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Ebey's Landing National Historical Reserve
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Farmland Preservation Case Studies for Ebey's Landing National Historic Reserve

Prepared for the National Park Service by Jones and Jones Architects and Landscape Architects, Ltd.

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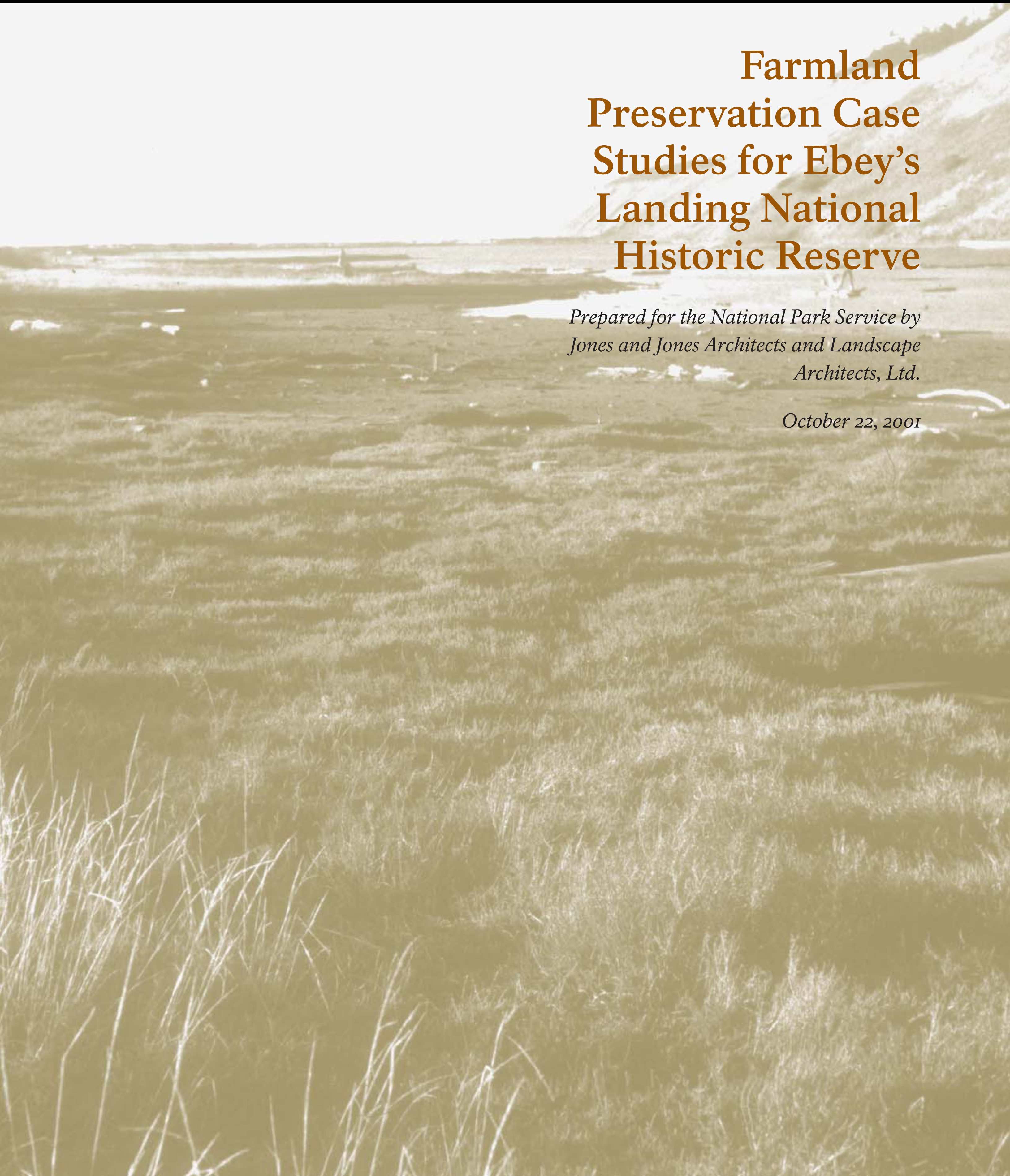

FARMLAND PRESERVATION CASE STUDIES

FOR

EBEY'S LANDING NATIONAL HISTORICAL RESERVE

PREPARED FOR THE NATIONAL PARK SERVICE

BY

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I. INTRODUCTION

The National Park Service (NPS) seeks the perpetuation of historical uses at Ebey's Landing National Historical Reserve (Reserve). The purpose of this report is to inform the protection of the working cultural landscape, primarily agriculture and secondarily forestry. It serves to identify, document and discuss an array of strategies that the federal government, states, counties, municipalities, land protection organizations, cooperatives, and farmers themselves have used to promote sustainable working farms and woodlots in the United States. Existing programs available at the Reserve and innovative case studies are documented at each level. This report lead to an accompanying Farmland Preservation Recommendations report which makes specific recommendations about the Reserve for inclusion in the Reserve's General Management Plan (GMP).

The Reserve is located in central Whidbey Island in Washington State and includes 17,400 acres of agricultural land, shorelines and inland waters, forests, over 300 historic structures and the town of Coupeville. The Reserve is a unit of the National Park System. NPS owns 326 acres in fee, but 303 of these acres are in a single property, the Engels farm. The Reserve is governed through a trust board comprised of representatives from the NPS, Island County, Coupeville, and Washington State Parks. The role of the NPS is to provide technical guidance and support through participation on the trust board, sponsoring educational and interpretive opportunities with the community, providing administrative and operational support, and by advocating resource and land protection primarily through the purchase of development rights and easements. It is also the responsibility of the NPS to prepare resource inventories and planning documents consistent with its management guidelines and policies.

II. CASE STUDIES

A. FEDERAL

EXISTING PROGRAMS

At Ebey's Landing National Historical Reserve, operations are overseen by the Trust Board of Ebey's Landing National Historical Reserve which is made up of representatives of the Town of Coupeville, Island County, Washington State Parks and the National Park Service. An NPS representative also participates in the Island County Historical Advisory Committee and the Town of Coupeville Design Review Board. The National Park Service owns 26 scenic conservation easements in the Reserve covering 1,557 acres and recently acquired in fee 303 acres of the Engels farm.

Several pieces of federal legislation have reinforced state and local farmland protection efforts:

The Farmland Protection Policy Act
The Farmland Protection Policy Act (FPPA), passed as part of the 1981 Farm Bill, requires that all federal agencies ensure that their actions do not encourage unnecessary farmland conversion. Agencies are required to evaluate their policies and identify alternatives that could prevent or at least minimize farmland conversion. Importantly, this act also addresses all federal construction projects, such as highways and federal buildings sponsored or financed in whole or part by the federal government, that may convert farmland to nonagricultural use. The FPPA becomes effective when states and localities involve themselves in the planning of federally sponsored projects that may conflict with local or regional farmland protection objectives. (American Farmland Trust, 1997: 19)

The FPPA directs the federal government to "develop criteria for identifying the effects of federal programs on the conversion of farmland to nonagricultural uses." The Natural Resources Conservation

Service (NRCS) of the United States Department of Agriculture (USDA) developed the Land Evaluation and Site Assessment system (LESA), for federal agencies to use in evaluating projects. LESA measures the quality of farmland by considering soil quality and suitability of the land for farming. LESA scores are used to rank or compare farmland parcels, but LESA is not intended to be a stand-alone technique to make decisions. Many state and local governments use LESA systems as part of their farmland protection programs. (American Farmland Trust, 1997: 19)

Federal Agricultural Improvement and Reform Act

Better known as the Farmland Protection Program (FPP), the Federal Agricultural Improvement and Reform Act was established as part of the 1996 Farm Bill. The Farmland Protection Program provides funds to help purchase development rights to keep productive farmland in agricultural uses. Working through existing programs, USDA joins with state, tribal, or local governments to acquire conservation easements or other interests from landowners. USDA provides up to 50 percent of the fair market easement value. To qualify, farmland must provide the following: be part of a pending offer from a state, tribe, or local farmland protection program; be privately owned; have a conservation plan; be large enough to sustain agricultural production; be accessible to markets for what the land produces; have adequate infrastructure and agricultural support services; and have surrounding parcels of land that can support long-term agricultural production. (USDA, 2001: www.nhq.nrcs.usda.gov/OPA/FB96OPA/FPPfact.html)

The current statutory limitation of the program is to protect no less than 170,000 and no more than 340,000 acres of farmland over the life of the act, but the limits could be expanded or eliminated in next year's reauthorization process. Funds for FPP come from the federal government's Commodity Credit Corporation (CCC). Total funding for the FPP was set at $35 million over 6 years. In the first round of funding, over $14 million was awarded to 37 programs in 17 states, protecting 76,756 acres of farmland. While the program clearly has significant potential to protect farmland, the level of funding has been inadequate given the growing interest in "purchase of agricultural conservation easement" (PACE) programs and the rising cost of farmland in most metropolitan areas. (USDA, 2001: www.nhq.nrcs.usda.gov/OPA/FB96OPA/FPPfact.html)

On January 22, 2001 the Department of Agriculture released an additional $30 million to protect farmland and a request for proposals has been issued. The CCC, acting through the appropriate NRCS State conservationist, must receive proposals for participation within 45 days of the date of the notice, January 22. Selected eligible entities may receive no more than 50 percent of the purchase price for each conservation easement, not to exceed the fair market value of the interest to be purchased. Pending offers by an eligible entity must be for the acquisition of an easement for a minimum duration of 30 years. (USDA, 2001: www.nhq.nrcs.usda.gov/OPA/FB96OPA/FPP-01.htm)

CASE STUDIES

Cuyahoga Valley National Park, near Cleveland and Akron, Ohio
FEATURED STRATEGY: **Leasing historic farm properties** through the Countryside Initiative

BACKGROUND
In 1974, Congress established Cuyahoga Valley National Recreation Area, between Cleveland and Akron, Ohio (renamed a National Park in 2000), "for the purpose of preserving and protecting for public use and enjoyment, the historic, scenic, natural, and recreational values of the Cuyahoga River and the adjacent lands of the Cuyahoga Valley, and for the purpose of providing for the maintenance of needed recreational open space necessary to the urban environment…." (National Park Service, 2001: 4)

By 1999, Cuyahoga Valley National Park had been very successful at improving and promoting the recreational and educational components of the park. An extensive infrastructure of improved roads, trails, shelters, and visitor centers were in place. Most of the park's original management and program goals had been accomplished with one significant exception—preserving and protecting the park's rural landscape quality. Without a viable community of working farms, the countryside—a patchwork of pastures, cropland, and woodlots—would quickly disappear. The distinctive look and feel of a working agricultural landscape is largely gone, scenic vistas are increasingly being obscured, and the park as a whole feels more and more closed in. [1]


Figure 1: Boston, Ohio, c. 1908.

