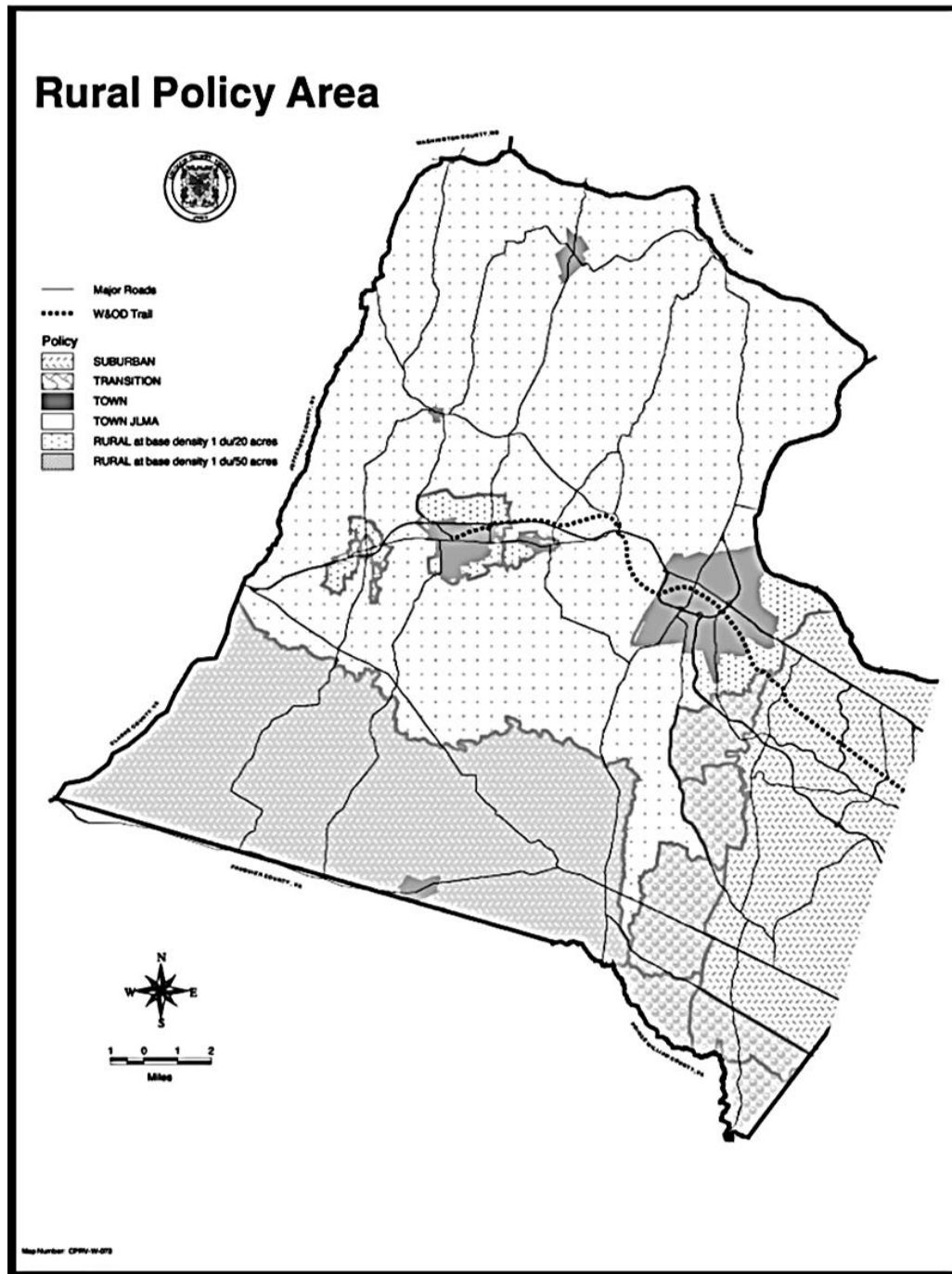


Figure 3: Loudoun County Rural Policy Area, Courtesy of Loudoun County Office of Mapping and Geographic Information, 2005<sup>276</sup>

Use-Valuation program, which provides reduced tax burdens to the farming community. As of December 31, 2013, Loudoun had 23 Agricultural Forestal Districts representing 1,216 of the 3,000 eligible parcels in the County. The total land enrolled in an Agricultural and Forestal District encompasses approximately 43,094 acres.<sup>277</sup> In a private correspondence with the author, Milton Herd, a private planning consultant who worked for Loudoun County, commented that both the Use Value Taxation Program and the Agricultural and Forestal District Program had been around for a while without being very effective in preventing farmland conversion.<sup>278</sup> Since 2001, the County's Agricultural and Forestal District Program has been administered by the County's Department of Economic Development, connecting the Agricultural and Forestal District Program participants with the County's Agricultural Economic Development initiatives in an effort to better administer the program and target programs and services to agricultural businesses.<sup>279</sup>

### Green Infrastructure

The Revised General Plan conceptually brought together the county's "natural, environmental, cultural and heritage resources into a unified Green Infrastructure strategy,"<sup>280</sup> under the umbrella of what is referred to in the plan as the county's Green Infrastructure. References to this strategy can be seen throughout each of the chapters of the Revised General Plan, with Green Infrastructure having a stand-alone chapter to address these important resources specifically. As stated in the Revised General Plan, the conservation and preservation of the resources that comprise Green Infrastructure should inform all future land use decisions and the development process. The four resource

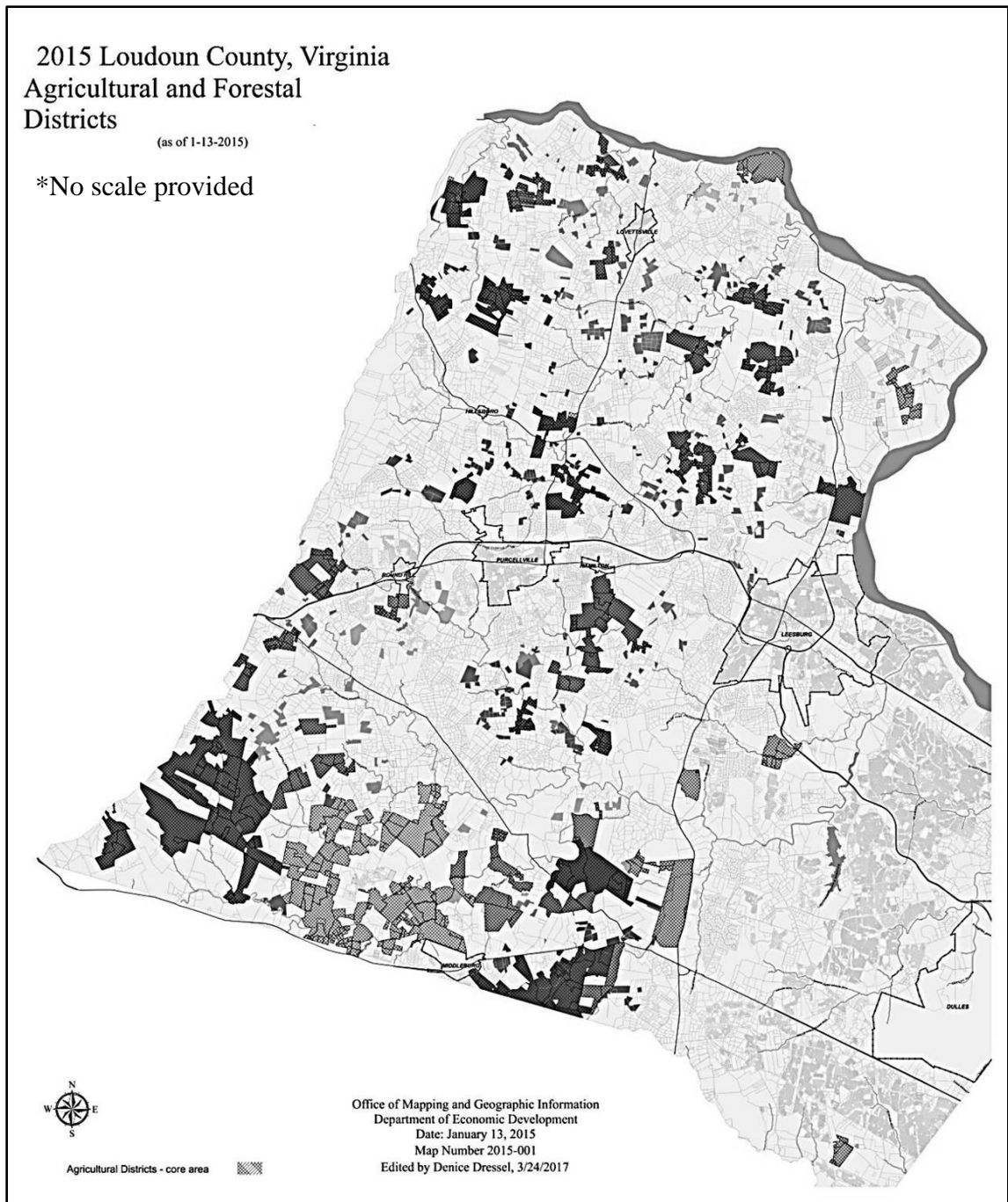


Figure 4 Loudoun County Agricultural Districts, Courtesy of Loudoun County Mapping and Geographic Information, 2015

categories which comprise Green Infrastructure are overlapping and speak to the overall quality-of-life for county residents:

1. Natural Resource Assets (River and Stream Corridors; Scenic Rivers and the Potomac River; Surface and Groundwater Resources; Geologic and Soil Resources; Forests, Trees, and Vegetation; and Plant and Wildlife Habitats)
2. Heritage Resource Assets (Historic and Archaeological Resources, and Scenic Areas and Corridors)
3. Open Space Assets (Greenways and Trails, Parks and Recreation, Public School Sites, and Open Space Easements)
4. Complementary Elements (Air Quality, Lighting and the Night Sky, and Aural Environment)<sup>281</sup>

In addition to the Revised General Plan, heritage resource preservation is addressed in Loudoun County's Heritage Preservation Plan, adopted in 2003. The purpose of the Heritage Preservation Plan was to implement the Heritage Resource Policies put forth in the Revised General Plan. Among the topics addressed in the Heritage Resource Plan are survey of heritage resources; archaeological resources; county heritage register; historic districts; cultural landscapes; heritage tourism; stewardship; education; development review; design and preservation guidelines; and county operations.

