

Acknowledgements

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Section 1: Plan Summary

In January 2006, funded by the Highlands Community Initiative (a program of The Trustees of Reservations), the Town of Worthington contracted with the Conway School of Landscape Design (CSLD) to help update its Open Space and Recreation Plan (OSRP). In collaboration with the Town's Open Space and Recreation Committee and interested citizens, a team of three CSLD graduate students made an assessment of the open space and natural and recreational resources in the town and developed a five-year action plan to accommodate the future open space needs of the community. As an update to the previous OSRP, completed in 1987, this report is part of a coordinated effort to guide continued, thoughtful development while protecting natural, cultural and recreational resources.

Worthington is identified as a town of scenic significance in the *Massachusetts Landscape Inventory, A Survey of the Commonwealth's Scenic Areas* (MassDEM 1982), because of its distinct landscape features and unique environments. Worthington is characterized by gently rolling hills, a smooth plateau in its center, with more pronounced relief occurring along the Middle Branch of the Westfield River which runs north-south along the western edge of the town. Wards Stream meanders over gentler lands in the upper-central section of town and flows down the eastern side where it is associated with large tracts of wetlands. Worthington is completely within the watershed of the Westfield River, the first river to be designated a National Wild and Scenic River in Massachusetts. Land adjacent to these streams is an important natural riparian corridor, providing habitat for many state-protected rare species.

The town prides itself in having clean drinking water in its wells, springs, and rivers and puts the quality of its water at the top of the list of resources worth protecting. Other community concerns include protection of riparian corridors, working forests and farmlands, historic resources, scenic views, and wildlife habitat; affordable housing is also an issue. Worthington is fortunate to have a significant portion of its land, 25 percent or 5,241 acres, protected in perpetuity from future development. However, a number of private, public, and non-profit lands of natural significance or recreational interest to the town are not protected and are susceptible to development. Increasingly, farmland is being sold and divided into parcels as small as two acres for single-family homes, fragmenting forests and interrupting once open vistas.

Dramatic forested slopes distinguish the Worthington landscape from most of the rest of the Commonwealth to the east. Occasional farm

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fields open up distant views of forested hilltops in the surrounding towns of the Highlands Region. Historic sites and buildings are concentrated in three of the five villages within town boundaries: Worthington Center, Worthington Corners, and South Worthington. Old mills and building sites, cemeteries, stone walls, and historic houses pepper the landscape with reminders of the long history of settlement on the land.

Worthington has continued its tradition of working forests and farmlands which has helped sustain the rural character of the town. However, many residents no longer work the land but commute to work in nearby towns. Furthermore, given today's economic climate, forestry and agriculture are becoming less profitable. Forests and fields throughout the town are likely places for continued residential growth. Worthington's population, if it continues its current growth rate, will increase by 50 percent in the next forty years. Present zoning regulations may not serve Worthington's long-term goals. In developing a growth management strategy that works for the town, Worthington must explore new options for planning its land use.

An open space and recreation plan allows the citizens of Worthington to see their town's future in the context of its past. It describes how the quality of life has been, and can continue to be, dependent on the natural character of the town. Specific areas of interest have been included, such as environmental problems, the importance of open space to the community, and the importance of recreational opportunities to the citizens of Worthington. An inventory of soils, geology, water resources, fisheries, wildlife, forests, land ownership, and scenic and unique resources follows. These inventories and assessments depend greatly on information provided by Geographic Information Systems maps.

The plan then attempts to project the future needs of Worthington from an open space perspective. Recommendations include such items as protecting core habitat and natural communities; adopting zoning regulations and bylaws that address sustainable development and protect the rural character of the town; creating both passive and active recreational opportunities for community members of all ages; taking measures to protect working farms and forests; and providing opportunities to educate the citizens regarding land stewardship and other important environmental issues.

By defining needs and setting goals, it should be possible for future development and growth of Worthington to continue in a manner that will best serve its residents.

Section 2: Introduction

2A. Statement of Purpose

Worthington is visibly changing. Current population growth and development in and around Worthington has been creating some apprehension among residents because they value the natural beauty, biological diversity, and excellent water quality in the town and recognize that they may lose these in the near future. Regional population has increased by 72% on average since 1970, with Peru, just to the west, having increased by 221%. Concern about new growth and development in town as a result of this rise in population is the major impetus for developing this Open Space and Recreation Plan.

Loss of formerly active agricultural land has been occurring for over one hundred years. This has caused the loss of lovely scenic views. Current zoning laws not only allow but encourage wide-spread development while landform directs development onto the limited rich, agricultural land in the town. These remaining agricultural areas contribute directly to both the rural atmosphere and to beautiful vistas which residents and visitors enjoy and greatly value.

The town developed an Open Space and Recreation Plan in 1987. During the past several years there have been changes made to the Worthington by-laws which serve to provide some protection to natural and historic resources: Flood Plain Zoning and Westfield River Protection Zoning (replaced 17 June 1989), Water Supply Protection District (added 22 May 1990), Wireless Communications Structures and Facilities (added 25 October 1997, replaced 14 August 2001), and Site Plan Review (added 18 October 2005).

This Open Space and Recreation Plan attempts to assimilate all of this information and project the future needs of Worthington in order to establish both short- and long-term goals for planning Worthington's future from the standpoint of open space and recreation.

2B. Planning Process and Public Participation

The Open Space and Recreation Plan completed in 1987 was a response to discussions among the planning board, Selectmen and other town boards regarding residents' concerns about the substantial growth occurring within the town. A survey was conducted which showed that the residents and property owners wanted to preserve the character of the town as a rural, agricultural community, and preserve and protect water resources and quality (Worthington Open Space Committee 1987, pgs 6-7).