Named to evoke a sense of a tended, cared for, and valued nature, the Countryside Initiative is an ambitious program to revitalize 30 to 35 of the old farms in the Park—and thereby restore for public use and enjoyment many of the distinctive historical, scenic, natural, and recreational values for which the park was originally established. (National Park Service, 2001: 4)

HOW IT WORKS
A new nonprofit organization, the Cuyahoga Countryside Conservancy (CCC) was established in 2000 to help develop and manage the Countryside Initiative. Beginning in 2001, the first five rehabilitated farms will be leased for periods up to 50 years to practitioners of sustainable agriculture. The CCC provides technical information and guidance on sustainable agriculture, helps prioritize rehabilitation of farm properties, recruits and evaluates prospective farm lessees, and evaluates and monitors each farm's annual operating plan. The CCC will work closely with each farm lessee to align their private goals and operating plans with the public objectives of the initiative. This represents an intentional threefold partnership, drawing on the distinctive strengths and resources of the government sector (the Park), the business sector (lessees), and the non-profit sector (CCC). (National Park Service, 2001: 3)

A request for proposals, available at the park website, describes the initiative, the characteristics of each of the available farms, and the conditions of participation. The first five farms range in size from 12 acres to 61 acres and are suitable for culturally intensive fruit and vegetable production, management-intensive grazing operations, and integrated crop-livestock enterprises. Certified organic production systems are favored, though not required; non-certified organic production systems are also expected to operate in the same general part of the sustainability spectrum. Each farm is described in the request for proposals with a historical sketch, illustrated farmhouse and farmstead descriptions, and illustrated field system description including soil types and acreages. (National Park Service, 2001: 13)

Long-term leasing of federally owned or administered property is now authorized by several recent Congressional Acts, but only at fair market value rent. The maximum term of any lease at CVNP is 50 years, at which point a new open competitive process is required by law. Achieving the purpose and objectives of the Initiative depends upon all leased farms being actively and continuously operated. If a lessee becomes unable to fulfill the obligations of his or her lease, the lessee must transfer the remaining leasehold interest, or relinquish the remaining interest directly to CVNP. (National Park Service, 2001: 12)

Typically, Initiative farms will produce high quality specialty products for direct, local and retail sale. Marketing methods will take forms such as: pick your own, community supported agriculture (CSA), roadside stands, local farmers markets, and direct sales to individuals and restaurants. A Cuyahoga Valley brand or image will be cultivated, but each farming enterprise will reflect the characteristics and capabilities of a particular farm site and the particular knowledge, skills and preferences of the farm lessee. (National Park Service, 2001: 10)

New Jersey Pinelands National Reserve, Southeastern New Jersey

FEATURED STRATEGY: **Transfer of Development Rights (TDR)** through the Pinelands Transferable Development Credit Program

BACKGROUND

The New Jersey Pinelands, an expanse of over one-million acres of forests, wetlands and rural settlements, was designated by Congress in 1978 as the country's first National Reserve. The Reserve, which is neither federally owned nor directly administered by the National Park Service, receives federal assistance and oversight and is described as an affiliated area of the National Park System. As such, it differs from a traditional national park in that its primary goal is to protect and preserve the area's natural and cultural resources through state and local management as an alternative to direct, large-scale federal acquisition and administration. Through state and local implementation of a federally approved land use management plan, development is limited in areas designated for preservation, forest and agriculture, while growth is directed and encouraged in and around already developed areas. (National Park Service, 2001: www.nps.gov/pine)

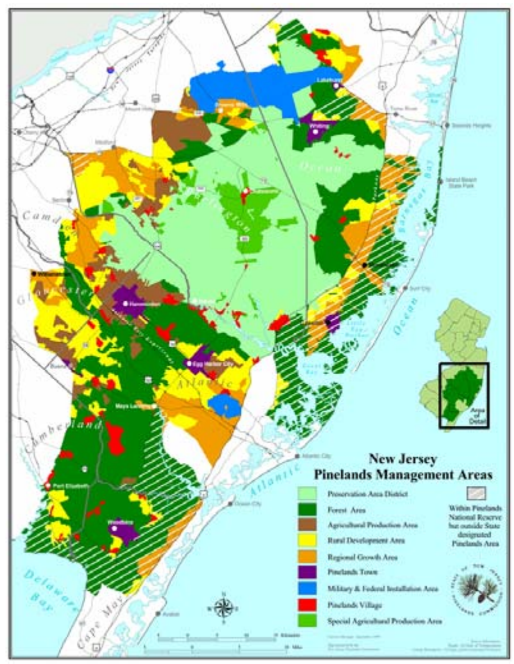

Figure 2: New Jersey Pinelands Land Capability Map

In 1978 the Congress of the United States established the Pinelands National Reserve and called upon the State of New Jersey to create a planning agency to preserve, protect and enhance the region's unique natural and cultural resources. In 1979 the New Jersey State Legislature enacted the Pinelands Protection Act and thereby created the Pinelands Commission. The Commission is charged with the development and implementation of the Comprehensive Management Plan for the Pinelands. It plays significant roles in monitoring the level and types of development that occur within the Pinelands, acquisition of land, planning, research, and education. (New Jersey Pinelands Commission, 2001: www.state.nj.us/pinelands/index.htm)

The Pinelands region is 1/3 publicly and 2/3 privately owned. Public lands of the State of New Jersey comprise over 300,000 acres and include parks and forests such as Wharton, Lebanon, Belleplain, Island Beach, and Colliers Mills, among others. Federal properties include three military installations, and the Forsythe National Wildlife Refuge. Numerous county and municipal parks, as well as conservation lands owned by nonprofit organizations, exist within the Pinelands. (New Jersey Pinelands Commission, 2001: www.state.nj.us/pinelands/index.htm)

HOW IT WORKS

The Comprehensive Management Plan provides a major land use area in the Protection Area which is designed to accommodate and encourage farming. Large concentrations of active farmland lie within the Pinelands's western boundary. Blocks of more than 1,000 acres of active farmland and adjacent farm soil are grouped into Agricultural Production Areas where farming and related activities will remain the dominant land use. The Plan classifies about 66,200 acres of the National Reserve this way. (New Jersey Pinelands Commission, 2001: www.state.nj.us/pinelands/index.htm)

To determine where development should be allowed and encouraged, the Commission had to analyze present and anticipated growth patterns. It found that new development was advancing into the Pines primarily on three fronts. One source of new development was the extension of the Philadelphia-Camden metropolitan area; another was the continuation of rapid development in Ocean County, largely comprising retirement communities; and the third was a building boom set off by Atlantic City's casinos. The Commission estimated the number of new housing units that could be accommodated. These units were then distributed among Regional Growth Areas that were designated in municipalities found to be experiencing development pressure and to be capable of accommodating growth. The Plan stipulates base densities ranging from 1 to 3.5 housing units per acre of developable land when sewers are available. In Atlantic County, for example, where the greatest level of development is anticipated, the Plan provides for the construction of up to 56,904 new housing units within 25,581 acres in growth areas. Regional Growth Areas within the state Pinelands Area total 80,000 acres; approximately half of this is considered developable. At the overall base densities called for in the Plan, 80,800 new housing units could be built in these areas. An additional 22,500 units could be built in these growth areas with the use of "Pinelands Development Credits." (New Jersey Pinelands Commission, 2001: www.state.nj.us/pinelands/index.htm)

As development is channeled into growth areas, land values there are expected to rise. On the other hand, the Commission has found it necessary to limit residential development in environmentally sensitive and agricultural parts of the Pinelands, restricting development opportunities which landowners there may have had before. The Plan includes an innovative program known as Pinelands Development Credits which is designed to reconcile these situations while enhancing the overall Pinelands protection effort. The program works by allocating development credits to landowners in the Preservation Area District, Agricultural Production Areas, and Special Agricultural Production Areas. The credits can be purchased by developers owning land in Regional Growth Areas and used to increase the densities at which they can build. A landowner selling credits retains title to the land and is allowed to continue using it for any non-residential use authorized by the Plan. This landowner is required to enter into a deed restriction that would bind future owners to those same uses. The Pinelands Development Credit program is designed to transfer some of the benefits of increased land values in growth areas back into areas where growth is limited. It will also help guarantee that appropriate land uses are observed and encourage more concentrated development where it can be accommodated. (New Jersey Pinelands Commission, 1996: 5)

Sales of credits take place on the open market like any real estate transaction. In 1985, the state created a Pinelands Development Credit Bank which can buy and sell credits, guarantee loans using credits for collateral, and maintain a registry of credit owners and purchasers. When credits are transferred to a Regional Growth Area, each credit entitles the owner to build four additional housing units. Municipalities are required to allow for the use of credits in their land use regulations. To distribute the bonus housing units evenly and maintain consistent housing types in various neighborhoods, municipalities designate zoning districts in which residential development will be permitted at densities ranging from less than 0.5 dwelling units per acre to 12 or more dwelling units per acre with credits. Using credits, development can take place at the high end of the density ranges. This could theoretically increase the number of units built in the growth areas by about 50 percent, or roughly 46,000 units. However, the number of credits that will be available for sale will generate only about 24,400 units, according to Commission estimates. The gap between supply and demand is expected to create a stronger market for the credits. (New Jersey Pinelands Commission, 2001: www.state.nj.us/pinelands/index.htm)

RESULTS

To date, over 12,000 acres have been permanently deed restricted under the program. The Comprehensive Management Plan identified about 100,000 acres of land to be protected so there is still a long way to go, but Pinelands has been relatively successful in terms of implementation of TDR program. Commission planner Larry Liggett credits the strong role of the state (county zoning is relatively limited in New Jersey) in mandating compliance with goals of the Plan, especially during the early years of the program, when the relatively complicated program was not well understood. This means that there needs to be relatively strong political will and recognition of significant development pressure for the program to succeed. In response to concerns that receiving areas for the development credits might not want additional density, Larry identified a number of important justifications for the program: land being preserved in the sending areas relates to the quality of life of those in the receiving areas as well; increased density must be done in a way that is higher quality density that suits the character of the receiving area and protects community resources; and additional density helps receiving areas to achieve other planning goals such as walkable communities and critical mass for services. (Liggett, 2001)

Marsh-Billings-Rockefeller National Historic Park, Woodstock, Vermont

FEATURED STRATEGY: **Teaching conservation history and land stewardship**

BACKGROUND

Marsh-Billings-Rockefeller National Historical Park is the only national park to focus on conservation history and the evolving nature of land stewardship in America. Opened in June 1998, Vermont's first national park preserves and interprets the historic Marsh-Billings-Rockefeller property. The Park is named for George Perkins Marsh, one of the nation's first global environmental thinkers, who grew up on the property, and for Frederick Billings, an early conservationist who established a progressive dairy farm and professionally managed forest on the former Marsh farm. Frederick Billings's granddaughter, Mary French Rockefeller, and her husband, conservationist Laurance S. Rockefeller, sustained Billings's mindful practices in forestry and farming on the property over the latter half of the 20th century. In 1983, they established the Billings Farm & Museum to continue the farm's working dairy and to interpret rural Vermont life and agricultural history. The park was created in 1992, when the Rockefellers gifted the estate's residential and forest lands to the people of the United States. (National Park Service, 2001: www.nps.gov/mabi)

Figure 3: Billings Farm

HOW IT WORKS
The National Park Service interprets the history of conservation with tours of the mansion and the surrounding 550-acre forest. NPS collaborates with The Woodstock Foundation, which operates the Billings Farm & Museum, and the Conservation Study Institute, established by NPS to enhance leadership in the field of conservation. Visitors to the farm and museum see exhibits emphasizing the history of the farm, historical farm technology and techniques, crop rotation, and the diversity of livestock (along the lines of Frederick Billings's farm of 1890). The goal of the farm and museum is to reach significant numbers of Americans to convey an understanding and appreciation of the importance of dairy farming and rural life. (Billings Farm, 2001: www.billingsfarm.org)

B. STATE

EXISTING PROGRAMS

The state of Washington has a rich agricultural history because of its many unique climates and soils. The state is the nation's top producer of apples, pears, Concord grapes, sweet cherries, raspberries and hops, and is a leading producer of wheat, potatoes and vegetables. Washington is also a very desirable place to live. Washington's farmland, especially in the Puget Sound region, is being lost at a dramatic rate. American Farmland Trust's "Farming on the Edge" report listed the Puget Sound and Willamette Valley Major Land Resource Area (MLRA) as the fifth most threatened in the country. A number of state laws have been enacted to protect farming. (American Farmland Trust, 1997: 277)

Comprehensive Growth Management Act (Wash. Rev. Code 36.70A.010 to .060)

In response to rapid population growth and sprawling development in the the Puget Sound area, the state passed the Washington Growth Management Act (GMA) in 1990. The Act and amendments in 1991 were intended to counter the threat to forests, farmland, shorelines and quality of life.