#### Local Historic Overlay Districts

Historic Overlay Districts (HODs) provide a layer of regulatory review protection beyond the underlying zoning ordinance that a property in a HOD is subject to. Properties located in a Historic Overlay District must comply with the architectural guidelines that protect the historic character of the HOD. Before any changes to the "...existing structures or construction of new structures or buildings (including fences but excluding

farm fences and bona fide farm buildings primarily used or to be used for agriculture or horticultural purposes) and signs can proceed, plans must be presented to and reviewed by the Loudoun County Historic District Review Committee (HDRC).”<sup>282</sup> Each HOD has its own design guidelines which the HDRCs use to evaluate conformance and provide guidance to an applicant seeking to make changes to their property.

Loudoun County created four categories for Historic Overlay Districts. They are the Historic and Cultural Conservation Districts, Historic Site Districts, Historic Roadway Districts, and Historic Access Corridor Districts. In 1972, the County established the Historic and Cultural Conservation (HCC) Districts as zoning overlay districts. Subsequently, the County recognized the Aldie, Oatlands and Waterford HCC districts in 1972, the Taylorstown district in 1976.

In 1977, the Goose Creek Rural Historic District was formed to preserve not only the historic architecture of the area but also the surrounding rural, agricultural landscape. According to Milton Herd of Herd Planning and Design, the Historic District was one of the first expansive rural historic districts in the state, comprising over 10,000 acres of land.<sup>283</sup> In spite of Loudoun’s preservation efforts, the zoning within the district has allowed some suburban-style development to occur, however, it remains intact and essentially preserved.

In 1988 the Bluemont Historic District was created and in 2002, the County’s first Historic Roadways District, known as the Beaverdam Creek Historic Roadways District, was formed in the southwestern portion of the County. The Towns of Leesburg, Middleburg, and Purcellville also contain local HODs.<sup>284</sup>



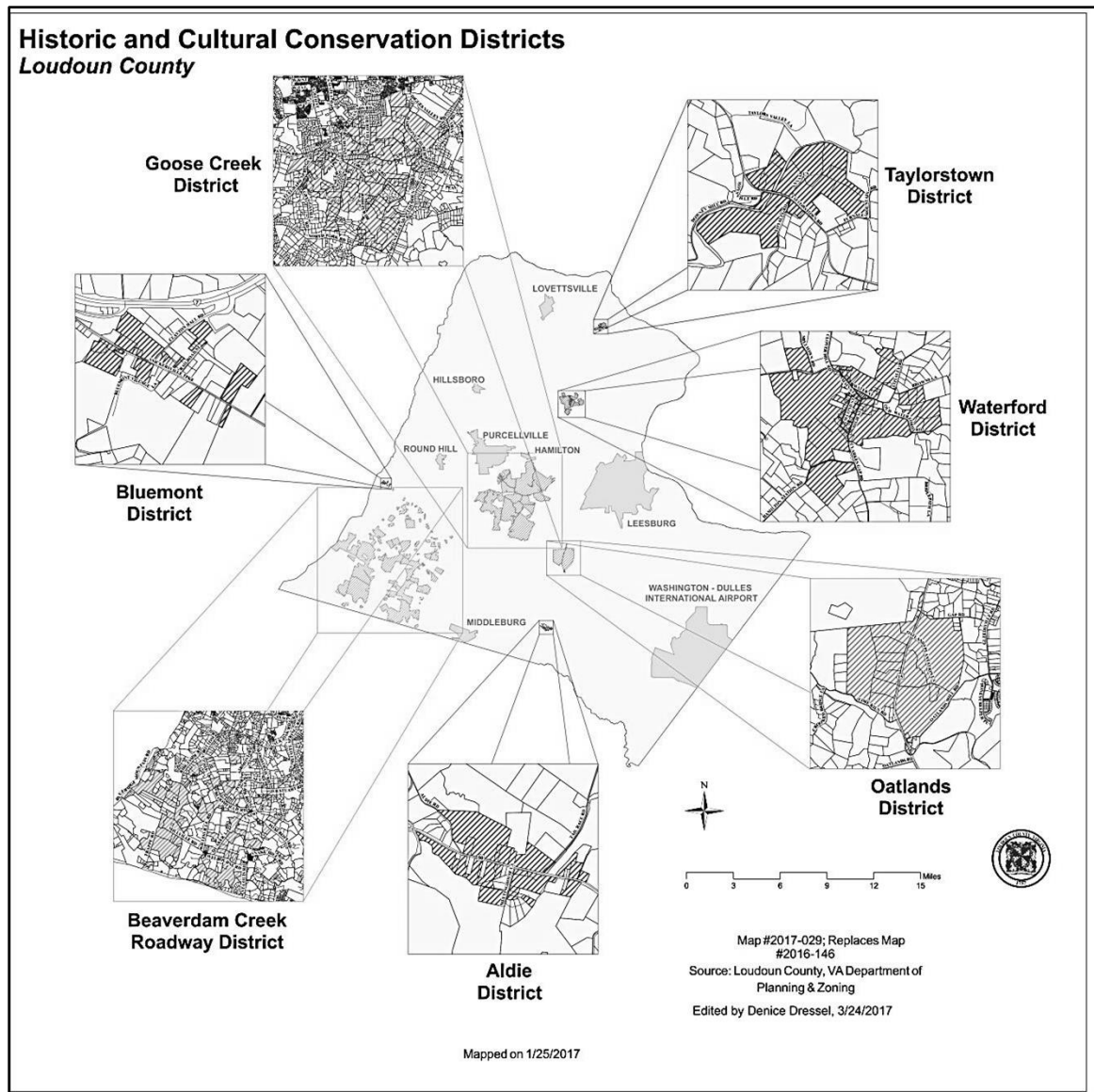


Figure 5: Loudoun County Historic Districts, Courtesy of the Loudoun County Planning Department, 2016<sup>285</sup>

### Certified Local Government

The Certified Local Government (CLG) program was created by the National Historic Preservation Act of 1966, as amended in 1980, which forms a partnership between local governments, the federal historic preservation program, and, in Virginia,

the Virginia Department of Historic Resources (VDHR). VDHR maintains the Virginia Historic Landmarks Register, oversees nominations to the National Register of Historic Places, and provides technical support and administers federal grants to CLGs for preservation efforts.

Loudoun County became a Certified Local Government (CLG) as called for in the Revised General Plan. Loudoun has taken advantage of the grant funding available to CLGs to create a dynamic and interactive website to educate the public about the County's Historic Districts, and to update their Guidelines for Historic Districts.<sup>286</sup>

### Surveys

Recognizing that resource identification is the first step in resource protection, the Revised General Plan states: "The County will conduct a comprehensive survey of its heritage resource base and will prepare and implement a plan for the preservation and promotion of these resources as an integral part of the economy."<sup>287</sup> As a result, the County contracted cultural resource surveys, including a survey of 750 historic standing structures; a survey of historically African American sites (with support from the Black History Committee of the Friends of the Thomas Balch Library); Preliminary Information Forms (PIFs) to assess resources within four of the incorporated towns in the County namely, Lovettsville, Hamilton, Purcellville and Round Hill; and Preliminary Information Forms (PIFs) to assess resources within seven historically African American settlements.<sup>288</sup>

### National and State Register Listings

Loudoun County has 81 historic sites listed in the National Register of Historic Places and the Virginia Landmarks Register and twenty-four Historic Districts. Five of these properties – Balls Bluff Battlefield, Dodona Manor, Oak Hill and the districts of Oatlands and Waterford – are National Historic Landmarks. Both state and federal registries are honorary and offer no regulatory resource protection; however, they serve to raise the prominence and stature of the sites in the public’s mind, which can bolster public support if the site’s preservation is ever threatened. Preservation protection is provided through the local Historic Overlay District ordinance, previously discussed.

### Real Estate Tax Relief – Land Use Value Taxation

Charles Poland, in *From Frontier to Suburbia*, recounts the early strain placed on Loudoun County farmers from raising property values and raising tax rates, due to the increased development and demand for public services: “During the 1960’s the increase in tax rates on real estate and the increase in the appraisal of farmland in Loudoun spiraled to the point some land was appraised 1,000 percent higher than the appraised value at the beginning of the decade. Farmers complained, with considerable justification, of inconsistencies and inequalities in the appraisals of realty.”<sup>289</sup>

In order to reduce this burden, in 1972, the state of Virginia passed enabling legislation and Loudoun County adopted a corresponding ordinance to create a Land Use Value Taxation Program in the county. Poland continues, “This plan, referred to as Land Use Taxation (LUT), was designed to greatly reduce the assessed value of farmland for

tax purposes.” The LUT was subsequently modified after developers eagerly took advantage of loopholes during its inception. Modifications included, “higher standards by making as a requirement for LUT the condition that land must be used in a manner that is ‘consistent with the land use plan of the county and zoning ordinances.’...Other new qualifications included a certification by landowners that their property was being used in a ‘planned program for soil management and soil conservation practices’ and had been farmed primarily for commercial purposes for at least five years prior to the application for tax relief under LUT.”<sup>290</sup> The 5-year history may be waived for produce that requires more than two years from initial planting until commercially feasible harvesting. A minimum gross income of \$1,000 per year must be documented or a minimum of \$1,000 averaged over the previous three-year period. Land Use Tax Assessments are also offered to properties in forestry, open space, historic and scenic resources.<sup>291</sup>

Loudoun County refers to its Land Use Taxation Program as a deferred tax program, meaning that changes in use or subdivision of lots may trigger roll-back taxes. The County’s web page explains the provision in the program this way: “Roll-back taxes are assessed based on the difference between the land use assessment and fair market value for the 5 years prior to a change (with some exceptions) plus interest at a rate of five-sixths (5/6) of one percent per month. The current year taxes will be based on fair market value. Changes in use, rezoning to a more intensive use and the split off or subdivision of lots may trigger roll-back taxes. Liability for roll-back taxes shall attach when a change in use occurs but not when a change in ownership occurs if the new owner continues the qualifying use.”<sup>292</sup> These measures help to ensure the tax benefits are given

to owners who are keeping their land in preferred uses and help to curb land speculator participation, or at least provide a mechanism for the County to recoup some of the deferred tax revenue when land is moved out of a preferred use.