In April 2000, the town of Worthington conducted another survey of its citizens and held two public meetings to gauge opinion regarding issues concerning the future of Worthington. The return rate was nearly 45%, almost double the typical return rate of similar surveys done in other communities in the Pioneer Valley. The information gathered was analyzed and documented in a report called *Worthington 20/20 Project Report, June 2000* (Worthington 20/20 Steering Committee 2000). Using the information gathered for the Worthington 20/20 report as a base, the Worthington Community Development Plan was completed in December 2004 by the Pioneer Valley Planning Commission.

Worthington's Open Space and Recreation Committee met many times throughout the process of producing this Open Space and Recreation Plan. In January 2006, the committee contracted with the Conway School of Landscape Design (CSLD) to produce a draft of sections one through nine including the associated maps. Three graduate students from the school, John Bisbing, Janna Thompson and Ian Warner, contributed services from January 2006 through late March. The CSLD team met with the committee four times and communicated regularly by telephone and e-mail. Two members of the town Recreation Committee attended the fourth of these meetings to share information and ideas. There were two public meetings to which townspeople were invited. Twenty-eight people attended the first meeting on January 28, 2006, and sixteen people attended the second meeting on March 8, 2006. The team from CSLD gathered information at the first meeting and at the second presented information from their research and gathered input from community members in attendance. A final draft of the plan was sent to the state in August 2006, and approved November 30 2006.

The Worthington Open Space and Recreation Committee members are Ben Brown, Scott Heyl, Sara Jonsberg, Pat Kennedy, Annie Lagoy, Ed Lewis, Bob Randall and Walter Wright. Another significant contributor was planning board member Jane Christiansen.

Section 3: Community Setting

3A. Regional Context

Summary **Worthington is situated between the Berkshire hills and the Connecticut River in western Massachusetts. This rural, Hampshire County Hilltown is in the northern part of the Highlands Region and the northern edge of the Westfield River watershed. Approximately 30 percent of the land is owned and managed by the Commonwealth in one form or another. Most residents work and shop in nearby towns and cities.**

Worthington is nestled in the Highlands Region of western Massachusetts, a link in the Appalachian mountain chain that runs from Maine to Georgia. Thirty-eight rural towns occupy the Highlands' 1,100 square miles. The Highlands region covers nearly 14 percent of the Commonwealth's total landmass yet has less than 1 percent of its population (approximately 43,000 out of a total 6,349,100). A long history of land conservation has permanently protected more than 25 percent of the land in the region as open space. Colonial settlement patterns can be seen in the stone walls and meandering country roads that connect farms, forests, villages, and towns. The area includes some of the largest unbroken tracts of forestland in southern New England, which support the region's exceptional ecological diversity and wildlife habitat, and are of particular importance to larger animal and interior avian species. Several of the state's most pristine river systems nurture forests and farms.

In the past thirty years, the population in the Highland towns has increased by nearly 50 percent. As one of the thirty-eight towns located between the Connecticut and Housatonic River valleys in western Massachusetts, Worthington is part of the Highland Communities Initiative, a program of The Trustees of Reservations, a statewide conservation organization. It is clear that planning for Worthington's future should be considered in the context of the thirty-seven surrounding towns, as all share similarities of character, scenic beauty, and natural resources. Beyond these similarities, the health of Worthington's natural resources depends to a large extent on the health of the natural resources of the region.

Considered the heart of the Hilltowns, which is a cluster of sixteen towns within the Highlands Region, Worthington covers 33.5 square miles, or 21,440 acres, and is bordered to the north by Cummington, to the west by Peru and Middlefield, to the south by Chester and Huntington, and to the east by Chesterfield. Because of its location

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between some small metropolitan areas, such as Northampton, Amherst, Holyoke, Springfield, Easthampton, Westfield, and Pittsfield, Worthington's location is attractive to second-home buyers and middle-aged couples wanting to live in rural New England, yet still be close to larger towns.

This proximity to nearby cities and towns makes it an accessible place for commuters. According to the 2000 Census, the average commute time of a Worthington resident is 40.5 minutes. Aside from the Corners Grocery in Worthington Corners, residents shop in the surrounding communities. As neighboring hilltowns have already experienced, more affordable housing and the closeness to larger towns and cities puts Worthington at risk of heavier development in the near future.

Located on the Middle Branch of the Westfield River, Worthington is within the Westfield River Watershed. In 1993, forty-three miles of the East, Middle, and West Branches of the Westfield River were designated "wild and scenic" by the U.S. Department of the Interior because of their unspoiled and pristine nature. The river system drains about 528 square miles and includes 636 miles of rivers and streams and over 4550 acres of lakes and ponds. It drops 2,000 feet through the hilltowns (or Eastern Berkshires) before entering the Connecticut. Usually, the annual spring run-off in the system provides excellent white-water canoeing and months of trout fishing in the well-stocked waters. The watershed offers tremendous biodiversity and is home in total to about 85,000 people. Bronson Brook, Tuttle Brook, Fuller Brook, Wards Stream, Jackson Brook, Kinne Brook, Little River, Whitmarsh Brook, and Johnson Brook, all first or second order streams flowing through Worthington, empty into the Westfield River.

These streams were particularly important in the early history of Worthington as they provided water power for the numerous wood product mills and distilleries that were the basis of the town's early-nineteenth-century prosperity. Today, the local economy consists mainly of several home-based businesses and a small general store. The Hilltown Community Health Center, with its central office in Worthington and satellite facility in Huntington, is the largest employer in town, with a total of eighty-eight employees, of whom seventeen actually live in Worthington (Sara Jonsberg, Open Space and Recreation Committee member).