GMA requires all counties in the state to designate important farmlands, which it defines as "agricultural lands that are not already characterized by urban growth and that have long-term significance for the commercial production of food or other agricultural products." Counties must adopt regulations to ensure "use of lands adjacent to agricultural…lands shall not interfere with the continued use…of these lands for of these designated lands for the production of food and agricultural products…" (American Farmland Trust, 1997: 278)

The GMA also requires fast-growing counties and their incorporated areas to prepare detailed comprehensive plans. Mandatory components include a land use element, which designates areas and associated population densities for a range of land uses. County comprehensive plans must be internally consistent and consistent with the plans of their cities and all adjacent cities and counties. One of the goals guiding the development and adoption of comprehensive plans is to "maintain and enhance natural resource-based industries, including productive timber, agricultural, and fisheries industries," and to "encourage the conservation of…productive agricultural lands, and discourage incompatible uses." (American Farmland Trust, 1997: 278)

Counties required to plan under the GMA also are required to designate urban growth areas to accommodate projected urban growth over a 20-year period. However, some critics argue that the GMA has not been effective enough. The non-profit, 1,000 Friends of Washington points out that urban growth boundaries have not been rigorously enforced. Kitsap County on the Olympic Peninsula has issued 58% of its new development permits outside its urban growth boundary. Of the 12 most populous counties, only King and Snohomish have compact urban growth areas that have at least 3,000 people per square mile. The fundamental weakness is that the GMA lacks performance standards and doesn't require the state to certify whether a local plan or regulation complies with the law. (The Conservation Fund, 2000: 5)

Conservation Easement (Wash. Rev. Code 64.04.130)

A conservation easement law simply authorizes the purchase of interests in land for purposes of conservation by any government agency or nonprofit organization. (Washington State, 2001)

Property Tax Relief/Differential Assessment/Deferred Taxation (Wash. Rev. Code secs. 84.34.010 to .160, .300 to .923)

Differential assessment laws declare that "farm and agricultural lands shall be valued on the basis of their value for use." If agricultural land is later developed for non-agricultural use a tax penalty is due. The amount of additional tax "shall be equal to the difference between the property tax paid as 'farm and agricultural land' and the amount of property tax otherwise due and payable for the seven years last past had the land not been so classified." Laws exempting agricultural land from special benefit assessments have also been enacted to ensure that farm land is not taxed to create infrastructures that are potentially damaging to the future of farming in an area. (Washington State, 2001)

Purchase of Agricultural Conservation Easement (Wash. Rev. Code secs. 84.34.200 to .240)

Purchase of agricultural conservation easement (PACE) laws elaborate on the capacity of government agencies and nonprofit organizations to purchase interests of specifically agricultural land. The laws also authorize counties to levy additional property taxes specifically for this purpose "not to exceed six and one-quarter cents per thousand dollars of assessed valuation against the assessed valuation of all taxable property within the county." Washington does not, however, have an active state-funded PACE program, as 19 other states currently do. (Washington State, 2001)

Right-to-Farm (Wash. Rev. Code secs 7.48.300 to .905)

Because agricultural activities conducted in urbanizing areas are often subjected to nuisance lawsuits and other obstacles, so called 'right to farm' laws have been enacted to protect agricultural activities from such lawsuits. These laws protect agricultural and forest practices as long as they are consistent with good practices, established prior to surrounding nonagricultural and nonforestry activities, unless the activity has a substantial adverse effect on the public health and safety. (Washington State, 2001)

CASE STUDIES

Massachusetts

FEATURED STRATEGY: **Business and marketing assistance** through the Farm Viability Enhancement Program

BACKGROUND

Massachusetts has developed an innovative strategy to preserving farmland by strengthening farmers.
The Farm Viability Enhancement Program, now in its sixth year, is designed to improve the economic bottom line and environmental integrity of participating farms through the development and implementation of farm viability plans developed by teams of agricultural, economic and environmental consultants.

Figure 4: Spraying plums on a Massachusetts farm

HOW IT WORKS

Farmers with more than 5 acres of actively farmed land may apply for participation in the program and recipients are selected based on six criteria, in order of importance: the threat to conversion of the farmland, the amount of land, the experience of the farmer, the potential environmental benefit, the opportunity for retail or value-added development, and the quality of the soil. (Lage, 2001)

Each year 30 to 40 farms are selected to receive technical assistance valued at approximately $5000. The first component is financial analysis of the farm operation. The second component is the assistance of a technical consultant with special knowledge of the particular type of farming operation. The third component is the assistance of a technical writer to draft a formal business plan for the farm. If there is an opportunity for retail or value-added development for the farm, a marketing plan is also drafted. This occurs in about two thirds of the cases. If the farmer agrees to implement the recommendations of the business plan and the technical consultation and is willing to sign a 5 or 10 year covenant to keep the land in agriculture, the farmer is eligible to receive a grant of up to $20000 or $40000 to implement the recommendations. (Lage, 2001)

RESULTS

So far, the Farm Viability Enhancement Program has been active in nearly every county in the state and has resulted in 103 business plans and 90 covenants that have protected 10,354 acres. (Lage, 2001)

Vermont

FEATURED STRATEGY: **Integration of affordable housing and land conservation** in one agency through the Vermont Housing and Conservation Board (VHCB)

BACKGROUND

Vermont's agriculture contributes more than $500 million in farm receipts a year to the state's economy, but the importance of agriculture to the State of Vermont goes far beyond the dollars brought into the state from the sale of agricultural products. Many of Vermont's rural areas are based on an agricultural economy and therefore the economic and social health of those communities is dependent on a strong agricultural economy. The tourist industry in Vermont provides more than 32,200 jobs and annually brings $1.3 billion into the state. The scenic beauty of Vermont's landscape, which plays a large role in attracting tourists, is in a large part due to the agricultural use of the land. (Vermont Housing and Conservation Board, 2001)

Figure 5: Audy Farm, Vermont

The pace and pattern of development in Vermont in the mid-1980s was threatening historic settlement patterns and the rural character of the state. Housing prices were rapidly rising beyond the reach of Vermonters, development pressure on the state's valuable agricultural and natural lands was escalating at a record pace, and historic properties and downtowns were being abandoned for suburban, sprawl development. In 1986, the Vermont Land Trust (www.vlt.org) assembled a coalition of affordable housing, conservation, and historic preservation advocates concerned with this rapid change in the character of the Vermont landscape to approach the state legislature with a plan to form a unique agency to review and fund projects addressing a range of community needs. The Legislature responded, passing the Vermont Housing and Conservation Trust Fund. The Vermont Housing and Conservation Board was up and running. (Vermont Housing and Conservation Board, 2001)

HOW IT WORKS

VHCB makes loans and grants to nonprofit organizations, municipalities and state agencies for the acquisition of land and conservation easements. All conservation projects are protected in perpetuity by legal instruments (conservation easements) recorded in the land records which travel with the land upon resale. The conservation easements are co-held by the applicant organization, VHCB, and, in the case of farmland conservation projects, by the Vermont Department of Agriculture, Food & Markets. The purchase of development rights has contributed to renewed vitality in agriculture by enabling young farmers to purchase farms at an affordable price and by helping established farmers to reduce long-term debt, to invest in infrastructure, and to make operations more profitable and efficient. By focusing on conserving contiguous blocks of farmland in traditional farming communities, VHCB's Farmland Preservation Program helps to ensure that farms are not isolated by residential development and communities can continue to support a healthy range of businesses that serve and rely on neighboring farms. (Vermont Housing and Conservation Board, 2001)

The fundamental innovation of the Vermont approach is the cooperation of affordable housing and land conservation organizations. Projects that bring housing trusts and land trusts together can result in the integration of sometimes divergent interests and create new ways of thinking about the needs of communities. "Smart Growth" discussions and collaborations can result in working relationships among community developers, affordable housing, historic preservation and land trust advocates. (Vermont Housing and Conservation Board, 2001)

RESULTS

After thirteen years, VHCB remains unique in the nation in pioneering a comprehensive approach to affordable housing and community development linked with land conservation and historic preservation. The results have been impressive. With a cadre of nonprofit organizations working at the local level to identify and develop important projects in each community, the effects of 13 years of investment are discernible in every part of the state. Since its inception, the Board has awarded over $130 million to nonprofit housing and conservation organizations, towns, municipalities and state agencies to develop more than 745 projects in 205 towns. This investment has directly leveraged approximately $450 million from other private and public sources and resulted in the creation of 5,700 units of affordable housing and the conservation of 307,000 acres of important agricultural and recreational lands and natural areas. Two hundred fifty-one farms comprising more than 83,000 acres of agricultural land have been conserved with VHCB funds since 1987. (Vermont Housing and Conservation Board, 2001)

Maryland

FEATURED STRATEGY: **Purchase of Agricultural Conservation Easements (PACE)** through the Maryland Agricultural Land Preservation Foundation (MALPF) and the Maryland Rural Legacy program

BACKGROUND

Maryland is one of the most important agricultural states on the East Coast, but it is also a very desirable place to live. With Washington, D.C. at its heart and Baltimore dominating the northeastern region of the state, Maryland attracts people because of its exceptional employment opportunities. While most of the state's businesses benefit from the strong economy and job market, agriculture often suffers. Between 1945 and 1970, Maryland experienced a population and development boom that spawned one of the nation's most aggressive efforts to protect farmland. The amount of agricultural land in Maryland decreased by one-third during this period, from 4.2 million acres to 2.8 million acres, as the state lost an average of 55,000 acres per year. Urban sprawl was the primary cause of conversion. Today, Maryland is still losing over 25,000 acres of agricultural and forest lands to development each year. By the year 2020, Maryland will likely be home to one million additional people. (American Farmland Trust, 1997: 253)

Figure 6: Carroll County, Maryland

HOW IT WORKS

In 1977, Maryland created the Maryland Agricultural Land Preservation Foundation (MALPF) to implement agricultural districts and the purchase of agricultural conservation easements (PACE). There was considerable resistance to mandatory agricultural districts so in 1978, when the Maryland Agricultural Land Preservation Program (MALPP) was created, it included provisions for voluntary participation. The program is funded by two real estate transfer taxes. The agricultural transfer tax is collected on land that is removed from agricultural production. The amount of the tax ranges from 3 percent to 5 percent of the sale price, depending on the type and condition of the property. These revenues are dedicated to funding the PACE program. Revenues generated by an additional .5-percent tax on the value of all real estate transfers are divided between parkland acquisition and farmland protection. MALPP protected almost 100,000 acres in its first 14 years and its success was due in large part to its creative funding source. Over time much of the PACE program has moved to the county level through a process of certification of counties which have an effective program to preserve agriculturally viable farmland. These counties may retain as much as 75% of the agricultural transfer tax revenues generated within their jurisdictions, as opposed to just 33% for counties that are not certified. As of 1996, 11 of

Maryland's counties had become certified. (Maryland Department of Agriculture, 2001: www.mda.state.md.us/agland/main.htm)

The Rural Legacy Program, a keystone of Governor Parris N. Glendening's "Smart Growth Initiatives," was enacted by the 1997 Maryland General Assembly and signed into law May 22nd of that year. The program encourages local governments and private land trusts to identify Rural Legacy Areas (RLAs) and to competitively apply for funds to complement existing land preservation efforts or to develop new ones for these areas. Easements or fee estate purchases are sought from willing landowners in order to protect areas vulnerable to sprawl development. (Maryland Department of Natural Resources, 2001: www.dnr.state.md.us/rurallegacy/rlprogram/)

RESULTS

Under the Rural Legacy Program $128 million has been committed from 1998 to 2002 for the preservation of 50,000 to 75,000 acres of Maryland's farms, forests, and open spaces. If funding is continued at the level of the first five years, the State could protect up to 200,000 acres of resource lands by the year 2011. The Rural Legacy Program is funded through a combination of Maryland Program Open Space transfer tax revenues and general obligation bonds from the State's capital budget. In 1999, the Sierra Club praised the Program rating Maryland as having the best Open Space Protection Program in the country. (Maryland Department of Natural Resources, 2001: www.dnr.state.md.us/rurallegacy/rlprogram/)