### The Land Evaluation and Site Assessment System

In *From Frontier to Suburbia*, Charles Poland writes, “Loudoun Valley [located in the northwestern quadrant of the county] contains some of the most fertile and productive soil in the United States, especially its 105,000 acres of Chester soils which are rated as premium farmland...Eastern Loudoun has inferior soil types compared to those in the western region of the county. Therefore, the demise of farming in eastern Loudoun is not so great a loss agriculturally as would be the total displacement of farming in the western half of the county.”<sup>293</sup>

Because the Land Use Taxation Program is based, in part, on the production value of land, the USDA’s soil classification system is used to evaluate the land’s potential production capabilities. Andrew Baker, in his Ph.D. dissertation, “Southern Landscapes in the City’s Shadow: Environmental Politics and Metropolitan Growth in Texas and Virginia, 1900-1990” asserts, “Changes in agricultural marketing and transportation combined with the rising importance of proximity in determining the land’s development potential had eroded the importance of proximity to agricultural land values. The LUT solidified this trend in policy. The LUT provided the greatest benefit to the owners of the most productive soils of Western Loudoun. By making soil the criteria of agricultural productivity, the LUT made environmental criteria rather than agricultural productivity

the central criteria of agricultural preservation.”<sup>294</sup> Interestingly, in this way, when Loudoun County adopted the Land Use Value Taxation Program, it helped to reinforce the western portion of the county as the preferred region for agricultural use.

#### Purchase of Development Rights

Loudoun County had a very short-lived Purchase of Development Rights Program in place once the 2001 Revised General Plan was adopted, paid for through General Funds. In the Program’s very brief duration, it managed to purchase the development rights to 2,500 acres in western Loudoun.<sup>295</sup> Unfortunately, the program was a victim of Loudoun’s contentious political pendulum of changes in the Board of Supervisors and was eliminated in 2004 when a new, less conservation-minded Board was voted into office. After efforts by the previous Board of Supervisors were successful in downzoning much of the land in the Rural Policy Area as part of a campaign to manage growth in the County, a new Board of Supervisors was voted in hostile to the slow-growth policies of the previous board. This new board quickly targeted the PDR program for elimination, calling it a “feel-good waste” and “esoteric fluff stuff.” The manager of the PDR program at the time defended the program’s economic benefits, saying that “Preservation costs about half of what development does, and even more so, you get the benefits of preserving the land.” His arguments were unpersuasive and the Board eliminated the program in 2004.<sup>296</sup>

#### Land Trusts and Conservation Easements

Although the Purchase of Development Rights Program no longer exists, 65,000

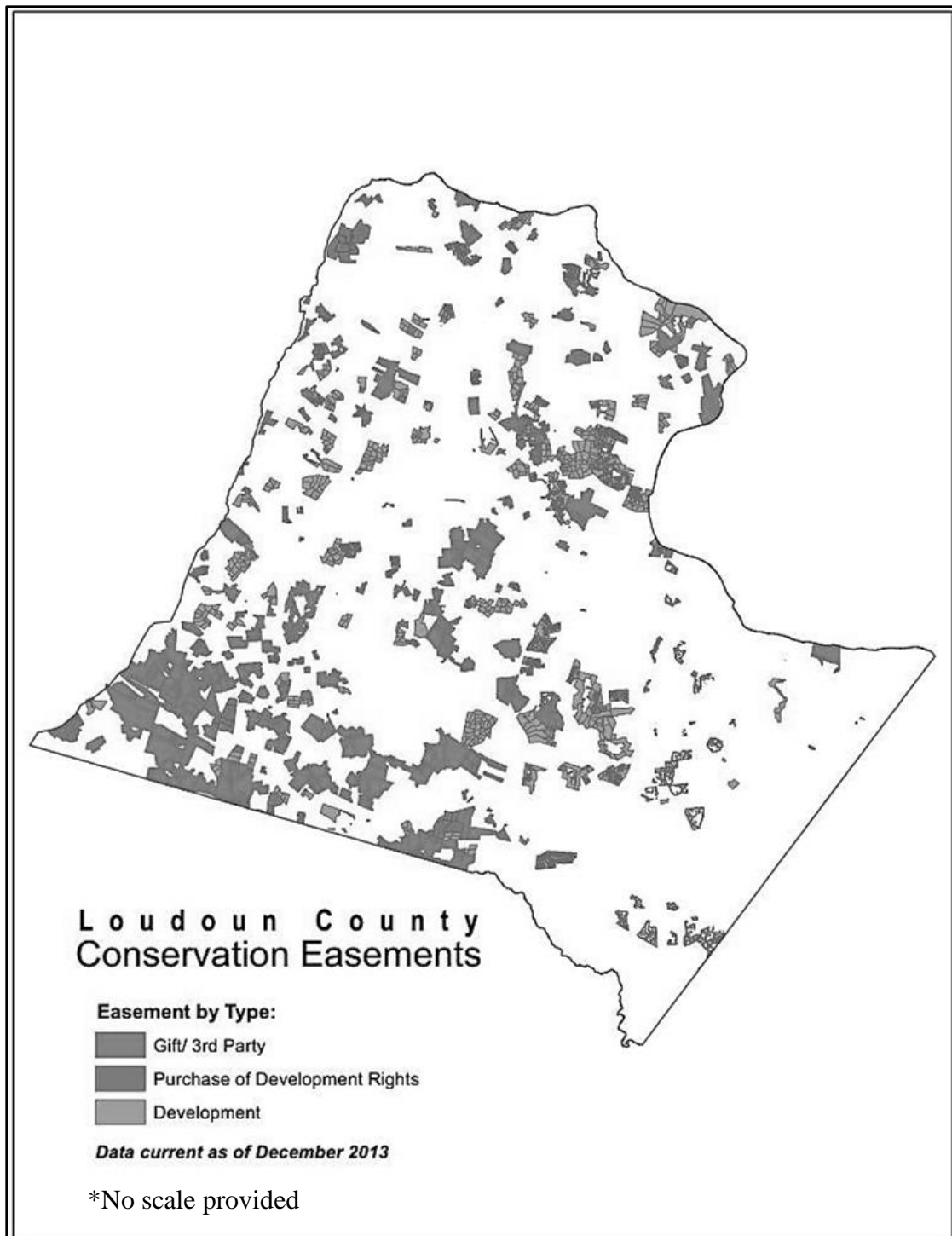


Figure 6: Loudoun County Open Space Easements, Courtesy of Loudoun County Mapping and Geographic Information, 2013<sup>297</sup>

acres of rural land in Loudoun, or about 20% of the county's total land, are under conservation easements.<sup>298</sup> Most easements are donated to and held by private non-profit conservation organizations that must be qualified by the state of Virginia to "acquire and hold a conservation easement by gift, purchase, devise or bequest." Loudoun County partners with many of these organizations and has established a stewardship program to assist property owners in meeting their easement obligations.

There are tax benefits a landowner may receive by placing a conservation easement on their property, in essence donating their development rights. The Federal Government offers a federal tax deduction of 50% of the individual's adjusted gross income, the unused portion of which may be carried forward for 15 years. Virginia offers a state tax credit for 40% of the value of the easement, any portion of the unused tax credit may be carried forward for 13 years. Federal estate taxes may also be affected by lowering the value of the land for estate valuation purposes, as well as reductions in real estate taxes if the land is not already in an LUT program.<sup>299</sup>

#### Alternative Agricultural Markets - Local Food Networks

##### The 200,000 Acre Solution: Rural Economic Development in Loudoun County

Loudoun County adopted a strategic economic plan in support of its rural economy in 1998, recognizing that land use planning is only a part of a comprehensive strategy for farmland preservation. Before the proposed downzoning of land in the Rural Policy Area in the 2001 revised Comprehensive Plan, the Board of Supervisors formed a Rural Economic Development Task Force to investigate ways in which Loudoun



County's rural economy could be strengthened and supported, in order for agriculture to flourish into the future as part of Loudoun's physical and economic character. The Task Force findings and resulting recommendations were delivered to the Board of Supervisors in a report entitled, *The 200,000-Acre Solution: Supporting and Enhancing a Rural Economy for Loudoun's 21st Century*. This document served as the County's Rural Economic Development Plan until it was revised in 2013. The reference to 200,000 acres was based on the approximately 200,000 acres in the western portion of the County then zoned A-3, for agricultural-residential use.<sup>300</sup>

The Rural Economic Development Task Force determined its ultimate goal was to double the value of Loudoun's rural economy in ten years<sup>301</sup>. The Task Force recognized the importance of the rural character of western Loudoun for the quality of life for its current citizens, and as an attractive amenity for promoting new businesses to locate in Loudoun. The Task Force acknowledged the economic benefits agricultural activities, tourism, and the equine industry brought to the county and identified much that could be done by the County in support of these industries. As stated in the report, "The Task Force squarely faced the issue of whether it is in the best interests of Loudoun County to grow its rural economy. The answer is a resounding 'yes'— both from an economic perspective and in terms of Loudoun's quality of life for its citizens."<sup>302</sup>

The Task Force used the USDA Agricultural Census for Loudoun from 1992, the most recent year for which data was available. The Census reported that gross agricultural sales totaled more than \$53 million in the following categories:

1. Agricultural products \$26.7 M

2. Horticultural products \$10.9 M
3. Livestock \$15.8 M

The report noted that these figures do not include:

1. Rural businesses
2. Rural tourism
3. The various businesses supporting agricultural production
4. The equine industry, which alone generates private sector economic input of more than \$75 million per year in equine services, based on the latest available data
5. The horticulture industry, which generates an additional \$11 million per year in service-related businesses.<sup>303</sup>

### Rural Economic Development Task Force Recommendations

The Task Force identified three major objectives for its recommendations for implementation in order to meet the goal of doubling the value of Loudoun's rural economy in ten years: greater profitability of farming; new initiatives to increase the rural economy; and securing the natural resource base. The recommendations for each objective were numerous and the report as a whole was comprehensive. The Task Force advocated for the adoption of all its recommendations asserting that, "many of the recommendations contained in this report are interrelated or interdependent, and that the implementation of one without the others almost certainly would be fruitless."<sup>304</sup>

### Recommendations to Help Farm with Greater Profitability<sup>305</sup>

The task force identified twelve individual recommendations for actions the county should take in order to help farmers farm more profitably, and thus retain agriculture as a thriving industry for the County. It is under the category of increased profitability where the Task Force focused specifically on shifting the rural economy

away from traditional agricultural commodities markets toward the more profitable alternative direct-to-consumer markets. The following is a summary of each recommendation:

1. Provide opportunities for rural "recapitalization": The County should help facilitate new forms of rural financing and encourage traditional lending sources to continue their support to agricultural enterprises.