The Westfield River in Worthington and Middlefield has the highest water quality classification (Class A) in Massachusetts. The Pioneer Valley Planning Commission (PVPC), in collaboration with the Westfield River Wild and Scenic Advisory Committee and affected

towns, is working to protect the Westfield River by creating a Westfield River Watershed watershed action plan and drafting an updated watershed protection bylaw for Worthington and other towns in the watershed.

Worthington's location assures that there will be continuing development pressure, as nearby small metropolitan areas expand. However, the open lands within Worthington have significance beyond town lines. There is considerable regional interest in the protection of surface water quality for the greater Westfield River watershed. In addition, the potential linking of trails and wildlife corridors and the preservation of productive agricultural lands will increase the value of these open space and recreational assets for the entire region. Worthington must work in close cooperation with its neighboring towns to ensure that land use, zoning, and conservation measures are complementary.

3B. History of the Community

Summary **Worthington's main villages were settled in 1768. The economy was mainly supported by agriculture and water-powered industries until the mid-1900s. Continued agricultural practices, a new awareness within the population, and a regenerated forest over some of the historic pastureland have sustained the rural character of Worthington.**

Early settlers were scattered throughout what is now the town and clustered around five nodes, now the villages of Worthington Center, Worthington Corners, South Worthington, West Worthington, and Ringville, where roads intersected. After the French and Indian War, John Worthington and several other residents in the area submitted a petition for incorporation to the Massachusetts Bay Province and it was granted in 1765. The names of several of these hardy and industrious eighteenth-century souls are preserved in road and location names.

By 1810, the population reached the number which has just recently been achieved again: just over 1,300 individuals. Roads running through the town, in particular the Boston-Albany Road that extended along what is now called Buffington Hill, brought traffic that took advantage of the several lodgings and taverns in town (see map: Historic Points of Interest). Early industries included a grist mill, dairy products facilities such as the Worthington Cheese Company, tanneries which relied on the extensive stands of hemlock within town borders, sawmills and other woodworking mills, and factories

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manufacturing such products as drum and banjo hoops, shovel handles, boxes, bedsteads and sleds, penholders and brush handles. There were also shops for making baskets of split ash, five blacksmith shops, and distilleries making hemlock, spruce, and linseed oils.

The business of agriculture was primary up to the middle of the twentieth century in the town's economic history. The leading articles of farm production for the year ending May 1, 1875, include milk, hay, butter, beef, potatoes, manure, maple sugar, firewood, pork, and apples. Tracts of land ranging from 40 to 430 acres were planted with fruit trees or sugar orchard, or set aside as grazing land. Nearly every farmer had 50 to 300 sheep. The most common breed was Merino, a breed known for its wool production. The woolen mills elsewhere in New England provided a lucrative market for their fleece (Worthington Historical Society). Much of these lands have now reverted back to forest, and contribute greatly to the general rural character of the town.

By the end of the American Civil War, the U.S. West opened to agriculture, and, as mechanization changed the way both farming and manufacturing were done, Worthington's population dropped dramatically. An ad appearing in 1910 offered "To parties looking for home sites – We have a number of building lots which will be given free to prospective builders. Lots range from the center of town to outskirts. For particulars, address Board of Trade, Worthington, Massachusetts" (Worthington Historical Society). Summer visitors continued to take advantage of the pleasant summer climate and comfortable amenities until the 1930s when the hotel burned down. It was during the 1930s that several landowners acquired very large tracts of land, notably the Albert family, who for many years raised potatoes. By 1945, Worthington's population hit a low of 363 residents.

The birthplace of Russell H. Conwell, lawyer, teacher, lecturer, journalist, and founder of Temple University in Philadelphia, for whom the town's elementary school is named, was marked with a boulder in 1930. A bronze plaque in front of the Congregational Church honors servicemen who served in World Wars I and II. A plaque on a boulder at the intersection of West Street and Sam Hill Road marks the site of the town's first meeting house, built in 1771. Worthington's pride in its history is further exemplified in other boulders and plaques throughout the community commemorating various events or people in its history.

Although the decline in industrialization forced certain mills to deteriorate, generations of residents have preserved and renovated

historic houses, buildings, and villages through the years, adding to Worthington's character. Generations of families are still residing in these villages and new families moving to Worthington have built houses on old family farms, occasionally building on forested lots. A small industrial infrastructure, the preservation of historic sites, and the continuation of agriculture as a way of life sustain the distinctive, rural character that citizens of Worthington shaped over time.

3C. Population Characteristics

Summary **Worthington's population is currently approximately 1,300, having more than doubled since 1960. The population is also aging, which will require the town to shift some of its resources from its younger population to an older one.**

According to the 2000 U.S. Census, Worthington is home to a total of 1,270 people, a population that has increased by over 100 percent since 1960. Of that total, 629 are males and 641 are females. The total represents about 38 people per square mile. The average Worthington resident is forty-two years old, Caucasian, married, a high school graduate plus some college, living in a one-unit detached house, with a median family income of \$53,047.

Census statistics show that there has been a 44 percent increase in population in the Highlands Region from 1970 to 2000 (from 30,337 to 43,751). Surrounding towns have experienced high growth rates as well; Peru to the west experienced a 221 percent increase (from 256 to 821), partially due to its proximity to Pittsfield. The populations of the region's most urbanized areas are declining or remaining relatively stable, while smaller, outlying communities, such as Worthington, are experiencing population increases and growth each decade. The Massachusetts Institute for Social and Economic Research projects that Worthington's population will be 1,593 by the year 2020, an increase of 25 percent from 2000 figures. As population increases, pressure to develop open space increases as well.

A high percentage of Worthington's residents are managers and professionals employed in education, health, and social services. Others work in construction, manufacturing, retail, arts and entertainment, and public administration. A small percentage of the population (2.9 percent) makes their living from agriculture, forestry, fishing and hunting, and mining. The variety of careers of Worthington's residents reflects the town's proximity to urban areas, where many residents work.