The Rural Legacy Program is innovative in the way it encourages local communities to make decisions about what land to protect. Communities that use strategic planning to protect large blocks of land receive priority over those that use a scattershot approach. An example of a Rural Legacy Area and typical award is the Little Pipe Creek RLA in Carroll County. The plan for this nearly 12,000 acre RLA is to form a greenbelt around the town of New Windsor, a National Register Historic District, and to provide a buffer for other preserved farmland. Thousands of acres of dairy farmland and crop land with high quality soils dot the landscape within and outside of the RLA boundaries. Carroll County was awarded $750,000 in fiscal year 2000 to protect 441 acres. (Maryland Department of Natural Resources, 2001: www.dnr.state.md.us/rurallegacy/rlprogram/)

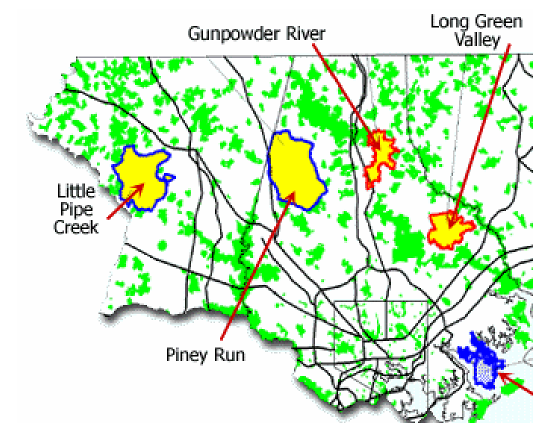

Figure 7: Little Pipe Creek Rural Legacy Area

Oregon

FEATURED STRATEGY: **"Exclusive farm use" (EFU) zones** of the Oregon Statewide Planning Program administered by the Oregon Department of Land Conservation and Development (DLCD)

BACKGROUND

In 1973, the Oregon legislature strengthened the state's role in protecting land zoned for "exclusive farm use." With Senate Bill 101, the legislature passed into law a strong policy to preserve "the maximum amount of the limited supply of agricultural land." Also in 1973, the legislature adopted Senate Bill 100, thus creating a strong statewide program for land use planning. The bill directed the newly created Land Conservation and Development Commission (LCDC) to "give priority consideration to" several resources, including "agricultural land." That state policy to protect farmland and the law calling for statewide planning and zoning have been in effect ever since. The combination of those two laws has led to a system of farmland protection that is arguably the strongest in the country. (Oregon Department of Land Conservation and Development, 2001: www.lcd.state.or.us)

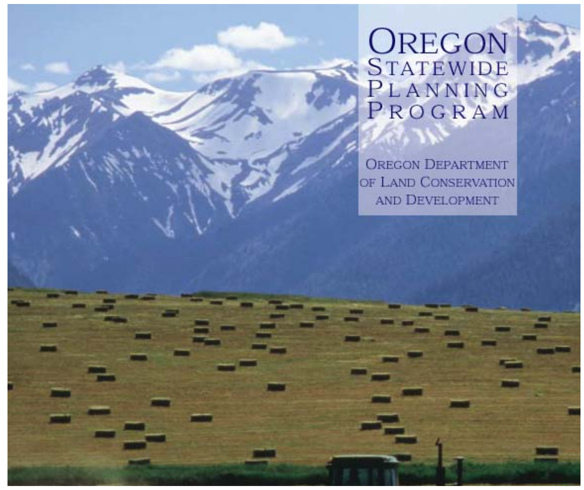

Figure 8: Oregon

HOW IT WORKS

EFU zones vary somewhat from one county to another, but their basic is to protect farmland in two main ways. First, they limit development by prohibiting land uses that conflict with commercial agriculture. Subdivisions, shopping malls, fast-food shops, and most other urban uses are prohibited in the EFU zone. Second, the zone specifies a minimum lot size to keep farmland from being divided into pieces too small for commercial agriculture. As a result of legislation passed in the 1993 Legislature, the minimum parcel size for cropland is 80 acres, for rangeland, 160 acres. (Oregon Department of Land Conservation and Development, 2001: www.lcd.state.or.us)

EFU zoning is reinforced by another key element of the statewide planning program: the "urban growth boundary" (UGB). Each of Oregon's 240 cities is required to establish such a boundary, and all of them have done so. The boundary marks the outermost limit of the growth and development planned by a city for the next 20 years. It is the line between urban lands, which are expected to be served and developed at urban levels sometime in the future, and rural lands, most of which are protected for commercial agriculture and forestry. (Oregon Department of Land Conservation and Development, 2001: www.lcd.state.or.us)

RESULTS

Some 16 million acres of agricultural land have been protected by the combination of strong state standards, local planning, and EFU zoning. Development approvals for dwellings, uses and land divisions on farm and forest lands reflect the influence of changes to state laws and LCDC rules enacted since 1993. For example, the number of new "farm dwellings" has remained relatively steady, while the number of non-farm dwellings continues to decline. Oregon's rapid population and economic growth remains very strong in some regions, so it is unlikely that these trends are the result of a lessening of demand for rural living opportunities. Rather, the declines of development activity on the state's resource lands appear to be the direct result of the revisions made to farm and forestland laws. (Oregon Department of Land Conservation and Development, 2001: www.lcd.state.or.us)

Oregon State laws and LCDC rules are designed to ensure that newly created parcels on farm and forest lands remain commercially viable. These are considered to be the most important methods for preventing the loss of the resource land base. As a result of requirements for 80 and 160 acre minimum parcel sizes, about 83% of all new farm and forest related parcels created in the 1998-1999 reporting periods were greater than 80 acres in size. As authorized by the statutes, counties also have the opportunity to demonstrate to LCDC that a lower minimum parcel size is appropriate to continue commercial resource enterprises. No counties have sought to use this “go-below” provision during 1998-1999. (Oregon Department of Land Conservation and Development, 2001: www.lcd.state.or.us)

California

FEATURED STRATEGY: **Restrictive agreement taxation**, an **agricultural district program**, establishes covenants on future development in exchange for use value taxation through the Williamson Act

BACKGROUND

Since 1947, California has been the nation’s number-one ranking agricultural state. It produces 55 percent of the fruits, vegetable and nuts and 25 percent of all the table food consumed in the country. The state’s agriculture is a nearly $27 billion industry. The temperate climate that is so conducive to agriculture also make California one of the most attractive places to live in the United States. Between 1940 and 1990, the state’s population more than quadrupled, growing from seven million to 30 million. This number is expected to double by 2040. (American Farmland Trust, 1997: 225)

HOW IT WORKS

Recognizing the extraordinary development pressures, California has implemented a variety of incentive-based programs, regulations and funding measures to protect the state’s agricultural industry and its land base. Incentive-based programs that allow farmers to voluntarily participate in preservation in exchange for a package of benefits are generally referred to as agricultural district programs. In 1965, the state legislature approved the California Land Conservation Act. The legislation, commonly known as the Williamson Act, created a program that offers tax relief to landowners who agree to sign 10-year contracts restricting the use of their land to agricultural or open space uses. Landowners who sign contracts are taxed preferentially, based on the agricultural value of their land. The state then reimburses counties with Williamson Act acreage for approximately one-third of the total property taxes lost. (American Farmland Trust, 1997: 225)

RESULTS

The amount of acreage enrolled in the Williamson Act peaked at 16.2 million in 1980-1981 and has fluctuated between 15 and 16 million since then. As of the end of 1998, about 15.9 million acres were enrolled in the program. This number represents over half of California’s total farmland and ranchland, and nearly one-third of all privately held land in the state. About half of the state’s estimated acreage of prime farmland was under contract. (California Department of Conservation, 2001: www.consrv.ca.gov/dlrp/index.htm)

The California program is not original in preferentially taxing agricultural land, but it is innovative in that it requires a protection from conversion for a period into the future, not just in the present. Of course, it is not permanent protection so there is the risk of conversion at the end of the ten year contracts and some areas facing tremendous development pressure are seeing alarming rates of nonrenewal. (California Department of Conservation, 2001: www.consrv.ca.gov/dlrp/index.htm)

C. COUNTY AND MUNICIPAL

EXISTING PROGRAMS

The existing Comprehensive Management Plan for Ebey's Landing NHR was adopted as part of Island County's existing Comprehensive Plan. The Reserve is updating its General Management Plan while the county is updating its Comprehensive Plan to comply with the requirements of the 1990 Growth Management Act. It is anticipated that the new GMP will be adopted as elements of the both the County and Town Comprehensive Plans. The proposed county plan has two agricultural protection zoning (APZ) designations, Rural Agricultural (RA) and Commercial Agricultural (CA). (Nemens, 2001: 2)

Rural Agricultural (RA) lands have a minimum parcel size of 5 acres, and the County codes indicate "the primary purpose of the Rural Agriculture (RA) zone is to protect and encourage the long term productive Use of Island County's agricultural land resources of local importance. It is established to identify geographic areas where Commercial farming practices can be conducted in an efficient and effective manner; and to help maximize the productivity of the lands so classified. Secondarily, lands classified RA provide scenic Open Space, wildlife habitat and watershed management to the extent such Use is consistent with the primary purposes of the Zone intended." (Island County Community Development, 2001: www.islandcounty.net/community/Regs/download_regs.htm#Title)

Commercial Agriculture (CA) lands have a minimum parcel size of 20 acres and the County codes indicate "The primary purpose of the Commercial Agriculture (CA) zone is to protect and encourage the long term Commercially productive Use of Island County's agricultural resource lands of long term Commercial significance that have been designated pursuant to RCW 36.70A.170. It is established to identify geographic areas where a combination of soil, and topography allow Commercial farming practices to be conducted in an efficient and effective manner; to help maximize the productivity of the lands so classified; to protect farming operations from Interference by non-farmers; and to maintain agricultural land areas for Agriculture Use free from conflicting non-farm uses. Otherwise, the purposes of the zoning classification are the same as the RA zone." (Island County Community Development, 2001: www.islandcounty.net/community/Regs/download_regs.htm#Title)

Island County tried a Transfer of Development Rights program but later revoked it because the receiving areas were not willing to accept greater density from remote unrelated sending areas. (Harbour, 2001)

Island County has a Historic Advisory Committee and the town of Coupeville has a Design Review Board that review development proposals, but these panels do not have veto authority over the projects. (Harbour, 2001)

Island County has a "right-to-farm" regulation that differs from the state law in several ways. It does not supersede state law, but is intended to be utilized "in the interpretation and enforcement" of the state law. Island County's applicable regulation includes surface mining where the state law refers to only agriculture and forestry. The County's version makes no mention of the "unless the activity has a substantial adverse effect on the public health and safety" clause that the state law includes. This doesn't necessarily mean that the unhealthy or unsafe practices are permitted, but that the County finds the requirement that the practices be conducted "in a manner consistent with good management practices" to be sufficient to describe the obligation of the farming operation. The County regulation also details language for measures to communicate the regulation-"mailed notices," "recorded disclosure notices," and "property declarations." (Island County Community Development, 2001: www.islandcounty.net/community/Regs/download_regs.htm#Title)

CASE STUDIES

King County, Washington

FEATURED STRATEGIES: **Agricultural Protection Zoning** (APZ) through Agricultural Production Districts (APD) identified in the Comprehensive Plan

BACKGROUND

Between 1945 and 1975, urban growth consumed two-thirds of King County's farmland and active farming operations declined from 6,500 to 1,200. In 1979, county voters approved a $50 million bond issue to fund the Farmland Preservation Program (FPP), the purpose of which was to "preserve the economic, aesthetic and cultural values provided by agriculture for the benefit of the citizens of King County." Funding for the program was delayed until 1985 due to problems with the funding source and a lawsuit. To supplement and guide the program, King County's 1985 Comprehensive Plan, developed to satisfy State of Washington Growth Management Act requirements, established Agricultural Production Districts (APDs). Between 1985 and 1987, King County protected 187 properties through the purchase of agricultural conservation easements, encompassing 12,650 acres of farmland, mostly inside the APDs. At the end of 1987, FPP was discontinued because the bond issue had not allocated funding for ongoing work. In 1995 the County authorized an additional $3 million to fund easement acquisition through the FPP , but has protected only about 200 acres since the 1980s purchases. The APD program is the dominant tool today and a Transfer of Development Rights (TDR) program has been launched to focus growth in urban areas and preserve sensitive lands. King County also promotes farming through the Puget Sound Fresh program which uses the distinctive "Puget Sound Fresh" label to encourage citizens to buy local produce and the Farm Link program which connects retiring farmers with beginning farmers that need land. (American Farmland Trust, 1997: 279) (King County Department of Natural Resources, 2001: dnr.metrokc.gov/wlr, www.pugetsoundfresh.org, dnr.metrokc.gov/wlr/wafarmlink)