The Task Force recommended the development of an agricultural lending program with community banks, making agriculture capitalization a stipulated program for County banking relationships, similar to the affordable housing funding program. More importantly for long-term effectiveness, the Task Force recommended the creation of a dedicated rural economic development function within Loudoun County government.

2. Support agricultural activities which have the highest potential for expansion

The Task Force recommended that private efforts which target profitable new markets be supported and encouraged. This recommendation included the introduction of specialty animals and crops, and shifting to alternative direct-to-consumer markets, steering away from the traditional commodities markets on which the County had historically depended.

3. Focus commercial agriculture on high-value crops for which there is strong market demand and high producer profits.

Because many high-value crops take major investments of land, capital, and time, such as multi-year horticultural crops like wine grapes, Christmas trees, and fruit trees,

the Task Force recommended that “the County should encourage the creation of a demonstration farm showcasing new crops and new production methods, so that farmers can readily assess the production potential of these new crops, and consumers can sample the produce.”

4. Access new markets and new methods to increase existing market penetration for rural products

The Task Force saw great untapped market potential due to Loudoun's location near the Washington D.C. suburbs for both agricultural goods and rural tourism and recommended this market be targeted for Loudoun products and tourist destinations.

5. Facilitate the establishment of an agricultural cooperative to access new markets and new methods, and to increase penetration into existing markets.

The Task Force recommended the formation of an agricultural cooperative and the establishment of a centralized food hub for aggregation and distribution of agricultural products for both the wholesale and retail markets, managed by the cooperative. Additionally, the Task Force identified the County as a partner in branding and marketing for county-produced agricultural products.

6. Provide targeted technical assistance and linkage to appropriate public and private organizations and resources, with an initial priority directed to existing agricultural enterprises: The County should recognize the importance of the rural economy by the creation or expansion of an organization specifically targeted toward increasing the rural economy.

Here again, the Task Force called on the County to expand the rural agricultural development presence in the County government, either in the Department of Economic Development or through the creation of a separate rural economic development agency.

7. Encourage the leasing of unused farm acreage for agricultural purposes.

The Task Force called on the County to create and maintain a Land Lease Data Bank to link potential farmers with underused farmland for lease and to ensure that land placed in the Land Lease Data Bank is eligible for Land Use Tax assessment.

8. Look to the future by encouraging young people to seek a career in agriculture.

The Task Force encouraged the County, through its rural economic development function, to implement existing programs for training future farmers.

9. Eliminate unnecessary or inappropriate regulatory burdens imposed on the rural economy: Review all existing legal and administrative requirements to determine their appropriateness for a rural economy.

The Task Force generally identified regulatory burdens that serve no public purpose in a rural setting and which impinge on agricultural operations. They called on the County to review regulations with an eye toward lessening those unnecessary requirements.

10. Encourage farmers and landowners to maintain or rehabilitate farm labor housing.

The Task Force identified the scarcity of farm labor as an issue which many farmers must face. Tied to this issue is the lack of affordable housing in the region. A solution recommended by the Task Force is to lessen the tax burden of farm structures used for labor housing by including them in for Land Use Valuation rather than taxing them at residential market value.

11. Search for additional commercial by-right uses to be authorized for the rural economy.

Similar to the recommendation to review regulations which are onerous to farming, the Task Force recommended the review of by-right uses allowed in the zoning regulations in order to expand those uses which would be compatible with the rural nature of the land, and favorable to rural economic development (e.g., craft shops, nurseries, antique shops, etc.).

12. An ombudsman should be designated to serve as a direct link between farmers and rural businesses and County or state government relative to issues affecting the rural economy.

According to the Task Force, “This individual would serve as a direct link between farmers and other rural businesses, working to minimize regulatory delays, avoid the imposition of urban interpretations of standards, and expedite resolution of administrative problems with County or state government in the planning, initiation, or conduct of their rural economic enterprise.”<sup>306</sup>

#### Recommendations for New Initiatives to Increase the Rural Economy

Four of the twelve new initiatives identified by the Task Force primarily focus on biotechnology: 1.) Recruit agricultural biotechnology companies for demonstration ventures and relocation to Loudoun County; 2.) Leverage Loudoun's locational advantages to become an important testing ground for agricultural biotech activity; 3) Sponsor educational and promotional events relative to biotechnology; and 4.) Create an "educational park" for biotech demonstration and education.<sup>307</sup>

Four other recommendations focus on business development in general and strengthening the ties between the county and its towns: 1.) Recruit appropriate new

businesses for location in a rural setting; 2.) Support Loudoun's towns in furthering their business development efforts; 3.) The County should examine and strengthen its relationships with its towns, particularly in the area of business development; 4.) Support the Loudoun Tourism Council's efforts to promote authentic rural tourism and active recreation experiences in Loudoun.<sup>308</sup>

The last four recommendations included in support of new initiatives are varied. The first addresses the equine industry in Loudoun County as a major part of the rural economy: 1.) Include the equine industry as a fundamental component of rural economic development and provide for its expansion. The second recommendation calls for ensuring that infrastructure for telecommunications is available to the rural area but sensitive of the rural landscape: 2.) Develop a telecommunications plan which considers all of the needs of the rural economy, while maintaining a sensitivity to the rural landscape and the tourism industry. The third repeats the charge to develop a marketing plan for existing rural businesses: 3.) The County should develop a clear marketing plan to attract appropriate new business and grow existing businesses in the rural setting. The fourth and final recommendation for new initiatives proposes providing technical assistance to rural business start-ups: 4.) Provide targeted technical assistance for business start-ups.<sup>309</sup>

#### Recommendations to Secure the Natural Resource Base of Loudoun's Rural Land<sup>310</sup>

Although the Rural Economic Development Task Force understood its mission to focus on the rural economy and make recommendations to the Board of Supervisors

pertaining to rural economic development issues, nonetheless, the critical impact land use issues have on the rural economy was too pervasive to be ignored. Ultimately, the Task Force made the most recommendations in the category of securing the natural resource base. In justifying this categorical focus on the tangible resources underlying a healthy rural economy, the Task Force defended its recommendations saying:

“A thriving rural economy can exist only where there are adequate resources—a critical mass of rural/agricultural land and a plentiful, low-cost water supply. The beginning point of any plan to maintain and grow the rural economy must be, therefore, to secure those natural resource assets of rural Loudoun in order that it may: 1) retain its rural character; 2) accommodate enhanced agricultural production; 3) offer opportunities for alternative rural enterprises; and, 4) continue to attract increasing levels of tourism. Today, this natural resource base is not only threatened, it is disappearing to residential subdivisions at an alarming rate. Unless immediate actions are taken to secure the rural resource base, it will seriously impair our ability to build a robust, profitable, and self-sustaining 21st Century rural economy. Securing that resource base must be our first priority.”<sup>311</sup>

The Task Force recommendations for securing the natural resource base were as follows:

1. Ensure that Loudoun's "countryside" retains its rural character: Create rural performance standards for residential development that will promote greater protection for and more compatible use of Loudoun's rural resource base.

The Task Force urged the County to review the current A-3 zoning to establish performance standards which encourage the conservation of open space which is suitable for agriculture.

2. Recognize that the maintenance of a rural character through the continued use of Loudoun farms for agricultural uses is critical to Loudoun's cultural heritage-based tourism industry.



In this recommendation, the Task Force stressed that agriculture, productive farms, and the working landscape are the essential element to the rural character of the County's countryside. "While the sustainability of traditional farming is questionable, as pointed out in the previous recommendation, the Task Force believes that farming can regain its vitality and continue to be a vital component of the rural landscape and economy."<sup>312</sup>

3. Give greater recognition to the horse industry and equestrian activities as a major component of the rural economy, and afford equine husbandry the same benefits and encouragement extended to other forms of agriculture.

The Task Force throughout the report stressed the need to give the equine industry in Loudoun County recognition and support as a major contributor to the rural economy.

4. Adopt additional A-3 by-right uses and remove unnecessary use-oriented impediments to encourage adaptive use of farm buildings and farmlands and to create new opportunities for rural activities consistent with maintenance of the rural countryside.

This recommendation is repeated from a similar recommendation made in the Recommendations for New Initiatives section.

5. The County should create incentives to promote and assist in the preservation and reclamation of farm buildings and structures in order to ensure availability for future agricultural use, while at the same time providing the ingredients critical to the visual character of rural Loudoun.

The Task Force recommended developing an information program to promote Virginia state rehabilitation tax credits for qualifying farm structures. In addition, the Task Force recommended a tax abatement program for the restoration and maintenance of qualifying farm structures.

6. Retain the most usable agricultural land for crop and livestock production: Amend the Zoning Ordinance to make it much easier to accomplish permanent Large-Lot Waiver subdivision, thereby encouraging alternatives to A-3 development, and reducing residential density from what it would be under normal A-3 development.

The Task Force recommended incentives and less regulatory burdens for large-lot subdivisions over traditional A-3 development in exchange for permanent conservation easements on undeveloped land.

7. Review and strengthen the opportunities for cluster residential development by creating options so attractive in their implementation that A-3 grid subdivision patterns or other development options resulting in higher densities and requiring more infrastructure will not be utilized.

This recommendation is similar to the recommendation for large-lot subdivisions, where the county could incentivize cluster developments by easing regulatory burdens in exchange for conservation easements.

8. The current Rural Village Ordinance should be carefully reviewed to determine its appropriateness for use in rural areas and to assess whether it is, in fact, an impediment to the maintenance of a rural economy

The Task Force identified the conflict between the Rural Village Ordinances and the surrounding rural land characteristics. They recommended a review and assessment of those regulatory conflicts, which could potentially allow for development sprawl from the rural villages into the Rural Policy Area.

9. Loudoun County should immediately begin the process of establishing a Purchase of Development Rights (PDR) program to retain land essential to agriculture and to encourage its agricultural use, for the protection of natural resources, to protect assets essential to the tourism industry, and to maintain the quality of life which gives Loudoun County its competitive advantage in attracting appropriate new business entities

The Task Force recommended establishing a Purchase of Development Rights program in the County, discussed previously in this chapter in the section on land use regulations.