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According to the U.S. Census Bureau, the median age in Worthington has been rising over the last few decades with those people aged 35 to 54 constituting the largest age group. The U.S. Census for 1990 and 2000 show that the segment of people aged 45 to 64 grew from 18 percent to 31 percent of the population, while the 25 to 44 age group shrank from 37 percent to 27 percent of the population; other age groups were fairly consistent, but decreased somewhat. As table 3-1 shows, a different, more specific grouping of the 2000 population reveals that the three largest groups are of ages between 45 and 54 (20 percent), 35 and 44 (19 percent), and 10 to 19 (17 percent).

The *Worthington Community Development Plan* (Pioneer Valley Planning Commission, 2004) states that the total population of Worthington increased 10 percent from 1990 to 2000. However, the number of workers in the labor force grew by 50 percent during this same time. This is possibly due to an in-migration of residents in their later working years – ages 45 to 64. National, regional and local statistics demonstrate the population of Worthington is clearly aging. As retiring workers leave the labor force in the next 5 to 15 years, there will be increasing pressures to provide services to this population. This will undoubtedly have a significant impact on the financial resources available for services geared toward younger adults and children. However, this aging segment of the population will also require many products and services, which local businesses are able to deliver, providing an opportunity for job growth for those with the appropriate skills.

Section 3: Community Setting

Table 3-1: Age of Population Projections						
(Based on U.S. Census Bureau & MISER Population Projections, in PVPC, 2004, p. 62)						
Worthington	1990	2000	2005	2010	2000-2005	2000-2010
	Actual	Actual	Projection	Projection	% Change	% Change
Under 5	82	59	71	77	20.3%	30.5%
5 to 9	117	76	79	87	3.9%	14.5%
10 to 14	99	108	122	97	13.0%	(10.2%)
15 to 19	50	104	107	94	2.9%	(9.6%)
20 to 24	45	44	74	66	68.2%	50.0%
25 to 29	66	30	68	94	126.7%	213.3%
30 to 34	109	73	79	105	8.2%	43.8%
35 to 39	122	102	137	108	34.3%	5.9%
40 to 44	140	135	148	145	9.6%	7.4%
45 to 49	75	132	147	151	11.4%	14.4%
50 to 54	52	120	145	152	20.8%	26.7%
55 to 59	24	87	133	123	52.9%	41.4%
60 to 64	53	60	94	178	56.7%	196.7%
65 to 69	49	34	62	93	82.4%	173.5%
70 to 74	28	30	30	49	0.0%	63.3%
75 to 79	26	37	30	23	(18.9%)	(37.8%)
80 to 84	16	25	29	26	16.0%	4.0%
85 and over	3	14	11	15	(21.4%)	7.1%
Total	1,156	1,270	1,566	1,683	23.3%	32.5%
Available to participate in the labor force (15-64 year olds)	N/A	887	1,132	1,216	27.6%	37.1%
Likely to participate in the labor force (an estimate based on labor force participation rates in 2000)	N/A	667	779	837	16.8%	25.5%

Build-out Analysis

The purpose of a build-out analysis is to show a locality what land is available for development, how much development can occur and at what densities, and what consequences may result when complete build-out of available land occurs according to the zoning ordinance. A build-out analysis can reflect changes in the zoning ordinance to illustrate the effects of those changes on future resources. A build-out analysis can also help quantify the costs of growth.

Build-out analysis begins with an examination of available land in each zoning district. Worthington currently has only one zoning district: Residential/Agricultural (see map: Zoning). Permitted uses are defined as agricultural, one family dwellings, religious/educational/municipal or other uses (including businesses) under special permit (Town of Worthington). Minimum residential subdivision requirements are 400 feet of road frontage and two acres of land. The projections listed below only account for “as-of-right” development and do not include development by special or comprehensive permit that may increase the amount of development. These build-out projections were combined with 2000 Census and other data according to the town’s current zoning.

According to the Executive Office of Environmental Affairs (EOEA) build-out maps, the town has over 10,000 acres of developable land. If this land is developed, the town could experience a population increase demanding an additional 505,392 gallons of water per day. If Worthington reaches complete build-out under this scenario, the well field and springs may be able to support this demand; however, the water distribution system and treatment infrastructure would require significant upgrades (Pioneer Valley Planning Commission, 2004).

The Executive Office of Environmental Affairs build-out projection, done in conjunction with the Pioneer Valley Planning Commission, is designed to show how much development could occur under present zoning. The goal is to illustrate future development potential, not predict actual growth (see Tables 3-1 and 3-2) (Massachusetts Executive Office of Environment Affairs, 2004).

Table 3-1: Demographic Projections

	Population	Students	Households	Water Use (gallons/day)
1990	1,156	223	412	N/A
Current	1,270	234	582	44,022
Build-out	15,674	2,486	5,945	549,414

Table 3-2 Build-out Impacts	
Additional Residents	13,300
Additional Students (K-12)	2,252
Additional Residential Units	5,363
Additional Developable Land Area (sq. ft.)	627,425,172
Additional Developable Land Area (acres)	14,404
Additional Commercial/Industrial Buildable Floor Area (sq. ft.)	0
Additional Water Demand at Build-out (gallons/day)	505,392
Residential	505,392
Commercial and Industrial	0
Additional Solid Waste (tons/yr.)	6,823
Non-Recyclable	4,852
Recyclable	1,971
Additional Roadway at Build-out (miles)	244

It is apparent from this build-out analysis that the current zoning laws encourage the fragmentation of large parcels of land into many smaller parcels, a process which will eventually result in the loss of much of the remaining open space and places that residents hold in high regard. Also, current zoning encourages the expenditure of more public funds on the developing town (on the upkeep of new and existing roads, for example), and adds significant stress to natural resources, in particular to the water supply through potential contamination and sedimentation. Understanding the potential effects of growth and development makes it easier to avoid future problems and conserve precious resources.