Figure 9: King County farm

HOW IT WORKS

5 Agricultural Production Districts have been identified and together they cover 42,000 acres. Zoning in the APDs allowed one dwelling unit per 10 acres in urbanized areas and one unit per 35 acres in rural agricultural areas. A variety of policies encourage farming and associated infrastructure and industries. The 1994 Comprehensive Plan added a "no net loss of farmland" policy which requires the mitigation of conversion of APD land through "the addition of agricultural land abutting a County APD of equal acreage, and of equal or greater soils and agricultural value." (American Farmland Trust, 1997: 282) (King County Council, 2000: Chapter 3-Rural Legacy and Natural Resource Lands page 37)

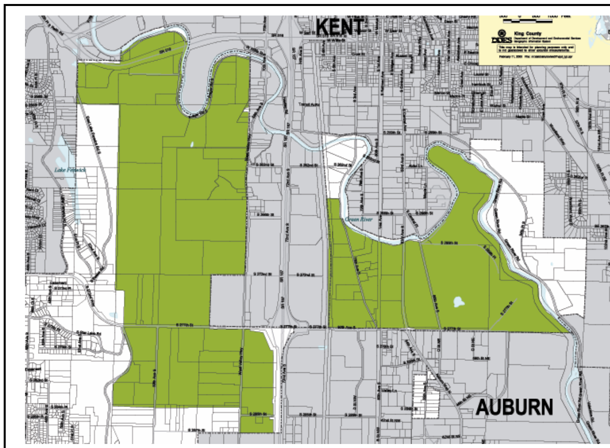

Figure 10: Lower Green River APD

RESULTS

Development pressure continues to be a serious challenge to King County farmers, even those inside the APDs. King County has developed PACE and TDR programs to give property owners whose land values may have been impacted by the restrictions some avenues for compensation. This relationship between APZ and incentive-based programs is critical because the reduced land values brought about by APZ frequently inspire opposition from the very farmers it is designed to protect. Since Agricultural Protection Zoning is also fundamentally not permanent protection, these political concerns must be constantly addressed. The success of the incentive-based programs and agricultural economic development programs will ultimately determine the viability of the Agricultural Production Districts as they will decide whether farmers are protected as well as the farmland. (American Farmland Trust, 1997: 285)

Montgomery County, Maryland

FEATURED STRATEGY: **Transfer of Development Rights (TDR) program** supported by APZ and PACE

BACKGROUND

Figure 11: Montgomery County

Montgomery County became a desirable place to live in the 1950s because residents could commute to Washington, D.C., easily by state highway. Montgomery's population more than doubled during the decade from 164,000 to 340,000, making it the fastest-growing county in the state. By 1960, half of its farmland was owned by people not involved in agriculture. The intensive growth in the southeastern part of the county in the 1950s and 1960s led county officials to try to protect the remaining farmland in the northwestern half. In 1969, the County Council adopted a plan called *On Wedges and Corridors*. The "wedges" are the rural areas of the county, predominantly agricultural lands in the northwestern region, and the "corridors" are the municipalities in the southeastern section. The plan recommended protecting agricultural land and open space by concentrating growth in the corridors. (American Farmland Trust, 1997: 259)

In 1980, Montgomery County approved and began to implement a Plan for the Preservation of Agricultural Land and Open Space. The plan recommended the use of two techniques to protect agricultural land: transfer of development rights (TDR) and agricultural protection zoning (APZ). The combination of techniques was used because policymakers believed that the farming community would not have supported downzoning without some means of preserving their equity. (American Farmland Trust, 1997: 260)

The TDR program got off to a slow start because not enough receiving areas were identified. Supply of development rights far exceeded demand so their value was much less than farmers had hoped. In 1989, the county designated more receiving areas and, importantly, developed a Purchase of Agricultural Conservation Easement (PACE) program that soaked up some of the supply of development rights. County easement purchases were also targeted at the urban fringe to create a buffer between the urban and rural areas by halting the extension of infrastructure into rural areas. The value of a development right doubled and the TDR program took off. (American Farmland Trust, 1997: 261)

HOW IT WORKS

TDR legislation was accompanied by an amendment to the zoning ordinance that created an 89,000-acre Agricultural Reserve in the rural area of the county and implemented APZ. Development was limited to one dwelling unit per 25 acres. The Agricultural Reserve is also known as the Rural Density Transfer Zone. This district and another 30,000-acre rural zone are the county's TDR sending areas. Landowners in the sending areas are permitted to sell their development rights to landowners in designated receiving areas who want to develop their property at a higher density than is ordinarily permitted by the base zoning. One development right can be sold can be sold for each five acres of land; rights are sold on the open market. (American Farmland Trust, 1997: 260)

RESULTS
Since 1980, Montgomery County has permanently protected 40,583 acres using TDR. This land represents nearly 60% of the land protected in the United States through the TDR method. It is important to note that they have also used PACE to protect 5,130 acres since 1988. Together the programs have protected roughly half of the county's agricultural acreage. TDR is most suitable in places where large blocks of land remain in farm use and where receiving areas exist that can accommodate the development to be transferred out of the farming area. The receiving areas must have the physical capacity to absorb new units, and residents of those areas must be willing to accept higher density development. (American Farmland Trust, 1997: 260) (Farmland Information Center, 2001: www.farmlandinfo.org/fic/tas/tafs-tdr.html)

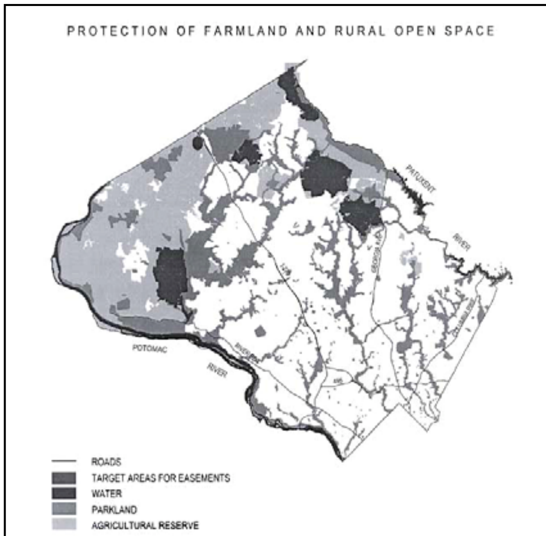

Figure 12: Montgomery County TDR map

Sonoma County, California
FEATURED STRATEGY: **Sales tax funded PACE** (Purchase of Agricultural Conservation Easement) program

BACKGROUND
Sandwiched between Napa and Marin Counties, which have been relatively progressive in protecting agricultural land, Sonoma is believed to receive much of the development that is steered away from its neighbors by high land prices and strict land use regulations. Sonoma is also much larger than the other North Bay counties—more than twice the size of Napa and three times that of Marin. The larger size of the county makes land cheaper in Sonoma than in Napa or Marin. Finally, Sonoma, unlike Marin and Napa, has a major highway running its length. Highway 101 links the North Coast and San Francisco, and bedroom communities have sprung up along both sides of the freeway. (American Farmland Trust, 1997: 237)

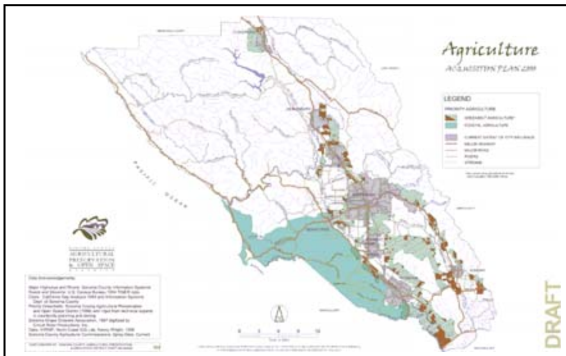

Figure 13: Sonoma County

The results of this pressure are evident in the county's population figures. Sonoma's population increased by at least 30,000 every five years between 1980 and 2000, reaching over 400,000. The Association of Bay Area Governments (ABAG) predicts strong growth pressures to continue for the North Bay. ABAG estimates that over the next twenty years, Sonoma County will experience a 25 percent increase in population and a 47 percent increase in the number of new jobs. Sonoma County Agricultural Preservation and Open Space District, 2001: 2) (American Farmland Trust, 1997: 237)

HOW IT WORKS
In November 1990, Sonoma County voters approved two measures that created the Sonoma County Agricultural Preservation and Open Space District and a ¼ percent sales tax over a 20-year period to fund agricultural preservation and open space acquisition. The Sonoma County Open Space Authority, an

independent entity created by the Board of Supervisors, is responsible for levying the sales tax. Through a contract, the Authority provides primary funding for the District's acquisition program. The sales tax provides an annual allocation of approximately $13 million for the District's land conservation program. Several California counties, including Marin, have created special districts for acquiring open space. Sonoma was the first to establish a special district the purpose of which includes acquiring agricultural land and Sonoma is the only jurisdiction in the country that uses revenues from a broad-based sales tax to purchase conservation easements on agricultural land. (Sonoma County Agricultural Preservation and Open Space District, 2000: 3) (American Farmland Trust, 1997: 238)

The County Board developed an acquisition plan in 1992 that identified priorities for land acquisition and described specific acquisition categories. The Agricultural Acquisition Category encompasses a variety of "working landscapes" throughout Sonoma County and was developed to help focus the District's agricultural land conservation efforts. For Acquisition Plan 2000, ranchers assisted District staff in identifying the highly productive coastal grasslands in the southwest part of the County, as an important grazing region for livestock. This is the Coastal Agriculture category. Other experts assisted the District in prioritizing farms within greenbelts which include lands for orchards, vineyards, nurseries and forage crops. This is the Greenbelt Agriculture category and it is essential to provide separation between the County's nine cities. (Sonoma County Agricultural Preservation and Open Space District, 2001: www.sonoma-county.org/opensp)

RESULTS

The goal of the District is to acquire outright or purchase easements on approximately 600,000 acres of agricultural, natural resource and open space land, which represents 60 percent of the county's land base. To date, the District has completed 80 land conservation projects and protected over 27,000 acres (close to 20,000 acres of agricultural land on 49 properties) through easement or fee acquisition at a cost of $50 million. ((American Farmland Trust, 1997: 238)

San Juan County, Washington

FEATURED STRATEGIES: Purchase of Agricultural Conservation Easements (PACE) with funds from **Real Estate Excise Tax (REET)** and protected forever by a **stewardship endowment**. Easement values assessed by a **point system**. A zoning **overlay district** will be proposed in the San Juan Valley Heritage Plan due in September 2001

BACKGROUND

In 1990, San Juan Islanders voted to create the San Juan County Land Bank to "preserve the island's unique natural heritage". In 1999, by a nearly 73% majority, the Land Bank was renewed for 12 more years. (San Juan County, 2001: www.co.san-juan.wa.us/land_bank)

HOW IT WORKS

The Land Bank is funded by a 1% real estate excise or transfer tax (REET) paid for by purchasers of property in San Juan County. The funds are used to purchase conservation easements and to acquire land outright. The Land Bank protects its conservation purchases and easements forever with the establishment of a stewardship investment fund. (San Juan County, 2001: www.co.san-juan.wa.us/land_bank)