10. Strengthen the Land Use Tax Program as a tool for farmland preservation, for natural resource management and protection, and to encourage the expansion of the equine industry in Loudoun County.

The Task Force recommended expanding the roll-back period depending on the converted use and reducing the rates for agricultural uses.

11. Protect, preserve and enhance key natural resources: Immediately implement the rural and agricultural policies previously adopted in the County's Comprehensive Plan by appropriate ordinances, standards, and regulations
12. Fully implement a program for the management and protection of natural resources as provided for in the Loudoun County Comprehensive Plan.

With these two recommendations, the Task Force urged the County to fully implement its Comprehensive Plan, by creating the appropriate ordinances, standards, and regulations needed to identify, manage and protect the County's natural resources.

13. Develop and implement policies which will ensure and protect the availability of adequate water resources to support and grow the rural economy.

The Task Force recommended an immediate surveying and inventorying of water resources, including identifying water recharge areas as well as resource locations in the county, and developing an appropriate and sustainable plan to manage, monitor, improve and protect those resources.

14. Encourage and promote the establishment of voluntary overlay Historic or Rural Districts in rural Loudoun

The Task Force encouraged the creation of additional scenic or historic overlay districts to promote tourism as a well-defined destination. Tourism is identified as a major component in the rural economy.

#### The 200,000 Acre Solution Conclusions

The Rural Economic Development Task Force identified the close to 200,000 acres of rural land as the economic resource which should drive the rural economy. More than one-third of the recommendations made by the Task Force were focused on land use planning and regulations. Clearly, a robust rural economy is as dependent on favorable and stable land use regulations, as much as it is dependent on proximity to markets. In the conclusion of the report, the Task Force stated, “The Task Force firmly believes that the implementation of the Rural Economic Development Plan as a whole will result in a doubling of Loudoun's rural economy in a decade. Achieving that goal will, in turn, produce fiscal benefits to the County through enhanced corporate recruitment, more cost-effective provision of services, and a quality of life profile that is unmatched in the Washington metropolitan region for its diversity.”<sup>313</sup> Many of the land use changes recommended were implemented through changes to the County's Rural Policy Area zoning in the 2001 Revised General Plan.

#### A 10 Year Update on Outcomes: The 200,000 Acre Solution, 1998-2007

In December of 2008, Loudoun County's Rural Economic Development Council updated the Board of Supervisors on the implementation of the County's Rural Economic Plan, *The 200,000 Acre Solution: Supporting and Enhancing a Rural Economy for*

*Loudoun's 21<sup>st</sup> Century*. The report the Council prepared was entitled, *The 200,000 Acre Solution: Loudoun County's Rural Economic Development Plan, a 10 Year Update on Outcomes, 1998-2007*, (hereinafter referred to as "the Update"). The Update reviewed the work of the County to support the growth of the rural economy over the past decade and examined whether the Rural Economic Task Force met its goal of doubling the County's rural economy in a decade.

According to the Update, the three major objectives the Task Force set out in order to meet the goal of doubling Loudoun's rural economy in ten years—greater profitability of farming, new initiatives to increase the rural economy, and securing the natural resource base—were ultimately met. The Update outlines the achievements of the first goal, greater profitability in farming, as such:

The first objective was to be attained by planting new crops with higher unit and per acre values; shifting from traditional wholesale/broker marketing channels to retail outlets; obtaining more technical assistance to address new production needs; bringing idle land back into production; easing local regulatory constraints; and developing new by-right uses for rural Loudoun properties.<sup>314</sup>

"Examples of new high-value products would be a processed meat such as lamb sausage or blueberries which were never commercially produced in Loudoun. Shifting market orientation would be developing a market for Halal-butchered sheep and goats and selling farm products directly to consumers through county-sponsored farmers markets."<sup>315</sup> The Update stressed direct marketing throughout the report as the key to increasing farming profitability and growing the rural economy.

The second goal, new initiatives to increase the rural economy, was met through “the recruiting a biotech company to Loudoun, developing a telecommunications plan appropriate in a green, rural area and promoting authentic rural tourism,”<sup>316</sup> the Update states.

As indicated in the earlier discussion on Loudoun’s land use planning, the third goal of securing the natural resource base and many of the accompanying recommendations proved to be the most controversial to implement. The Purchase of Development Rights program recommended by the Task Force was short-lived. In addition, at the time of the writing of the Update in 2008, the courts were just issuing the final decision to uphold the downzoning of land in the Rural Policy Area, overturned once in the Virginia courts, but then re-implemented in 2006.

Regarding the Task Force’s goal of doubling the County’s rural economy in ten years, the Update reported these results: “The Rural Task Force had to establish a starting point for its plan of 100% expansion of the rural economy...It took the 1992 USDA Agricultural Census as its baseline. That census showed that the gross output of Loudoun’s rural economy was \$26,746,000. As a result, to double its value over the ten succeeding years, the gross output of the rural economy would have to reach \$53,492,000 by the end of 2007.”<sup>317</sup>

The starting figure was \$26,746,000, with two main components:  
\$10,951,000 for Produce, Nursery/Greenhouse  
\$15,795,000 for Livestock, Hay, and Grain  
\$26,746,000 Total

A decade later, following roughly the same output measures as the census, [but including retail sales omitted in USDA census data], the best estimate of the value of the

agriculture portion of Loudoun's rural economy is shown below:

\$25,200,000 for Produce, Nursery/Greenhouse

\$42,700,000 for Livestock, Hay, and Grain

\$67,900,000 Total”<sup>318</sup>

Most importantly, the Update stresses, “New products **sold by farmers to consumers** [original emphasis] such as wines, fruits, vegetables, and meat products are now significant parts of the product mix. This is a fundamental difference between the 1997 make-up of the county's gross agricultural output and the 2007 model. Rising from negligible levels at the start, these retail goods now play a much larger role in the county's agricultural structure. This is the result of both an evolutionary shift in agriculture and a purposeful effort to bring about such change.”<sup>319</sup> Here the Rural Economic Development Council emphasized the transition from traditional wholesale agriculture commodity markets toward direct-to-consumer markets as being pivotal to the continuation and growth of rural economic activity in Loudoun County in the decade following *The 200,000 Acre Solution*.

#### Support from County Staff

This shift away from wholesale commodity market farming and toward direct-to-consumer market farming was encouraged, supported, and enhanced by the expanded staff put in place by the Board of Supervisors in response to the recommendations made by the Task Force. The County's Agricultural Development Officer was charged with developing and installing the Rural Economic Development Council, which authored the 2008 Update.<sup>320</sup> In 2001, three additional staff members were hired: an Agricultural Market Manager who was charged with increasing products and growing markets for the

emerging direct-to-consumer markets; a Commercial Horticultural Manager, located in the Virginia Cooperative Extension Office, whose primary focus was on Loudoun's relatively new but rapidly expanding viticulture industry; and a Rural Coordinator, who worked on branding, marketing and public relations for Loudoun's rural economy.<sup>321</sup> One other interesting point the Update stressed, the role of the Rural Coordinator was to strengthen the relations between farmers and the public seeing this interface as "an invaluable piece in making all the efforts fit together."<sup>322</sup> The bolstering of the support for rural economic development by three new County staff members is a testament to the Board of Supervisor's desire to see the evolution of agricultural markets and their commitment to supporting the perpetuation of agriculture in Loudoun County.

With the additional staff in place, the Rural Economic Development Division along with the Virginia Cooperative Extension Office began to implement some of the recommendations made in the *200,000 Acre Solution*, focusing their efforts on the goal of greater profitability for farmers through further expanding into direct-to-consumer markets with high-value crops. From the year 2002 to 2007, working closely with the Loudoun Valley HomeGrown Markets Association (LVHMA), the farmers market system in the county nearly doubled, from four to seven: "In 2002 LVHMA had four markets, Leesburg, Cascades, Sterling, and Middleburg. By 2007 the number was up to seven, with the additions of Purcellville, South Riding, and Lovettsville. All were producer-only markets, where no brought-in produce could be sold. The number of Loudoun farmer-vendors also increased over this time from approximately 40 to more than 70. Some of these Loudoun farmer-vendors were also selling at the 'major league'



farmers markets of Dupont Circle [D.C.], Takoma Park [MD], and Arlington, [VA]” the Update reports.<sup>323</sup>

According to the Update, in 2008 there were 85 local food producers in Loudoun County. These local growers were using the direct-to-consumer techniques previously discussed in this thesis research in order to keep more of the sale revenues, thus making their efforts more profitable. The Update states, “Their marketing channels are farmers markets, both in Loudoun and elsewhere, wayside and roadside stands, community supported agriculture operations, pick-your-own farms, supermarkets and small grocery stores, restaurants, caterers and other local food sellers. These are the outlets where local producers prefer to sell because they receive retail or close-to-retail prices. These outlets are much better than produce auctions or wholesale markets because they give the farmer the opportunity to set his price and stick to it. The shift to selling at retail can make all the difference between a profit-making farm and one that is losing money.”<sup>324</sup> Profitability, in turn, can mean the difference farmland retention and farmland conversion.

#### The Update and the 2002 USDA Agricultural Census

The Rural Economic Development Council identified two flaws for their purposes in the Agricultural Census data collection and addressed the method they used to correct for them in the Update. The first flaw identified was that the Census data “did not contain certain data that would show how some aspects of Loudoun agriculture were changing. An example of this was grapes and wine. The census covered the wholesale value of wine grapes but made no mention of the retail value of the wine made from them.”<sup>325</sup> The

county Department of Economic Development subsequently queried the vineyard and winery owners to get their gross annual sales for 2002 and 2007. These figures were used to calculate the gross sales of this industry.

A second flaw or gap in the data of the Census identified concerned the direct market sales of farm products to consumers. The Update states: “The USDA Agricultural Census does not include these sales. It looks only at wholesale transactions, leaving out the retail sales of farm goods which are gaining ground as a share of many farmers’ total income, both locally and nationally.”<sup>326</sup> Again, the county Department of Economic Development surveyed local producers of farm goods sold at retail. The figures gathered by this survey show a gain of 525% in total sales from 2001 to 2007, according to the Update. This phenomenal increase is evidence of the successful implementation of the *200,000 Acre Solution* recommendations and the Rural Economic Development’s efforts to shift the agricultural economy toward direct markets.