Limiting development to areas of less sensitivity (away from sensitive wetlands, riparian areas, wildlife corridors, and specific historic and scenic areas) may help preserve Worthington’s rural heritage and help achieve a balance of nature, water resource protection, and land development.

3D. Growth and Development Patterns

Summary **Although the population of Worthington is small, residential growth outside the village centers is increasing, dispersing new development mostly onto existing open agricultural lands. As driving to work and to shop outside of town has become standard for most residents, these agricultural lands are becoming less used for agriculture and are likely places for residential growth.**

Patterns and Trends

Worthington's growth from an agricultural area to a manufacturing center stalled in the early 1800s, and the town remained rural. As recently as 1987, agricultural enterprises were the town's largest employer.

By 2006 Albert Farms, the potato farm that had been the town's major employer, had not operated for over 10 years, though some of its fields were cultivated by farmers who leased the property. In 2006, its mortgages were foreclosed and will be auctioned by the USDA in March 2007. Some of those 550 acres are restricted to agricultural use. In 2006, the town's largest employer is the Community Health Center.

According to the Center for Rural Massachusetts, Worthington, with its 38 residents per square mile, is considered one of the remaining rural communities left in the Commonwealth. Although Worthington has managed to maintain some agriculture, much of the farmland has reverted to forest, providing viable habitat for wildlife, but reducing the amount of open lands for crops and pastures.

Up till now, weather, soil conditions, lack of public water and sewer systems, lack of transportation, lack of jobs, and distance from services have slowed growth and kept the town much as it was 40 or 50 years ago. Because of its small population and remote location, it does not have an infrastructure for cell phones, cable TV or high speed internet service, a sewer system, or a water system that serves the entire town. It attracts people who enjoy its scenic qualities and recreational opportunities.

Although Worthington's population and density may seem small in comparison to towns and cities in the region, it is expected to grow considerably within the decade. Growth continues today as costs of homes in the Connecticut River Valley have escalated, causing prospective homeowners to seek affordable housing in hilltown communities like Worthington.

The growth of population in Worthington seems likely to continue. Some open land along Route 112, once used for agricultural purposes and more recently appreciated largely for its scenic qualities, has been divided into two-acre lots and currently holds single-family houses. If all pastureland were to be developed, views to the distant towns and hills from Worthington would be blocked by homes. With the current zoning bylaws in place, the agricultural fields and flatter forested areas are available for residential as well as agricultural use (see map: Zoning). Any proposed lot must be a minimum of two acres with a

four-hundred-foot minimum road frontage and may not contain more than one dwelling. The 2000 build-out data, based on these zoning by-laws, indicates that Worthington could see potentially ten times the number of residents and housing units.

Infrastructure

Water and Sewer

The Worthington Fire District is the town's public water supply system. Originally developed to protect residents from house fires, it now serves 168 homes and 50 hydrants in the town center at the junction of 112 and 143, and along Route 112. The system is estimated to be capable of serving 30 additional hookups. This system is a corporation owned by those it serves, not by the town.

Five businesses in town have wells that serve members of the public: Buffington Hill Partnership, Worthington Golf Club, Liston's Bar and Grill, Berkshire Park Camping, and the former Little River Café.

The majority of town residents rely on private wells and septic systems. There is no public sewer system. The need for a well and septic system, as well as a dwelling, on a building lot, limits density and development.

Transportation

The primary mode of transportation for Worthington residents is the car. There is no public transportation system serving the town. The nearest bus stop is twelve miles from the center of town, and the nearest long-distance bus station with frequent service is seventeen miles away in Northampton. Bradley Airport, near Hartford, Connecticut is forty-two miles away. The nearest shopping center is eighteen miles away.

The main roads leading in and out of town are Route 112, which runs north-south through town, and connecting Worthington to Westfield and Springfield to the south, and Route 143 which runs east-west through the northern part of town, and is the connection to Northampton and Amherst to the east and Pittsfield and Albany to the west (see map: Existing Infrastructure). Many town roads are not paved, and some are not plowed in winter.

In evaluating the existing transportation system, it is important to consider the impact of zoning regulations and future growth in employment, population and residential development. Like other hilltowns of Western Massachusetts, the remote location of Worthington and the size of its population and tax base have left the town without any public means of transportation both within Worthington, and to and from neighboring communities. At the same time, environmental concerns, and people without access to transportation such as people with low income, senior citizens, teenagers, and people with disabilities, make public transportation potentially desirable (PVPC, p.17).

In its development plan to the town, the Pioneer Valley Planning Commission recommended that Worthington participate in a feasibility study with other hilltowns to determine the potential of joining an established public transportation system such as the Pioneer Valley Transit Authority (PVTA). The town of Williamsburg is currently served by the PVTA, but Chesterfield and towns west are not (PVPC, p.73).

Long-Term Development Plans

The town's zoning bylaw was adopted in 1970. The town was zoned as a single rural-agricultural district, with business uses allowed by special permit, and a minimum lot size of 1 acre and 200 feet of frontage. In 1978, frontage was increased to 200 feet, and in 1980, to 400 feet. In the 1980s, study recommended the town be divided into several zoning districts, with the historic village centers as village zones, and farmland as agricultural zones. However, the town did not accept this proposal and has remained a single district to the present.

One subdivision was attempted in the late 1970s. Five houses were built, but the subdivision was not completed and the town eventually took over the roads. In 1987 the town adopted the subdivision control law. No subdivisions have been built under those regulations.

The village centers remain, with homes on lots that predate the current frontage requirement. New housing has fanned out from the center along road frontage.