1n 1996, the Land Bank adopted an innovative method of valuing easements. Easement values are determined by a point system based on the characteristics of the farm that make it desirable for development and on the agricultural and scenic values that it provides. The price of easements has historically been determined through professional appraisals. The value of the easement is typically the difference between the appraised fair market value of the property before and after restrictions on nonagricultural land use are imposed by the easement. Under the San Juan County system, characteristics such as farm acreage, prime soils, crop value, road frontage, use of conservation practices, etc. are translated through points into the purchase price through a formula. The Land Bank still continues to use the standard method of appraisals to value easements on coastal properties and land within urbanized areas. (American Farmland Trust, 1997: 100)

The point system may resolve some significant problems of the appraisal-based valuation. Appraisals take a long time, often six months or more; they are expensive, often from $2000 to $5000; and they are subjective, often requiring several opinions. Appraisals also raise problems for the PACE program manager: in general, the better the farm, the lower the easement value. The problem is that appraisals measure what developers are willing to pay for farmland, not what farms are worth to society. Consider two farms of the same size in similar areas—an overgrown, run-down farm with poor soils and few agricultural improvements, and a well-maintained farm with prime soils, a new barn, etc. Common sense says that society should pay more to protect the second farm. But using the before-and-after appraisal method would probably result in a higher easement value on the first farm for two reasons. First, farmers would be willing to pay more for the second farm than the first. The "after" value of this farm would thus be higher, reducing the difference between restricted and fair market value. Second, the improvements on the second farm are worth a lot more to a farmer, but they're a nuisance to a developer—few homeowners want industrial buildings and a manure pit in their backyard. So the two farms are at best equal in terms of fair market value. (American Farmland Trust, 1997: 100)

The San Juan County Land Bank pays for stewardship by setting aside money in a stewardship endowment fund each time a property or easement is acquired. The amount placed in this fund is based on an estimate of what stewardship of the property will cost over time. The money in the stewardship endowment fund is invested and the interest from the investment is used to pay for the Land Bank's stewardship activities. Some of the interest is reinvested so that the account balance can continue to grow over time. In this way, the Land Bank protects its investments by establishing this permanent fund to support management activities on Land Bank properties and easements forever. On properties owned by the Land Bank, management consists of developing and maintaining a management plan with community participation, collection and maintaining accurate baseline data, coordinating volunteer stewards that visit the properties regularly, and communicating with neighbors and the broader community about the goals for the properties. For easements held by the Land Bank, management consists of collecting and maintaining baseline data, communicating with the property owners, developing good relationships with new property owners, and promoting effective stewardship by the property owners. (San Juan County, 2001: www.co.san-juan.wa.us/land_bank)

A San Juan Valley Heritage Plan will be completed by September, 2001 which recognizes and protects visual open space resources as equal in importance to maintaining traditional agricultural uses in San Juan Valley. The Plan will allow for land division and development at a variety of densities as an incentive to maximize conservation and protection of open space and to maximize the potential for continuing agricultural use. The plan will also ensure that the ultimate development of the overlay district does not exceed an average of one dwelling unit per fifteen acres. (San Juan County, 2001: 1)

RESULTS
San Juan County has protected 1,418 acres with 17 easements at a cost of just over $2.2 million. (Farmland Information Center, 2001: www.farmlandinfo.org/fic/tas/tafs-paceloc.pdf)

Napa County, California

FEATURED STRATEGY: **Agricultural marketing** in the form of a requirement that the Napa label only appear on wines made with at least 75% Napa grapes

BACKGROUND

Since the 1950s, Napa County residents have voted in favor of programs to protect agriculture, particularly the vineyards that wind through the Napa Valley. The Valley has an ideal climate for growing grapes and its vineyards have earned a reputation for producing excellent wine grapes. County residents are supportive of the wine industry because the vineyards demand little space, yet play a major role in boosting the county's economy. The total economic value of the wine grape industry is close to $1 billion. With these incentives to resist development, Napa County has some stringent and creative farmland protection regulations and agricultural protection zoning. In 1990, voters approved a particularly innovative winery marketing ordinance that was designed to support the county's agricultural sector. (American Farmland Trust, 1997: 233)

Figure 14: Napa vineyard

HOW IT WORKS

The ordinance requires that at least 75 percent of the grapes used to make wine and other products at the county's wineries be grown within Napa County. Before the ordinance, a large number of wineries were growing grapes in other areas where land was cheaper, then using the grapes to produce wine in Napa so the prestigious Napa label could be put on the bottle. (American Farmland Trust, 1997: 236)

Opinions were divided about how the ordinance would affect Napa's wineries and agricultural land. Advocates argued that it would increase the demand for vineyard land which would result in stronger support for farmland protection efforts. Others maintained that additional land would not be needed because improved technology would increase yield and because vineyards would simply relocate to other counties. Critics charged that the ordinance would hurt the county's wineries by increasing production costs. (American Farmland Trust, 1997: 236)

RESULTS

Observers report that since the ordinance was approved, it has protected the agricultural viability of Napa's wine-grape industry. Land use consultant and Napa County Planning Commissioner Mary Handel stated in Saving American Farmland that the ordinance has allowed Napa grape growers to continue making a profit from grapes and wine, and at the same time reduced the trend of farmland being converted for tourist facilities that have little to do with the county's agriculture. (American Farmland Trust, 1997: 237)

Davis, California

FEATURED STRATEGY: **Agricultural conversion mitigation** through the Right-to-Farm and Farmland Preservation Ordinance

BACKGROUND

The City of Davis is bordered on all sides by active farmland. The city retains a connection with its rural heritage and has maintained a strong commitment to preserving prime farmlands and agricultural activities. The Davis General Plan reflects this commitment with policies calling for the protection of prime farmland, creation of buffers between urban and agricultural uses, and maintaining a compact urban form. (City of Davis, 2001: www.city.davis.ca.us/parks/programs/openspace.htm)

Figure 15: Davis, California

HOW IT WORKS

Farmland preservation is addressed through a requirement that for every acre of farmland converted to urban uses, one acre of comparable farmland is preserved in perpetuity (1:1 ratio). Lands identified by developers to satisfy this requirement must meet several standards including: comparable soil quality, adequate water supply to allow continued farming, and no encumbrance of the land that precludes future farming (e.g. partial urban development). Flexibility is built into the ordinance allowing the City to accept in-lieu fees to cover the cost of acquisition and management of agricultural conservation easements. Location of easements accepted or purchased by the City have been coordinated through an open space plan. Easement lands are organized to provide large contiguous blocks of land that provide farmland value, habitat value, and serve to define urban form. (City of Davis, 2001: www.city.davis.ca.us/parks/programs/openspace.htm)

Farmland protection policies included in a pending General Plan Update will increase the replacement ratio from 1:1 to 2:1 – requiring the conservation of two acres of prime farmland for every acre converted to urban uses. (City of Davis, 2001: www.city.davis.ca.us/parks/programs/openspace.htm)

RESULTS

The City has received over $900,000 in in-lieu fees as a result of the farmland preservation ordinance and these fees have been used as matching funds for state conservation easement grants. Since passage of the ordinance in 1995, the City has secured agricultural conservation easements totaling over 2000 acres. (City of Davis, 2001: www.city.davis.ca.us/parks/programs/openspace.htm)

D. NON-GOVERNMENTAL ORGANIZATIONS

EXISTING PROGRAMS

The Whidbey-Camano Land Trust owns one conservation easement of 40 acres in Ebey's Landing National Historical Reserve. e-mail: wclt@whidbey.com

Several large land trusts frequently collaborate with local land trusts, agencies and governments to protect farmland. These organizations also have a variety of educational resources and often receive donations of land or easements. The Nature Conservancy (TNC) currently owns nearly 400 acres in the Reserve, including the recently acquired Pratt property. The mission of The Nature Conservancy is to preserve plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive.www.tnc.org
The American Farmland Trust works to stop the loss of productive farmland and to promote farming practices that lead to a healthy environment. They have an extensive library of farmland preservation tools and case studies. www.farmland.org

Scenic America could provide guidance on protecting viewsheds. www.scenic.org

The Island County Washington State University Cooperative Extension program provides educational support to the Island County agricultural community. www.island.wsu.edu

The Forest Stewardship Council supports environmentally appropriate, socially beneficial and economically viable management of forest resources. www.fscus.org

Washington Farm Assistance, a program of Puget Sound Farm Trust, protects farmland by helping new and established farmers, their heirs and replacements become more successful. wfa@thefarmtrust.org (206) 767-7334

CASE STUDIES

Franklin Land Trust, Massachusetts

FEATURED STRATEGY: Land trust buys **easements in exchange for debt forgiveness** in order to shelter active farmers from taxes

BACKGROUND

Founded in 1987, the Franklin Land Trust is a nonprofit organization devoted to the preservation of the farm and forest land, and the rural character, of western Franklin County, Massachusetts. The Land Trust does not seek to own land itself, but instead encourages private stewardship. Mark Zenick attributes the Trust's success to "its fundamental belief that the wishes of private property owners must always be acknowledged and respected." He continues "The Land Trust has not assumed that individuals can or should give up equity value in their properties. Instead, it has tried to fashion conservation strategies that speak to landowner expectations while providing effective land protection options." (Franklin Land Trust, 1997: 3)

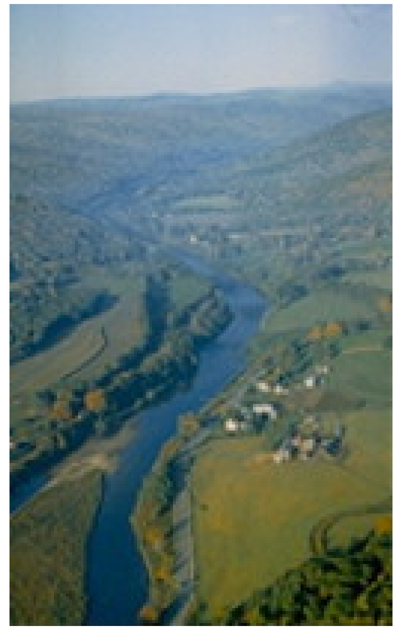

Figure 16: Connecticut River Valley

Franklin Land Trust frequently acts as a go-between between farmers that are willing to sell the development rights on their land and the state of Massachusetts's Agricultural Preservation Restriction (APR) program, the state's PACE program. The Trust often arranges loans from organizations such as the Conservation Fund to purchase development rights when there is a threat of development and resell them to the APR program when the state money is available. Because there is a considerable backlog to participate in the oversubscribed state program, these bridge loans are critical. (Zenick, 2001)

Sometimes the Land Trust helps farmers avoid significant capital gains tax burdens by receiving the proceeds of a sale of a conservation easement to the state program-which can only cut a single check for the easement-and releasing the money to the farmer in installments which do not trigger significant tax penalties. (Zenick, 2001)

HOW IT WORKS

Experience with installment plans led Mark Zenick to invent a particularly innovative technique that serves farmers that would have been forced to sell land to developers because they cannot afford to pay their mortgages and they can't even afford to sell conservation easements because such sales would trigger requirements to pay off their mortgages and still pay the taxes on the supposed capital gain. The Land Trust has offered installment forgiveness of a mortgage in exchange for conservation easements on two projects. According to Mark, "In both cases the farmer sold his development rights to Franklin Land Trust for a dollar amount 4% less than the amount the State agreed to pay for these rights. At a simultaneous closing the farmer sold an APR to the Land Trust which sold it to Massachusetts Food and Agriculture (the department which administers the APR program). Franklin Land Trust took the state's payment and bought (NOT PAID OFF) the outstanding mortgages on the farm, allowing the APR to be recorded ahead of any financial liens. The Land Trust also imposed additional restrictions (to keep the land actively farmed) in exchange for its involvement." (Zenick, 1995)

"Since no money was actually received by the farmer, he has no immediate taxable gain exposure. If he fulfills the terms of the Supplemental Agreement, each year's principal and interest obligation will be 'forgiven' – he would have to claim this paper income but at a lower federal level than if he sold the rights directly to the State. Conceptually this is a mirror image of the installment payment plan – installment mortgage 'forgiveness' in exchange for tangible public benefits accruing to the Land Trust in fulfillment of its non-profit mission." (Zenick, 1995)