The Update’s summarization of the data from the 2002 Agricultural Census contains both losses and gains in the agricultural indexes reported. For example, the Update reports “Cattle numbers dropped by 37%; dairy cows fell an additional 18% from their already low numbers, and hogs fell by 42%; thus continuing the drastic declines in traditional farm animal enterprises...In traditional crops, the trend was also severely downward; corn for grain and corn for silage, wheat, soybeans, and barley all took heavy hits, ranging from 31% to 65% declines in the 2002 Agricultural Census.”<sup>327</sup> These declines are to be expected resulting from the shift in concentration of agricultural

activities away from traditional commodities markets and toward more direct marketing techniques.

On the other hand, the Update reports positive gains in the targeted new direct-to-consumer markets: “Offsetting these losses, however, were gains in emerging areas. The 2002 Agricultural Census highlighted these changes: direct-marketed goods were up by 452%, horse sales rose to \$10.1 million, and the county ranked first in Virginia in acres of grapes, beekeeping, llamas and milk goats. Average farm income rose by 400%, from \$4,326 in 1997 to \$17,674 in 2002.”<sup>328</sup>

However, in the area of farmland retention and conversion, the news from the Census was not as bright. The Update reports that while the total number of farms rose from 1032 in 1997 to 1516 in 2002, the new farms were a result of the subdivision of larger farms. The average size of a Loudoun farm fell from 179 acres in 1997 to 109 acres in 2002. This is also probably a reflection of the changing nature of agriculture in the County; specialty crops sold in direct markets don’t usually need the large amounts of land that commodity crops require.<sup>329</sup> A more troubling figure reported is “the 2002 Census showed the number of acres of farmland fell from 184,988 in 1997 to 164,753 in 2002, a loss of 20,235 acres.”<sup>330</sup> This conversion of 11% of the County’s farmland in just five years was evidence of the need for serious changes in the land use regulations of the Rural Policy Area if Loudoun County wished its rural economy to survive into the future.

As discussed previously in this thesis research, the land use regulations in the Rural Policy Area were changed, stemming from the 2001 revised Comprehensive Plan. The density of the zoning went from A-3, or one residence per three acres, to twenty or

forty-acre lots, or higher density where cluster development techniques have been implemented to maximize conservation of land. By 2008, the challenges to the downzoning had worked their way through the courts and the reclassification withstood the legal challenges. Farming, just like other businesses, needs a moderately stable regulatory climate in order for farmers to make decisions about the future. Loudoun County, through its land use planning policy guidance and changes in zoning regulations, Land Use Value Taxation program, along with its Rural Economic Development efforts and support has attempted to provide that stability for the rural economy to thrive. As the Update concludes, “The past ten years have been an important period in the evolution of Loudoun’s rural economy. With major land use issues settled and secure land base in place, farmers and business people are now more likely to invest in agriculture and rural enterprises for further economic growth in years ahead.”<sup>331</sup>

#### The 2012 USDA Census – Change in Agriculture and Farmland since the Update

Loudoun County is made up of approximately 330,880 acres of land. As can be seen in Table 1, in 1945 the Agricultural Census reported that 305,117 acres of that land were farmed. This means the majority of citizens living in the County were farming in some form. The 1959 Census reported a notable decrease in farmland acreage in Loudoun County to 252,681 acres, a 17% drop, as well a corresponding decrease in the number of farms of all sizes, except for those in the two largest categories (Table 2). This decrease, according to the 1959 Census, was due to a change in the definition of ‘farm’: “Some of the places of 3 or more acres that were not counted as farms in 1950 and 1954 because

the value of their agricultural productions was less than \$150 would have qualified as farms if the criteria had been the same as in earlier censuses.”<sup>332</sup>

	2012	2007	1997	1987	1978	1969	1959	1945
Number of farms	1,396	1,427	1,032	934	836	761	947	2,015
% of change	-2%	38%	10%	12%	10%	-20%	-53%	
Acres of land in farms	134,792	142,452	184,988	206,601	228,503	216,574	252,681	305,117
% of change	-5%	-23%	-10%	-10%	6%	-14%	-17%	
Average farm size in acres	97	100	179	221	273	285	267	151
% of change	-3%	-44%	-19%	-19%	-4%	7%	77%	

Table 2: Change in farm quantity and size, Loudoun County, USDA Agricultural Censuses

Since the USDA’s refinement of the definition of ‘farm’, with the exception of one ten year period between 1969 and 1978, Loudoun County’s total farmland acreage has contracted each and every decade. The largest percentage decrease, seen in Table 1, occurred between the years of 1997 and 2007. The total number of acres reported in farmland in 1997 was 184,988, the total farmland acreage reported in 2007 was 142,452, a decrease of 23%. The previous two decades had seen farmland losses of 10% apiece. This decade experienced this dramatic farmland conversion in spite of the adoption of *The 200,000-Acre Solution*, in 1998 with its focus on supporting the rural agricultural economy, and the revised General Plan of 2001, with its focus on supporting rural land uses through downzoning A-3 lands. The 2012 Census reported 134,792 total acres of

land in farms, down from 142,452 total acres in 2007, a loss of 5%. There could be several reasons for this slowdown in farmland conversion. One reason is the shorter time span measured of only 5 years. Another likely cause is the result of the great economic recession beginning in 2007 and its effects on the homebuilding industry. If the country and County had not experienced such a dramatic economic downturn and slow recovery, the losses reported would probably be greater, using the previous decade's conversion rate as a predictive gauge.

Table 1 shows in 1969 the average size of a farm in Loudoun was 285 acres, the largest average farm size reported for any year reviewed. The average farm size shrinks every ten year period. Between the years 1997 and 2007, the average farm size decreased from 179 acres to 100 acres, a 44% drop in size. Interestingly, there is a corresponding rise in number of farms for the same period. In 1997, there were 1,032 farms reported in Loudoun and in 2007 there were 1,427. This indicates that overall farmland countywide is decreasing, farms are becoming smaller, but more numerous. This could be a reflection of the change in the agricultural economy pivoting away from traditional agriculture, which requires larger farms, toward smaller lot, more intensive agriculture of specialty crops grown for direct markets.

Table 2 shows the change over time in the number of farms by size. Between the years 1997 and 2007, the number of farms with 1 to 9 acres grew 149%, from 67 to 167. In the following five-year period, the number of these smallest farms dropped 17% to 139. In the ten year period between 1997 and 2007, the number of farms between 10 and 49 acres and 50 to 179 acres grew from 483 to 816 and 268 to 289, respectively. In the

following five year period between 2007 and 2012, the number of farms between 10 and 49 acres and 50 to 179 acres grew from 816 to 824 and 289 to 301, respectively. The increase in the number of farms between 10 and 49 acres from 1997 to 2007 was a notable 69%.

Farms by size:	2012	2007	1997	1987	1978	1969	1959	1945
Number of farms with 1 to 9 acres	139	167	67	60	39	28	41	412
% of change	-17%	149%	12%	54%	39%	-32%	-90%	
Number of farms with 10 to 49 acres	824	816	483	383	208	126	166	428
% of change	1%	69%	26%	84%	65%	-24%	-61%	
Number of farms with 50 to 179 acres	301	289	268	243	274	238	284	571
% of change	4%	8%	10%	-11%	15%	-16%	-50%	
Number of farms with 180 to 499 acres	85	99	138	154	201	255	312	495
% of change	-14%	-28%	-10%	-23%	-21%	-18%	-37%	
Number of farms with 500 to 999 acres	29	30	42	49	73	75	116	91
% of change	-3%	-29%	-14%	-33%	-3%	-35%	27%	
Number of farms with 1,000+ acres	18	26	34	45	41	39	28	18
% of change	-31%	-24%	-24%	10%	5%	39%	56%	

Table 3: Change in farm size, Loudoun County, USDA Agricultural Censuses

The largest farm categories reported losses for the same fifteen year period. From 1997 to 2007, the number of farms between 180 to 499 acres decreased from 138 to 99, a 28% decrease; the number of farms between 500 to 999 acres decreased from 42 to 30, a 29% decrease; and the number of farms with over 1000 acres decreased from 34 to 26, a 24% decrease. The following five years show a similar pattern of contraction of the

numbers of the largest farms in the county. I suggest, again, this is indicative of the shift in the agricultural economy away from commodities markets where scale-of-production is most important due to the small profit margins, and toward smaller-scale production of specialty and high-value crops which can be sold directly to the consumer at retail prices.

Value of agricultural products sold directly to individuals for human consumption	2012	2007	1997	1992	1987	1978
Number of farms	210	161	77	99	*	100
% of change	30%	109%	-22%	-1%		
Sales in \$1,000	1,575	959	174	228	*	874
% of change	64%	451%	-24%	-74%		
*The following separate data inquiries were eliminated from the 1987 form: Value of agricultural products sold directly to individuals for human consumption						

Table 4: Direct-to-consumer sales, Loudoun County, USDA Agricultural Census

Table 3 reflects the value of agricultural products sold directly to individuals for human consumption. This index was added to the Agricultural Census in 1978, removed in 1987, and brought back in 1992. According to the 1978 Census, “This item represents the value of agricultural products produced and sold directly to individuals for human consumption from roadside stands, farmers' markets, pick-your-own sites, etc. By definition, it excludes non-edible products such as nursery products, cut flowers, wool, grains, etc. Sales of agricultural products by vertically integrated operations through their own processing and marketing operations were excluded where identified.”<sup>333</sup>

In 1978, 100 of Loudoun County’s 836 farms sold produce directly to consumers with a total value of \$874,000. Between the years of 1978 and 1992, the change in the number of farms selling directly to consumers only decreased by one, however sales



decreased 74% for a total value of \$224,000. The decline continued in 1997, with the total number of farms participating in direct markets decreasing to 77 and total value dropping 24% to \$174,000. Then in 2007, the number of farms reporting participating in direct-to-consumer markets shot up to 161, a 109% gain. Sales value also increased in this time period to \$959,000, a 451% upturn. The positive trend continued in 2012, with the number of farms participating jumping another 30% to 210, and sales values rising 64% to \$1,575,000. *The 200,000 Acre Solution* economic efforts to support the shift of Loudoun's rural economy away from traditional agricultural markets and toward the emerging demand for direct-to-consumer and value-added products began to be implemented essentially in the early 2000s with the hiring of additional staff and the development of the Rural Agricultural Council. The number of farms participating in direct-to-consumer marketing and the value of their produce sales returns increased dramatically in the years following the implementation of the recommendations from *The 200,000 Acre Solution*.