A flood plain overlay district was added in 1982, a Westfield River Protection District in 1989, and a Water Supply Protection District in 1990.

Section 3: Community Setting

The Planning Board is currently updating the town's subdivision regulations, and has Smart Growth funding for a village center bylaw. A committee is working toward passage of the Community Preservation Act. The Westfield River Wild and Scenic Committee has Smart Growth funding to update watershed protection bylaws in some member towns including Worthington.

Section 4: Environmental Inventory and Analysis

4A. *Geology, Soils and Topography*

Summary **The geology, soils, and topography of Worthington have played a central role in how the town was settled and why it remains a rural community today. Mountains formed by folding, faulting, and uplifting millions of years ago were covered by glaciers that left the land covered with glacial till during their retreat. However, optimal soils for agriculture are limited in the highlands because of shallow depth to bedrock, exposed bedrock, and steep slopes. There is a moderate percentage of soil in the town that is considered prime agricultural land, which also may be the easiest to develop.**

Geology

The hills in Worthington today were created by two mountain-building events, the Taconic and Acadian, from 350 to 500 million years ago. These events caused folding, faulting, and uplifting of mostly schist, gneiss, and quartzite. The mountains produced by these events weathered and eroded over the next few million years into low undulating hills.

There are three major bedrock regions in the town. Substrates west of West Hill are characterized by carbonaceous quartz-rich schist, amphibolites, and gneiss. The bedrock east of West Hill is of carbonaceous schist and micaceous quartzite. A small portion of town, west of Tuttle Brook, has bedrock formation of quartz and mica-rich schist and gneiss (Pioneer Valley Planning Commission, 2004). These three bedrock types and subsequent glacial deposits are the foundation for the soils present in Worthington.

Soils

The soils in Worthington are composed of the glacial tills typical of Hampshire County and create good agricultural soils when located on fairly level terrain. They compare favorably with other rich, agricultural soils of the eastern United States. The cobbles and large outcrops in most of the town, however, limit agricultural and residential development, making these areas good candidates for open space. Where boulders and rocks have been removed on the plateau areas in the middle of town, the soils generally provide sufficient

drainage, root penetration, and moisture-holding qualities needed for agricultural production. Where the land hasn't been cleared, the combination of the limiting soils and the humid climate make for prime forest habitat. (see map: Prime Agricultural Soils)

The town has a small percentage (almost 10 percent) of prime agricultural soils (as identified by the Natural Resources Conservation Service; see the Prime Agricultural Soils map). These soils are concentrated along the main roads and plateau areas of town. Prime agricultural soils found in Worthington include Marlow loam, 3 to 8 percent slopes; Peru loam, 0 to 8 percent; and Ashfield fine sandy loam, 3 to 8 percent (U.S. Department of Agriculture, 1995). If these areas are currently being farmed, the cleared fields may be very attractive to homebuilders due to the ease of development and the proximity to roads.

While optimal soils for agriculture are limited in the highlands, in its plateau area Worthington has some of the most productive agricultural soils in the Western Massachusetts highlands. They are dominated by five types: 1) the Lyman-Tunbridge-Peru soils, which are stony, loamy and shallow and are most suitable for woodlands, particularly for sugar maple production; 2) the Peru-Marlow soils, which are deep, loamy and moderately permeable, and are good sites for agriculture, buildings and sugar maple production; 3) the Westminster-Millsite soils, which are shallow, excessively drained, and steep, are most suited for woodlands, but moderately suited for sugar maple production; 4) the Ashfield-Shelburne association, which are moderately well drained, extremely stony upland soils, are most suited for woodlands, including sugar maple production; and 5) the Montauk-Paxton-Scituate association, which are extremely stony, very deep, well-drained soils on uplands, most suited for woodlands (U.S. Department of Agriculture 1995).

Surveys have indicated that most of Worthington is subject to severe limitations to septic tank development due to wet soils, slow percolation rates, or steep slopes. There is visible evidence of this limitation throughout town where developers and landowners have constructed mounds to accommodate the installation of septic system absorption fields in compliance with the Commonwealth's sanitary code. (see map: Soil Limitations for Development)

Topography

As one of the hilltowns within the western Massachusetts Highlands Region, Worthington is situated in a region of mountain ranges and

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valleys. Much of the town consists of wooded hills, while the plateau in the center of town (approximately 1,500 feet [450 meters] above sea level) is characterized by broad cultivated fields bordered by stone walls and hedgerows. A major portion of the town's area is composed of wooded hills while some of the plateau in the center of town is covered with broad cultivated fields bordered with stone walls and hedgerows. There are magnificent views to be enjoyed from many parts of Worthington. Parts of five states may be seen from its highest points.

Bashan Hill rises 2,033 feet (620 meters) in the northwest corner. A mile to the southeast of Bashan is Knowles Hill, which rises to approximately 2,011 feet (610 meters). The lowest points in town, along Bronson Brook and the middle branch of the Westfield River, average around 1,000 feet (305 meters) above sea level.

The geological features were created over a long period of time and the resulting soils, hills, and valleys are what have made Worthington what it is. The steep hillsides and valleys with fertile, level fields in between create an ideal location for a small, rural community. One of the purposes of this Open Space and Recreation Plan is to determine the steps needed to help Worthington retain the scenic appeal that these features have helped create.

4B. Landscape Character

Summary **Forests cover almost 84 percent of the land in Worthington, providing habitat for diverse flora and fauna, helping maintain high water quality, and providing a significant recreational resource. The town's landscape is diverse, with steep slopes and deep stream valleys bordering a plateau area in the mid-section of town. Townspeople identify with the rural character of these open fields and thick forests.**

Worthington's landscape is diverse and consistent with the Highlands Region of Western Massachusetts. The high points, the ridge lines, the swampland and the agricultural fields all comprise Worthington's rural character (see map: Landscape Character).