Mark feels it is an innovative way of helping "heavily mortgaged farmers sell their development rights without exposing themselves to steep capital gains on funds immediately used to pay off lending institutions in order that they will subordinate to the APR. In the second use of this idea the farmer would have had to use almost all of his APR funds to pay off the bank, leaving him with no dollars to meet what would have been an approximately $70,000 tax liability." (Zenick, 1995)

RESULTS
The Franklin Land Trust has completed 79 projects protecting 7,782 acres in its 13 years of operation. There is of course dependence on the availability of state funds through the APR program, but the Trust has developed a number of tools to dramatically extend the capacity of the state program. (Zenick, 2001)

Skagitonians to Preserve Farmland
FEATURED STRATEGY: Broad agenda of **advocacy** for and **education** of the public and farm land-owners

BACKGROUND
Skagitonians to Preserve Farmland (SPF) is a grass-roots, nonprofit organization formed in 1989 and dedicated to protecting Skagit County's rich agricultural heritage through public and land-owner education. Skagitonians is also an IRS-approved land Trust that accepts donations of agricultural conservation easements, gifts of land, and may purchase easements or land with donated funds.
Skagitonians meets with and counsels farmland owners on these and other available mechanisms to keep agricultural land for agricultural production. (Skagitonians to Preserve Farmland, 2001: www.skagitonians.org)

Figure 17: Skagit County farm

HOW IT WORKS
SPF has become the recognized authority for protecting farmland and farming in the Skagit Valley. SPF effectively participates in maintaining and creating policies at the local, state, and federal level that presume a future for farming; works to implement programs to protect farmland; and creates partnerships for land protection with other conservation organizations, such as Skagit Land Trust, Trust for Public Land, American Farmland Trust, and The Nature Conservancy. SPF is also a key participant in the Skagit Watershed Council. As a community-building organization, SPF recognizes that a successful protection strategy depends upon a strong core of public opinion in favor of farmland protection. SPF sponsors community education, annual cultural and recreational events ("Celebrate Skagit Harvest"), informs the public about farmland issues, and builds community support in the Valley and throughout the Puget Sound for Skagit farmland protection. (Skagitonians to Preserve Farmland, 2001: www.skagitonians.org)

RESULTS
Based on the depth and breadth of demonstrated support, coupled with SPF research about such programs around the nation, County Commissioners voted, in 1996, to impose a property tax increase (Conservation Futures) to fund the purchase of development rights from willing farmers. SPF has demonstrated broad and deep community support for farming. In an Elway Research poll commissioned by SPF and the Economic Development Association of Skagit County (EDASC) in 1996, 82% of Skagit

Valley residents agreed that the county should be doing more to protect farmland. 90% recognized the importance of farming for the economy, wildlife habitat, and open space. (Skagitonians to Preserve Farmland, 2001: www.skagitonians.org)

In 1999, SPF published the first west coast "Cost of Community Services " study, in partnership with the American Farmland Trust (AFT), demonstrating that farmland, forest land, and open land in Skagit County produce nearly twice the amount of tax revenue it requires for pubic services ($1.00 in revenue for $.51 in services). Study findings were consistent with other such studies from around the nation. (Skagitonians to Preserve Farmland, 2001: www.skagitonians.org)

Farm Acquisition Research and Management (FARM) LLC
FEATURED STRATEGY: **Purchasing and leasing farmland**

BACKGROUND

Figure 18: Living Legacy Community Ranch

Farm Acquisition, Research and Management (FARM) LLC, is a for-profit limited liability company dedicated to preserving farmland and promoting environmentally and economically sustainable farming in urban/suburban areas of Puget Sound. The company was formed in early 1999 when eighteen members of the Root Connection subscription farm got together to save their farm from development. The group purchased the 11 acres of farmland and then leased it to The Root Connection Farm. The group then bought an adjacent 11 acre parcel and currently lease it to the Living Legacy Community Ranch. In 2000, FARM LLC with the assistance of The Land Conservancy purchased a 47 acre parcel that was to be developed as a shopping center for $1.15 million and then was paid $900,000 for the development rights by King County's Farmland Preservation Program. (FARM LLC, 2001: www.farmllc.com) (Dizon, 2000) (The Land Conservancy, 2000: 5)

HOW IT WORKS

The mission of FARM LLC is to preserve threatened farmland for the benefit of small farmers and the community at large, and to ensure a safe, local food supply. There are three components of their business-acquisition, research and management. (FARM LLC, 2001: www.farmllc.com)

Acquisition: Farmland deed restrictions require that lots remain the size they were when the county purchased development rights from the owner. This means the land cannot be divided and sold as smaller parcels. But with new intensive farming techniques, farmers can produce five times the yield per acre of traditional farms. According to FARM LLC, some small farmers don't need—and cannot afford—large parcels. Another problem for farmers is that landowners generally lease on a year-to-year basis. The farmer has little stability or incentive to make long-term improvements to the land in a sustainable manner. Another concern is county requirements that nontillable surfaces be less than 5% of the land area. Urban farms require closer ties to the community and farm members. The activities of these farms require space for parking, storage buildings, and retail sales. To create opportunities for economically viable, small-scale farming, FARM LLC offers long term leases on small parcels of land to sustainable farmers. Since FARM LLC owns more than one piece of land, they can lay out the allowed 5 percent of infrastructure in the most efficient way. (FARM LLC, 2001: www.farmllc.com)

Research: By researching sustainable, small-scale farming methods and promoting their findings, FARM LLC is encouraging farmers to adopt environmentally friendly and economically viable practices. One small test project that has been constructed is an animal-heated solar greenhouse. They are developing a curriculum of workshops to demonstrate the workings of a sustainable, profitable farm. (FARM LLC, 2001: www.farmllc.com)

Management: FARM LLC aims to preserve the viability of the small farm through shrewd management. The group of investors is made up of an accountant, a doctor, a scientist, a writer and several Microsoft executives so they have diverse skills. Decisions are guided by a mission statement and business plan and made by a board of elected members. Project managers oversee each project. (FARM LLC, 2001: www.farmllc.com)

FARM LLC is working to ensure that local farmland is farmed, not just preserved, while still providing a return to investors in the form of land leases.

E. FARMS, FORESTRY AND COOPERATIVES

EXISTING OPERATIONS

Ebey's Landing National Historical Reserve has only one large commercial farm left, the Sherman dairy farm. The Muzzall dairy farm also produces organic milk, but must sell at non-organic prices to Darigold because they are the only buyer big enough to afford pick-ups on the island. Part of the Engels farm was recently acquired by the National Park Service and is being rented back to the family. Much of the remaining farmland is hayed or used to grow seed for Christensen Seeds, which provides seeds for most Skagit Valley farms. (Harbour, 2001)

CASE STUDIES

The Root Connection Farm, Washington
FEATURED STRATEGY: **Community Supported Agriculture (CSA)**

BACKGROUND
According to Robyn Van En, a co-founder of the first share farm in America back in 1985, "The origin of the Community Supported Agriculture (CSA) concept, the partnership between consumers and farmers, can be traced to Japan in the mid-1960s. Homemakers began noticing an increase in imported foods, the consistent loss of farmland to development, and the migration of farmers to the cities. In 1965, a group of women approached a local farm family with an idea to address these issues and provide their families with fresh fruits and vegetables. The farmers agreed to provide produce if multiple families made a commitment to support the farm. A contract was drawn and the *teikei* concept was born, which translated literally means partnership, but philosophically means 'food with the farmer's face on it.'" (Van En, 1995: 29)

Figure 19: Hoop houses protect crops

The Root Connection Farm, in operation since 1987, is Washington's oldest and largest share farm. The Farm is owned and operated by Claire Thomas and all produce is grown in accordance with Washington State organic production law. (Root Connection, 2001: www.rootconnection.com)

In the fall of 1998, a group of Root Connection Farm members formed FARM LLC (described above), a for-profit corporation dedicated to preserving farmland and supporting farmers. FARM LLC purchased the land the Root Connection sits on in March 1999 to prevent its being sold to developers and then sold the development rights on the land to King County. The Root Connection now leases the land from FARM LLC on a long-term lease. (Root Connection, 2001: www.rootconnection.com)

HOW IT WORKS

A member buys a share for the growing season. Then, each week from June through October, members pick up their produce at the farm (located between Woodinville and Redmond) or at one of the farm's drop-off sites in Lynnwood or Seattle. Besides fresh, organic vegetables, farm members can pick their own flowers and herbs and explore the farm. Costs for the growing season are $625 for a full share (feeds 4-8 people) and $400 for a half share (feeds 1-4 people). (Root Connection, 2001: www.rootconnection.com)

RESULTS

The Root Connection Farm started in 1987 with 20 member families sharing produce from ½ acre of farmland. Last year, planting intensively on five acres of raised beds, the farm produced more than 125,000 pounds of organic vegetables for 400 member families. (Root Connection, 2001: www.rootconnection.com)

GreenMan Farm, Washington

FEATURED STRATEGY: **Community Supported Agriculture (CSA)**

BACKGROUND

GreenMan Farm, a Community Supported Agriculture (CSA) farm on Vashon Island, was started in 1998 by Martin Nyberg and Jasper Koster-Nyberg. GreenMan Farm is a good example of how even a small amount of rural residential land can be returned to agricultural use and help restore the relationship between people and the source of their food. Jasper farms full time while Martin still works part-time for a Seattle software company, but their vision is to transition to full-time farming. They bought a two-acre plot of rural residential land and they are in the process of proving that they are using the land for agriculture in order to receive agricultural use taxation by the state. GreenMan Farm is not only organic, but biodynamic. Biodynamic growers go beyond other organic gardeners in seeing their stewardship of the land as part of a philosophical or spiritual expression. (GreenMan Farm, 2001: www.greenmanfarm.com) (Nyberg, 2001)

HOW IT WORKS

GreenMan Farm's growing season runs from late spring through mid-fall. Each week during the season, subscribers come to the farm to pick up a grocery bag of freshly picked produce, free range eggs, and flower bouquets. Last season the farm produced nearly thirty different vegetable varieties. Occasionally, the share includes bonus items such as pickles jams and preserves. In order to provide a wide variety of seasonal vegetables and herbs, crops are planted in succession and provide a weekly supply of mixed vegetables. As crops rotate throughout the season, weekly shares vary by size and types of produce, reflecting local growing seasons and conditions. (GreenMan Farm, 2001: www.greenmanfarm.com)

Figure 20: typical share in July 1999

A weekly share provides enough produce for 2-4 people. The subscription price for a season is $500 with discounts for full payment in advance. Subscribers are also invited to participate in work-days, potlucks, farm tours, and seasonal celebrations on the farm. (GreenMan Farm, 2001: www.greenmanfarm.com)

RESULTS
GreenMan Farm began two years ago with a handful of Vashon Island subscriber families and last year had 28 families. Last year they farmed one of their two acres. This year they hope to continue their growth and put more of their land into cultivation. (Nyberg, 2001)

Shelburne Farms, Vermont
FEATURED STRATEGIES: **Grass-based dairy** and **certified forestry** and related education programs

BACKGROUND
In 1886, Dr. William Seward and Lila Vanderbilt Webb began acquiring farmland on the shores of Lake Champlain to create a model agricultural estate. They were assisted in the effort by two of the most prominent planners in the country—architect Robert H. Robertson and landscape architect Frederick Law Olmsted, Sr. Olmsted's vision guided the layout of farm, field and forest; Robertson designed the buildings. By 1902, Shelburne Farms encompassed a 3,800-acre farm dedicated to demonstrating innovative agricultural and land use practices. (Shelburne Farms, 2001: www.shelburnefarms.org)