#### The Long View: Planning for the Future of Agriculture in Loudoun County

Since adopting *The 200,000 Acre Solution* in 1998, Loudoun County has continued to rapidly develop, becoming one of the fastest growing counties in the Mid-Atlantic region. In 2011, the Rural Economic Development Council recognized the need to reexamine Loudoun's rural economy and develop a new strategic plan in support of maintaining a strong rural economy into Loudoun County's future. The resulting report, *The Long View: A Business Development Plan for Loudoun County's Rural Economy*,

was issued in 2013.<sup>334</sup>

The USDA Agricultural Census for 2017 has not been published, so there is no available data on the progress or successes of the Rural Economic Development Council's most recent recommendations. The Council declared that it wanted to focus on "continuing the fine accomplishments already underway as a result of *The 200,000 Acre Solution: Supporting and Enhancing a Rural Economy for Loudoun's 21st Century*. This plan has successfully guided the implementation of the many market-driven business and economic development projects as well as the creation of a nationally recognized land conservation program that have successfully met one of the plan's primary goals of doubling the value of agricultural production in the County."<sup>335</sup>

*The Long View* identified four foundational strategy recommendations for the future of Rural Economic Development: "1) assess the need for a Loudoun agriculture and rural business accelerator; 2) develop an integrated approach to equestrian industry enhancement; 3) conduct a regular rural business owners survey; and 4) create a formal rural business peer-to-peer consulting and research network."<sup>336</sup>

The plan also recommended five programmatic strategies: "1) redesign loudounfarms.org website to add a greater level of business support information; 2) encourage the formation of a Loudoun County trails associations; 3) enhance marketing programs to improve linkage between rural and urban economies; 4) create a branded rural business awareness program; and 5) develop a consolidated, year-round farmers market in Loudoun County."<sup>337</sup> In a personal communication with Kellie Hinkle, Loudoun's Agricultural Development Officer, she related that one of her top priorities is

to establish a year-round farmers market for Loudoun farmers.<sup>338</sup>

In order to implement these recommendations, the Council identified “an additional full-time equivalent within the Department of Economic Development and a commitment of approximately \$190,000 at the County level over the next four (4) years will be required.”<sup>339</sup> With the call for one more position and the request for more funding, the Rural Economic Development Council is signaling their desire and commitment to continue their efforts to keep agriculture viable and rural working landscapes part of Loudoun County’s future.

### Examples of Terroir

The rural local agricultural economy has not existed long enough to establish “a taste of place” in Loudoun County. Because direct-to-consumer marketing is relatively new, and specialty crops are just beginning to be established, the products coming to market do not have the ‘provenance’ or pedigree of being associated with ‘place,’ yet. There are a few exceptions where a sense of the local was being associated with a particular product. One place this is found, of course, is in the viticulture. *The Long View* gives this example of a type of grape and its association with ‘place’: “One of the unique aspects of Loudoun vineyards is a large commitment to producing a native variety of grapes called Norton. In 2006 Virginia produced 6,200 tons of grapes, 220 of which were the Norton grape, the most distinctly American grape used in wine production. Developed in 1830, the Norton grape has become a favorite of American wine enthusiasts, and is known for its suitability for dry wines, something that is rather

uncommon among varieties of American grapes.”<sup>340</sup>

Another place where terroir may emerge is in the fledgling hops-growing industry being developed by local farm-brewers for the micro-brew economy and supported by the Rural Economic Development Division. Kellie Hinkle, Loudoun County’s Agricultural Development Officer, in a personal communication with the author, stated that samples of the hops beginning to be grown in the county are being sent to Virginia Polytechnic Institute for analysis. At a recent industry event, one of the representatives from the Extension office commented that Loudoun was growing ‘a better bitter’.

The local economy may be too young still to really see a full-fledged taste of place. As long as Loudoun County continues to support local agriculture grown for local markets, I believe a sense of terroir has an opportunity to develop in the County. The Department of Economic Development and the Loudoun Rural Economic Development Council have recently launched a branding campaign, the ‘Loudoun, VA Made, Loudoun, VA Grown’ program, the goal of which is to promote the continued development and success of Loudoun’s agriculture and specialty products.

### Conclusion

As evidenced through the presented example of Loudoun County, it is through a robust land conservation strategy with multiple tools, as well as concerted agricultural economic development that farming remains viable on the urban fringe. Once a jurisdiction is under intense development pressure as Loudoun was and still is, the best strategy for local



Figure 7: Loudoun, VA Made • Loudoun, VA Grown™ 341

governments that wish to maintain rural working landscapes is to have a plan which combines good strong land use regulations for resource protection, such as urban growth boundaries, Purchase of Development Rights programs, tax credits for the voluntary donation of conservation easements, true large-lot zoning, and a land use tax evaluation system which recaptures lost tax revenue when a property is subdivide or its use is converted.

Additionally, providing economic development support to farmers in order to maintain the working agricultural landscapes is necessary if the jurisdiction's goal is to keep a viable farming economy. Commodity markets rely on economies of scale for profit, and farms on the urban fringe will, by necessity, be small intense enterprises; land is too expensive for sprawling farms with low-profit margins. Finding and supporting the

production of high-value agricultural products and cultivating lucrative direct-to-consumer markets should be part of a rural economic strategy for counties on the urban fringe.

## CHAPTER V CONCLUSION

### Introduction

Agricultural landscapes are cultural landscapes, a product of human interaction with natural elements in order to coax from the land life and livelihood. The qualities of these working landscapes comprise and are characteristic of what the historic preservation community refers to as ‘a sense of place.’ They point us to our agrarian history and our growth and progression as a nation. The vernacular agricultural landscape is an important resource to the urban fringe, where farmland can be seen as an amenity; scenic, uncluttered views, recreational activities, and the produce grown on the farms all contribute to the quality of life for its urban and suburban neighbors. As Olson and Olson state in *Under the Blade*, “Any farmland bordering a major urban area is unique in terms of its proximity to that city. More than half the value of U.S. farm production is generated in counties in or near urban areas. Farmland at the urban fringe is critical to the development of localized food systems. It also provides other services to the city including recreation opportunities, water supply, and aesthetic enjoyment that are not as easily obtained from distant sources as is food. Farmland statistics at the national or state level tell only a small part of the story. Losses that are trivial on a national scale may be devastating at a local scale.”<sup>342</sup> Maintaining these vulnerable and valuable landscapes should be a concern of everyone in the region, not exclusively that of farmers.

Agricultural landscapes which exist on the urban fringe have a unique set of challenges as well as opportunities. Existing in such close proximity to the urban core and its suburbs, they are under constant development pressure as the city's population pushes outward in a search for inexpensive land for traditional development, rural estates, and second homes. "The post-interstate highway system development boom has for the first time brought heavy development pressure on all sorts of settings simultaneously – suburbs, distant rural areas, and resort communities," Richard Olson tells us in *Under the Blade*, "Any place within two hours' drive (a city's 'commuter shed') is a potential bedroom community, and any place within five to six hours travel is a potential vacation residence."<sup>343</sup> As agricultural land is taken out of production and converted for development the consequences for farmers are two-fold: land prices rise as demand increases making it harder for existing farmers to expand and new farmers to get started, and farming becomes more difficult due to the loss of a critical mass of farmland for support services. The character of 'place' changes from rural to semi-rural, to suburban through development encroachment.

Richard Olson continues his analysis of land use succession in *Under the Blade*:

According to agricultural location theory (Tarrant 1974), within the general constraints of climate, the type of agriculture practiced in a particular area is determined not just by soil and topographic characteristics, but by the location of the area relative to markets, the demand of those markets, and transportation costs. J. von Thünen applied this theory in describing concentric circles of different types of agriculture surrounding a city, with higher value, more perishable crops grown in the inner circle. In the northeastern United States, Hart describes a ring of land closest to the city with greenhouses and nurseries, and outer ring with fruit and vegetable farms, and beyond that, dairy farms. As the city expands, the rings move outward so that, 'The children of dairy farmers become truck farmers, their grandchildren develop greenhouses or nurseries, and their great-grandchildren sell their land to developers and retire to areas that have



milder climates.’ Expanding cities influence land use and agriculture far beyond the urban boundary.<sup>344</sup>

Without direct intervention coming primarily from local governments the trajectory just described is one faced by agricultural landscapes on the urban fringe. This thesis research explored the ways in which local governments and non-profit land trusts are working to preserve farmland on the urban fringe. Chapter II examined the regulatory framework used by local governments to conserve both natural and agricultural resources such as urban growth boundaries, agricultural large-lot zoning, and use-valuation tax assessment and how these methods can be applied to the preservation of large rural landscapes. This chapter also considered incentive programs such as Purchase of Development Rights, Transfer of Development Rights, and Conservation Easements donations with their tax benefits as possible methods to compensate farmers who voluntarily choose to give up their development rights.

Market opportunities also exist, however, for agriculture production in close proximity to the population centers of major metropolitan areas. Farmers on the urban fringe are uniquely situated to access lucrative urban and suburban markets for local agricultural products. “Major urban markets still represent a significant concentration of demand, both in terms of the number of consumers and their generally higher incomes,”<sup>345</sup> Bryant and Johnston state in *Agriculture in the City’s Countryside*. By shifting their business model from traditional commodity markets and focusing on direct-to-consumer markets instead, these farmers near urban and suburban populations are able to capture the market demand for local food. Bryant and Johnston continue, “In addition, many of the ‘farm’ markets that have developed in suburban, or rural and small town

location near urban areas have capitalized upon the urbanites' desires to return to a more 'rural' setting, where they can rub shoulders with 'real' people and enjoy the hustle and bustle of a 'rural' market. In many areas, they also become part of the tourist attractions and are often marketed in those terms."<sup>346</sup> Experiencing the rural vernacular landscape contributes to a quality of life that urbanites are seeking, which can be promoted side by side with the agricultural produce of the urban fringe.