Much of the town identifies with this rural character and the views that the open fields and the thick forests of the town provide. Agriculture was once the town's largest employer and an important contributor to the local economy. Over 8 percent of the total land area (1,716 acres) in Worthington is currently pasture land or cropland.

Worthington Open Space and Recreation Plan – 2006

Along with the agricultural land, Worthington gets much of its rural character from its large tracts of intact forests. Approximately 84 percent (17,200 acres) of Worthington is forested (PVPC 2004, p. 34). These forests provide integral habitat for large mammals as well as interior avian species. The forests within Worthington are part of the larger tracts of the forests within the Highlands region and are key to maintaining the health of the Westfield River watershed and the water supply and quality within Worthington itself. These forests, dominated by the northern hardwoods hemlock variety, are suited for the production of timber and also are well suited for the production of maple sugar. Corbett Road Audubon Sanctuary, Fox Den Wildlife Management Area, Glen Cove Wildlife Sanctuary, Hiram H. Fox State Wildlife Area, Peru State Reservation, and Worthington State Forest are some of the major forested areas within Worthington. Other significant areas are privately owned or are unnamed.

It is hard to travel anywhere in Worthington without crossing a river or stream. These waters are fundamental to supporting wildlife habitat, maintaining the high water quality in the town, and providing recreational resources. The portion of the Middle Branch of the Westfield River from Sam Hill south to Middlefield and Chester provide outstanding canoeing and kayaking, especially during the spring high water period. Worthington also has great fishing in the Westfield River and in the many other streams in town. The Massachusetts Division of Fisheries and Wildlife stocks the Middle Branch, Little River, Bronson Brook, and West Branch Brook each spring (PVPC 2004, p. 31).

Lacking a single defined town center, Worthington has five separate village centers: Worthington Corners, Worthington Center, Ringville, South Worthington, and West Worthington. The main two villages are Worthington Corners, which has the post office and the general store, and Worthington Center, which has the town hall and the elementary school. Several historical sites are located in town. These include several cemeteries, old homes, and a church.

Early Georgian Colonial Home on Old North Road
Greek Revival Home on Buffington Hill Road
The Buffington House
Jonathan Woodbridge House
Woodbridge House
Rice House
Conwell Academy Building
Georgian Colonial on Clark Road
Early Colonial home on West Street

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Gothic Revival home on Radiker Road/Route 112
Worthington Town Hall
Worthington Inn
R.H.Conwell Birthplace
South Worthington Church
Almon Johnson Cemetery
Benjamin Cemetery
Brewster Cemetery
Center Cemetery
Cold Street Cemetery
Converse Cemetery
Leonard Cemetery
North Cemetery
Ringville Cemetery
Sam Hill Cemetery

4C: Water Resources

Summary **Worthington plays an important role within the Westfield River Watershed. Its position in the headwaters of the watershed means that its water quality has a direct and distinct impact upon the health and quality of the entire watershed. Healthy wetlands, lakes, and streams support some of the most diverse habitats in the state.**

Although covering only 37 acres (0.2%) of the town’s landscape, surface waters provide valuable wildlife habitat and unique natural environments. These environments help to define Worthington’s rural character and also provide residents with exceptional recreational opportunities and clean drinking water. Residents are fortunate to have an abundant, clean public water supply and private, on-site groundwater wells. The current good quality of the Worthington’s water resources does not mean that it should be taken for granted. Steps need to be taken to ensure its continued health.

Watershed

Worthington is within the Westfield River Watershed. In 1993, forty-three miles of the East, Middle, and West Branches of the Westfield River were designated “wild and scenic” by the U.S. Department of the Interior because of their unspoiled and pristine nature. The river system drains about 528 square miles and includes 636 miles of rivers and streams and over 4550 acres of lakes and ponds. It drops 2,000

feet through the hilltowns (or Eastern Berkshires) before entering the Connecticut River. Bronson Brook, Tuttle Brook, Fuller Brook, Wards Stream, Jackson Brook, Kinne Brook, Little River, Whitemarsh Brook, and Johnson Brook, all first or second order streams flowing through Worthington, empty into the Westfield River.

The Westfield River in Worthington and Middlefield has the highest water quality classification (Class A) in Massachusetts. The Pioneer Valley Planning Commission (PVPC), in collaboration with the Westfield River Wild and Scenic Advisory Committee and affected towns, is working to protect the Westfield River by creating a Westfield River Watershed watershed action plan and drafting an updated watershed protection bylaw for Worthington and other towns in the watershed. A Stream Assessment of Bronson Brook was completed in 2005.

Lakes and Ponds

Worthington has many small, unnamed ponds located primarily on private property in wetland areas. Conwell Pond and Little Galilee Pond are the two primary ponds in town. These areas provide habitat for resident and migrating species.

Rivers and Streams

Worthington has approximately sixty-one miles of rivers and streams, eight miles of which are the nationally designated Wild and Scenic Middle Branch of the Westfield River. This Middle Branch flows from the Peru border along the Middlefield-Worthington town line and continues south into Chester (see map: Water Resources).

The Massachusetts Wetlands Protection Act (WPA) and Rivers Protection Act (RPA) limit development activity around these important ecological sites. The WPA has a 25-foot no-building buffer around designated wetland areas with an additional 100-foot buffer that requires an Order of Conditions for development projects. The RPA creates a 200-foot riverfront protection zone from the high water mark along rivers and streams. There is approximately 600 acres of land located in these protection zones to allow for flood mitigation, provide wildlife habitat, and protect water quality.

Worthington currently has a Westfield River Protection District that encompasses the entire Middle Branch of the Westfield River in Worthington and flood hazard areas designated Zones A, AI-30 on the

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Worthington Flood Insurance Rate Maps (FIRM). There are additional submittal standards for those wishing to build in the district and certain underlying uses are disallowed (PVPC 2004, p.22-23).