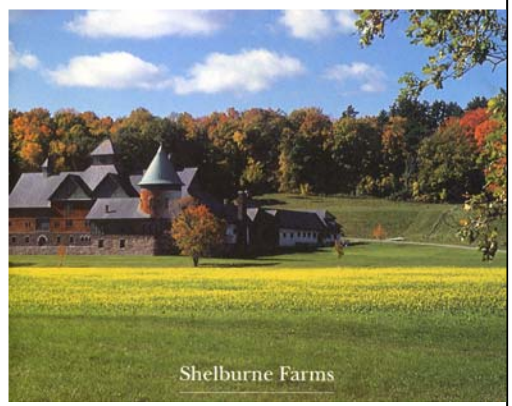

Figure 21: Shelburne Farms

After a brief heyday at the turn of the century and a long decline until 1972, family descendants incorporated Shelburne Farms as a nonprofit organization dedicated to conservation education. Shelburne Farms is now a 1,400 acre working farm, national historic site and educational organization. Shelburne Farms's mission has become: to cultivate a conservation ethic in students, educators and the general public by teaching and demonstrating the stewardship of natural and agricultural resources. Much of the land that demonstrates stewardship is permanently protected with conservation easements and deteriorating buildings are being preserved and rehabilitated to new uses. Through it all, the property has remained a continuous working farm. (Shelburne Farms, 2001: www.shelburnefarms.org)

HOW IT WORKS
The dairy at Shelburne Farms maintains the working landscape, provides the real-life story for teaching about sustainable agriculture and the value of agricultural resources, and is the basis for the cheesemaking operation. It provides a high quality, value-added food using low-input agricultural methods. Shelburne Farms operates a grass-based dairy, relying heavily on pastures to support their herd of 200 Brown Swiss Cows. Cows graze small sections of pasture for 12 to 24 hours and then are "rotated" to a new section. The grazed area is given time to regrow before it is used again, keeping the pastures healthy. This grass-based method of dairying is friendlier to the environment because it eliminates the use of crop-based herbicides and pesticides; uses less machinery and fuel to plant, maintain, harvest, and transport grain; uses manure as a natural fertilizer on the pastures; and controls water pollution by maintaining thick pasture growth. Shelburne Farms has about 600 acres of productive cropland: 282 acres for rotational grazing, 236 acres for stored winter feed, and 86 acres leased to a neighboring farmer who grows organic grain crops. (Shelburne Farms, 2001: www.shelburnefarms.org)

Shelburne Farms manages about 400 acres of woodlands, ranging from stands of northern hardwood to softwood plantations of pine and spruce. These living ecosystems provide heating fuel for farm buildings, lumber for wood products, habitat for wildlife, and an open-air classroom for teaching the lessons of ecology, "green forestry" and environmental stewardship.

Each year, ten to thirty acres are marked for cutting. The farm takes great care to minimize forest disturbance, maintain a healthy balance of both young and old trees, leave some areas untouched for wildlife refuges, ensure attractive forests for visitors, and maximize use of the logs for lumber, firewood and chips. The areas that are cut each year are not harvested again for twenty years.
In 1997, Shelburne Farms joined Vermont Family Forests, an association of more than 30 landowners whose mission is to cultivate local family forests for economic and social benefits while protecting their ecological integrity. As a member of this group, Shelburne Farms received "Green Certification" in 1998 from SmartWood. An important timber customer is the Beeken/Parsons Wood Shop, an independent enterprise that resides in the Farm Barn. For the past several years they have focused on transforming low-grade lumber into beautiful furniture with "character-marks"— knots, bark or other defects that make many logs less valuable. This niche market gives Shelburne Farms and other woodland owners new flexibility in harvesting trees. (Shelburne Farms, 2001: www.shelburnefarms.org)

RESULTS
According to the 1999 Annual Report, the dairy operation produced about 100,000 pounds of cheese. The sale of the cheese and other value-added farm products and services provides about 75% of the operating budget for the farm and its education programs. Gifts and grants made up only 13% of the funding source. In the same year, the woodland management team harvested 33,000 board feet of timber from the property. Much of this was used for restoration work and new buildings on the farm. Most importantly, the Farms hosted nearly 250 non-profit organizations and schools in its conservation education programs. (Shelburne Farms, 2001: www.shelburnefarms.org)

Tillamook County Creamery Association, Oregon
FEATURED STRATEGY: **Marketing cooperative** producing value-added products

BACKGROUND
In 1909 the farmers of ten operating cheese factories in Tillamook County formed the Tillamook County Creamery Association (TCCA) to control cheese quality. By 1968 all of the cheese factories in Tillamook County consolidated and the cheesemaking became centralized at the present day site, which was built in 1949. 1n 1979 a visitor's center was built to provide viewing areas, educational slide shows and displays, and a museum. Since then, the center has been expanded to accommodate the nearly one million visitors that visit TCCA each year. (Tillamook County Cheese Association, 2001: www.tillamookcheese.com)

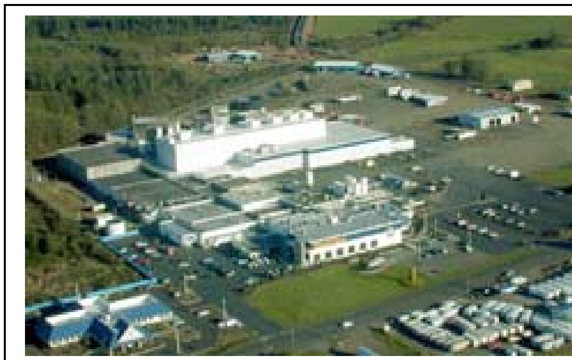
Figure 22: Tillamook headquarters

HOW IT WORKS
Today, TCCA is a cooperative owned and operated by over 150 dairy families with average herds of 135 cows, nearly all of whom live in Tillamook County. As a cooperative, the farmers set the policies and direction of Tillamook Cheese and share the profits of the organization which now represents nearly one-third of all milk produced in Oregon. The dairy farmers of TCCA maximize the value of their labor by collectively producing and marketing value-added products--cheddar and other cheeses, butter, milk, ice cream and yogurt. (Tillamook County Cheese Association, 2001: www.tillamookcheese.com)

RESULTS
Tillamook produces over 65 million pounds of cheese and over 18 million pounds of other products each year and now employs over 350 people in addition to the 150 dairy farms it supports. (Tillamook County Cheese Association, 2001: www.tillamookcheese.com)

Tree Shepherd Woods, Olympia, WA
FEATURED STRATEGY: **Ecoforestry and education programs and certification** through the SmartWood Program

BACKGROUND
The Tree Shepherd Woods property is a unique certified forest in that the owner's forestland management objective has been the operation of an ecoforestry demonstration project. Harvest volumes, costs, and income are carefully recorded as well as ecological changes in the landscape. People interested in learning about ecoforestry are invited to participate in seminars and tours on the property. (Smartwood Program, 2000: 2)

According to one owner, Jean Shaffer, "Ecoforestry means choosing and taking trees and plants out of a forest according to the forest's active adaptation to present conditions of soil, water and climate, coupled with ancient first peoples' stewardship. Observing the forest manage itself, implementing that management and showing it to those who come to find out, is an ecostery. Ecostery is the ecological version of a monastery, a place where knowledge is accumulated, preserved through using it, and shared." (Shaffer, 1997: www.olywa.net/speech/october97/shaffer.html)

The Tree Shepherd Woods property is located in Thurston County, Washington, near the city of Olympia. The property of 20 acres has a forested area of 9 acres. The composition of the remaining acres is a mosaic of groups of trees with dense brush between. The forest is the north half of the property. Douglas fir is the predominate tree species with western red cedar, red alder, western hemlock, madrona, dogwood, big leaf maple and willow included. Understory species include Oregon grape, evergreen and red huckleberry, yerba buena, sword fern rose, blackberry, ocean spray, hazelnut and salal. Slopes are slight to moderate, 15% to 35%. There is one small drainage in the middle of the property that has a spring which flows into a pond. The property was clearcut in the 1930s and in the 1970s was selectively harvested. In 1986 two acres were clearcut. (Smartwood Program, 2000: 3)

The objective of the owners in November 1995 was to scientifically set up, run, and reap the revenues of an ecoforestry demonstration test of harvested forest materials while maintaining the natural health and structure of forest ecosystems. Her intentions also included adaptive management through the vehicle of data from professionally installed monitoring plots. The operation is certified by the SmartWood Program of the Rainforest Alliance. To earn SmartWood certification, a forest management operation must undergo an on-site field assessment and annual audits of the activities, progress toward certification conditions, and compliance with SmartWood standards. Areas investigated include forest and watershed management, silviculture, ecological productivity, wildlife habitat, roads and trails, yarding, stream protection, restoration, community and economic stewardship, and tracking of products through the chain-of-custody. (Smartwood Program, 2000: 2)

HOW IT WORKS
During the first harvest, in 1995, logging was done using a winch mounted on a skid. The logging was extremely low impact. Ground disturbance was nearly non-existent and residual tree damage was rare. Only the suppressed and malformed (except where they provided nesting habitat) trees were harvested. A couple of poorly formed trees were girdled to create snags. Species diversity was lacking at the time of the original evaluation of the property. Structural diversity was also poor. Allowing succession to continue, by leaving

trees that are growing well and taking out the ones that have fallen behind, has increased diversity. (Smartwood Program, 2000: 8)

The property produces Douglas Fir log and lumber. All products from the harvest are processed by the landowner or by local processors. The owner acts as the timber operator and product manufacturer. Jean Shaffer has built a micro-mill to saw the small logs harvested from the forest. Her partner, Jerel, who is a part-owner of the land, falls, winches and transports the trees. The owners work with the miller to determine a fair market trade in wood for milling services. The drying of the wood is done on the land. Most of the milled lumber is kept by the owners to do fine woodworking value-added projects. The other milled lumber is sold with the proceeds supporting the efforts of the Jean's organization promoting ecoforestry, the Forestland Management Committee. (Smartwood Program, 2000: 4)

Purple Haze Lavender, Sequim, WA
FEATURED STRATEGY: Ag-tourism

BACKGROUND

Purple Haze Lavender is a 7.5 acre certified organic lavender farm in the Dungeness Valley of Washington's Olympic Peninsula. They have a flair for the promotion of their farm, sustainable agriculture, and the unique character of their region. Purple Haze Lavender Farm has incorporated the beauty and design of its lavender fields into a landscape of gardens, orchards, ponds, wetlands and buildings. The formality of the lavender farm is framed by a valley of open space and vistas of the Olympic Mountains. (Purple Haze Lavender, 2001: www.purplehazelavender.com)

Figure 23: Purple Haze Lavender

The success of Purple Haze as a business is deeply rooted in a commitment to preserving the agricultural heritage of the Dungeness Valley. According to Mike and Jadyne Reichner, the owners of Purple Haze, "We believe our farm should celebrate all that the acreage can provide: a sustainable perennial crop, lavender flowers and oils for developing natural products for the body and mind, an agricultural tourist destination, a sight for learning and celebration, and a connection to the world via the internet that allows us to gain and share information on the agriculture of this herb." (Purple Haze Lavender, 2001: www.purplehazelavender.com)

HOW IT WORKS

Purple Haze has carefully considered accommodating visitors to the farm. They have facilities and events that cater to the agricultural tourist. They offer u-pick bouquets, farm tours, and lavender-related gifts and value-added products such as skin care products, aromatherapy, and perfumes. They help organize with the Sequim Lavender Growers Association an annual Lavender Festival every summer that draws over 20,000 people in two days. They also offer summer classes at the farm where people can learn different ways to use lavender in cooking, crafts, and skin care treatments. The farm has an informative and stylish website offering all their value-added lavender products, directions to visit the farm, and information about the Lavender Festival. (Purple Haze Lavender, 2001: www.purplehazelavender.com)

RESULTS

Business is booming at Purple Haze. Mike and Jadyne have steadily grown their small business into a successful sustainable farm with over 15,000 plants on 7.5 acres and hundreds of different value-added products. Numerous visitors to the website and the farm have become lifelong customers. (Purple Haze Lavender, 2001: www.purplehazelavender.com)

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