Chapter III of this thesis research examined the germination and growth of local food systems as the demand for locally sourced food rose in response to the negative effects of the global industrial food system. This chapter explored how, on the whole, the global industrial food system has been detrimental to small and medium sized farms, forcing consolidation and monocrop specialization based on an economy-of-scale production model. It showed how corporations, whose only consideration is profits, are exploitative in their relations, having no loyalty to farms, farmers, or communities. The global industrial agricultural model has been harmful not only to farmers but to consumers as well. Corporate agriculture and corporate food system have made food cheap, but they also have made cheap food. As a result, more and more people are looking to reconnect with the foods they eat, and the farmers who grow them. This consumer demand has created an emergent local food system which relies on direct-to-consumer marketing, making connections between communities and the local farmers, for which small to mid-sized farms located on the urban fringe are well-suited.

## Findings

My thesis research addressed this thesis question: What are the current land use management tools for preserving farmland under high conversion pressure and how can the demand for locally sourced food contribute to the sustainability of agricultural production and farmland conservation on the urban fringe? My supposition was that a robust farmland conservation program which incorporates multiple land use management tools designed to stabilize land conversion, combined with well supported rural economic development programs which target local direct-to- consumer markets, will result in a successful reduction in the rate of conversion of productive agricultural land on the urban fringe. Chapter IV examined Loudoun County as a case study for a municipality located on the urban fringe of the Washington D.C. and its efforts to preserve its rural character under intense development pressures.

Loudoun County has had a history of development encroachment on its rural landscapes as far back as 1958 when 5,000 acres were removed from production for what was to become Dulles International Airport. With the construction of the airport and the interceptor sewer to serve it, the eastern portion of the county was opened up to commercial and dense suburban development. In 1977, Loudoun created one of the first and most expansive Rural Historic Districts in the state, Goose Creek Rural Historic District, comprised of 10,000 acres, and formed to preserve the historic architecture and the surrounding agricultural landscapes. In 1979, Loudoun County began to implement a rural land use conservation policy through its comprehensive planning documents used to set land use planning policy for the county. Loudoun created urban growth boundaries,

which direct growth to designated urban areas while discouraging development in rural areas through limiting the availability of public infrastructure of sewer and water to identified natural and agricultural resource areas. In 2001, the General Plan for the County downzoned the Rural Policy Area, consisting of 227,304 acres of the county's approximate 330,000 acres, from A-3, allowing one dwelling per 3 acres, to either one dwelling unit per 20 or 40 acres, with alternative densities for clustered developments.

Around the same time of the 2001 downzoning, Loudoun was adopting a comprehensive Rural Economic Development Program called the *200,000-Acre Solution*, which identified three major objectives for its recommendations for implementation in order to meet the goal of doubling the value of Loudoun's rural economy in ten years: greater profitability of farming; new initiatives to increase the rural economy; and securing the natural resource base. The plan emphasized the transition from traditional wholesale agriculture commodity markets toward direct-to-consumer markets as being pivotal to the continuation and growth of rural economic activity in Loudoun County. The County hired three additional staff to help implement the recommendations of the plan and to help achieve the ambitious goal of doubling the value of the rural economy in ten years.

In 1945, the Agricultural Census reported that 305,117 acres of Loudoun's approximately 330,000 acres of land were considered farmland. The majority of citizens living in the County were farming in some form, if only for personal consumption. In 2012, only 134,792 acres remained in production. Except for one ten-year period between 1969 and 1978, the county lost farmland acreage. Interestingly, though, the number of

farms has been on the rise since 1969, with only a slight decline in the most recent ten-year period reported. Along with the rise in the number of farms, we see a decrease in farm size, from a high on 285 acres in 1969 to 97 acres in 2012. One possible explanation for the decrease in farm size, but the increase in farm numbers is the change in the agricultural economy pivoting away from traditional agriculture which requires larger farms, toward smaller lot, more intensive agriculture of specialty crops grown for direct markets.

More telling is the rise in both the number of farms participating in direct-to-consumer markets and the sales value of the products sold, according to the Agricultural Census. In 2007, the number of farms reporting participating in direct-to-consumer markets rose 109% from 1997. Sales value reported increased dramatically during this same time period by 451%. The positive trend continued in 2012, with the number of farms participating in direct sales jumping another 30% and sales values rising 64%. The rural economic development efforts to support the shift of Loudoun's rural economy away from traditional agricultural markets and toward the emerging demand for direct-to-consumer and value-added products appear to have made a positive impact on the local food economy as evidenced by the number of farms participating in direct-to-consumer marketing and the increase in value of their produce sales returns in the years following the implementation of the recommendations from *The 200,000 Solution*.

## For Further Study

### Biodiversity and Sustainability

Further research opportunities focus primarily on concerns of sustainable agricultural production. The loss of agricultural biodiversity, from the increased consolidation of farms and farmland, discussed earlier in this treatise, to the reduction of the varieties plants and animals through monocultural production, to the decline of microbial colonies in soils, leaves us vulnerable to food insecurities, from pests, diseases, and the political whim. Troublingly, research institutes such as the prestigious Leopold Center for Sustainable Agriculture have been defunded and the U.S. Department of Agriculture has been silenced by administrations hostile to issues of agricultural sustainability. Hopefully, other research institutions will step in to fill the void in the sustainable agriculture discourse left by these two important and influential bodies.

### Impact of Climate Change

One of the most important avenues for future research is what effects climate change will have on localized food systems and what should be the response of small farmers to changing weather patterns and environmental conditions? What impact will rising temperatures, changing precipitation patterns, increased frequency and severity of cyclical storms, biome migration, and other variables brought on by the changing climate have on smaller farms relying on direct-to-consumer marketing, and how might these farms adapt to these changes? Climate change will have an impact on all agriculture, including Virginia's lucrative wine and agritourism industries. What might those impacts be and how can local jurisdictions help small and mid-sized farmers mitigate those

impacts? However, researching this topic may prove difficult, for just as the Department of Agriculture has been silenced on the issues of sustainability, so has the U.S. Environmental Protection Agency and other U.S. Agencies been muzzled on the issue of climate change.

Another topic for further study under the umbrella of climate change is what small diversified farms might do to help reduce greenhouse gas emissions. Agriculture is one of the largest contributors of human-produced carbon emissions. To address climate change is, in large part, to address agricultural production. The soil is the second largest carbon sink in our environment after the oceans. Good soil health comes from good soil management practices such as composting, planting cover crops, managing crop rotation, and conservation tillage, creating healthy soils and sequestering carbon in the soil. Might one adaptation technique for farms on the urban fringe be to adopt what are known as regenerative agricultural practices or “carbon farming” practices? As nimble, responsive independent agents, smaller, locally-focused, diversified farms might be in the best position to be early adopters of a promising solution to our carbon problem.

#### Social Justice for Farm Workers

Other issues meriting further study are the aging population of farmers without young people to succeed them and the unaffordability of land and high capital costs for young farmers wishing to enter into farming. The problem of succession seems ripe for a creative solution, which, perhaps somewhere is now being introduced. Social justice issues for farmworkers - the creation of rational immigration policies, fair wages and worker protection against exploitative employment practices, protection from pesticide

exposure, and the provision of decent affordable housing – are all topics which would lend themselves to further research.

### Comparative Analysis of Tools and Outcomes

This treatise focused on what land use measures are available to local jurisdictions for farmland preservation and what programs and tools might be put in place to support local agriculture through direct-to-consumer markets. The county chosen for the case study resulted in much positive data to support the thesis that by tapping into direct-to-consumer markets, the demand for local agricultural products will create a sustainable economic climate for farming to persist on the urban fringe. Due to time constraints, other counties were not examined. It would be fruitful to explore other counties in the same or different regions to find similarities and differences in both approaches and outcomes.

### Conclusion

Through considering the confluence of the loss of vernacular agricultural landscapes due to development conversion pressures, and the rise in the demand for local agricultural products, this thesis research explored the current land-use management practices for farmland conservation on the urban fringe. In addition, this thesis research investigated rural economic development efforts to employ direct-to-consumer marketing models to capture the demand for locally-sourced food in order to bolster the economic sustainability of agricultural production of these volatile landscapes.



Bryant and Johnston argue, in *Agriculture in the City's Countryside*, that, "Land use planning with its focus on physical land use considerations is ill-prepared to deal with the long-term stability of agricultural land use in the City's Countryside. Effective intervention must take into account the economic and social viability of the farm business structure. While regulation of land use may introduce some element of stability into the farmer's planning horizons, it will do nothing for the farmer's future revenue and relatively little for the cost picture."<sup>347</sup> Shifting agricultural markets from large-scale commodity farming to smaller-scale, direct-to-consumer markets, as shown in the case study example of Loudoun County, can help to stabilize farming revenue and create and economically sustainable environment for agriculture on the urban fringe.

"While most land use analysts agree that North American agricultural land preservation policies need to coordinate agricultural (economic) programs with other land use strategies, few state and provincial governments have adopted such strategies"<sup>348</sup> Beesley states in *Contested Countryside*. Loudoun County recognized that, while land use planning measures were critical for preserving farmland, they were not enough to preserve farming. The rural economic development piece of the rural conservation program is what has helped keep the Rural Policy Area of western Loudoun viable.

I have found that by tapping into the demand for local foods and for agro-tourism local jurisdictions can bolster the rural economy and contribute to a regional quality of life. As these markets grow and mature, producers will have an opportunity to develop regional characteristics which will differentiate their products from other regions, as well, further reinforcing and enhancing the special contributions of the vernacular agricultural

landscape on the urban fringe. In conclusion, for the preservation of farmland on the urban fringe under development pressure as well as the continuation of active agricultural production, there must be the political will to implement a comprehensive program of land use conservation and rural economic development.

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256 Originally this case study chapter was envisioned to contain examples of agricultural uses in National Park Units such as Ebey's Landing National Historical Reserve, Cuyahoga Valley National Park, and Point Reyes National Seashore. While each example would be an interesting study for its own merits, this pursuit was quickly abandoned, as the land use preservation strategies involved with a federal management undertaking would not necessarily be comparable to local jurisdictional efforts.

Additionally, two Northern Piedmont counties of Virginia were initially identified to be included as case studies, Fauquier and Loudoun Counties. Fauquier County has the benefit of having an extra-jurisdictional buffer, Prince William County, between its eastern border and the heavily developed, urban metropolitan county of Fairfax, decreasing or delaying the use conversion pressures which Loudoun has experienced. Other social, historical, and geographic factors have contributed to Fauquier County's unique historical development, which are beyond the scope of this thesis.

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