Wetlands

Worthington's wetlands include stream borders, swamps, wet meadows, and beaver ponds. Wetlands are important because they store water, provide habitat, and improve water quality by filtering toxins. These areas are home to frogs, fish, beaver, muskrats, great blue herons, waterfowl, bitterns, and several other species. Common wetland flora in Worthington include red maple, butternut, eastern cottonwood, water lily, arrowhead, cattail, sedges, and as many as twenty-five species of fern (PVPC 2004, p. 23).

Worthington has approximately 324 acres of wetlands, much of which are wooded. This number rises to 361 if open waters are included. The high water table throughout much of Worthington means that there are probably many wetland areas in Worthington not yet identified by MassGIS or the USGS. These areas require identification by a wetland scientist before they can fall under the protection of the Wetland Protection Act. Most of the wetlands in Worthington are located adjacent to the streams and ponds. The most extensive, Jackson Swamp, is along the eastern border with Chesterfield (PVPC 2004, p. 23).

The Massachusetts Wetlands Protection Act and the Rivers Protection Act includes wetland areas along streams called bordering vegetated wetlands (BVW). The local Conservation Commission reviews development plans within wetlands and the buffer zones. Wetlands outside of these zones, non-BVW, are not protected unless these are certified vernal pools. Worthington currently has no local wetlands bylaw to give these critical natural resources protection. Development in these regions is hard for practical reasons, but creation of bylaws protecting these wetlands would help to preserve these unique environments and protect water quality (PVPC 2004, p. 23).

100-Year Floodplain

The 100-year floodplain is an area with a 1% chance of flooding in a given year. It is a critical habitat for many plant and animal species and provides some of the most fertile soils in the region. These lands are mostly along the streams and rivers which include the surface water areas along the Middle Branch of the Westfield River, Wards

and Watts Streams, Jackson Brook and Jackson Swamp, Whitmarsh Brook, Bronson Brook, Stevens Brook, and the Little River.

Much of the 100-year floodplain is protected by the Wetland and River Protection Acts as it is open wetlands surrounded by forest cover, but a large section is located along Routes 112 and 143. The floodplain also has various disincentives for development within its bounds, e.g., expensive flood insurance, Worthington's Floodplain District bylaw, and State Building Codes. However, according to members of the Worthington OSRC, these do little to prevent development from taking place, only affecting what form it takes.

Outstanding Resource Waters

The entire watershed of the Middle Branch of the Westfield River within Worthington has been designated an area of Outstanding Resource Water by the State Department of Environmental Protection. This ORW is delineated because it is a source of public drinking water.

The National Park Service designated the Westfield River a Wild and Scenic river in 1993 with more miles added in 2004. There are eight miles, consisting of the portion of the Middle Branch that runs along the Worthington/Middlefield border to the boundary with Peru, in Worthington.

The Middle Branch is also classified "Class A" surface water by the Commonwealth. This designation recognizes this portion of the river for exceeding fishable and swimmable standards as well as being suitable for public drinking water supply (PVPC 2004, p.23).

Water-Based Recreational Opportunities

According to the Westfield River Greenway Plan (1993), the portion of the Middle Branch of the Westfield River starting west of Sam Hill and flowing into Middlefield and Chester is a significant whitewater run and is considered an outstanding canoe and kayak run with Class III difficulty. Class III is moderately difficult, requiring considerable skill for kayaking and excellent skill for canoeing. Negotiating this section of the river is best in the spring when the water levels are highest.

Worthington's cool, clean rivers and streams support a wide variety of fish species. The New England River Basin Commission rates the

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Westfield River as one of the best cold-water fisheries in Massachusetts (PVPC, p.31; see Section 4E below).

The town-owned Memorial Park contains ponds used in the winter for ice-skating and for fishing derbies in the spring. The privately owned Swim and Tennis Club, located on Route 112, contains an outdoor pool for use by members.

Public Access to Recreation

Access at town-owned recreation areas is available through parking lots. Few publicly owned lands in town allow river access. In the course of Vision 20/20 public meetings and the household survey, complaints about obstructed roads due to canoeists and anglers crossing private properties surfaced.

Water Supply

Water Quality Assessment

Eleven water sources, four spring-fed reservoirs and seven bedrock wells, supply the Worthington Fire District with its water. There are 168 connections supplying approximately 565 residents. This district is thought to be able to support thirty more residences (Source Water Protection Plan 2005, p.11). Residents are fortunate to have an abundant, clean public water supply and private, on-site groundwater wells (PVPC 2004, p. 22). Five sources of non-community non-transient water are also considered for interim wellhead protection. Worthington's town water supply is treated and is generally of excellent quality (PVPC 2004, p.24)

The Massachusetts DEP has not identified any water bodies in Worthington as having an impaired quality.

Existing Water Supply Protection Strategies

Worthington's four spring-fed reservoirs along Ridge Road have a Zone II area of protection surrounding them. This area is defined by the Massachusetts Drinking Water regulations 310 CMR 22.02 as the area of an aquifer that contributes water to the reservoir. The seven bedrock wells are protected by an Interim Wellhead Protection Area

(IWPA), an area that is assumed to supply water to a recharge area until a scientifically determined Zone II can be assigned.

The advanced delineation of a Zone II around the wells is significant because it more accurately maps the recharge areas for the wells. This area can be up to 1.5 miles beyond the half-mile zone an IWPA considers.

Potential Water Pollution Sources

Although Worthington's water quality is currently very good, there are potential sources of pollution, from groundwater contamination, on-site sewage systems, and road-salt contamination. These environmental challenges are discussed more fully in Section 4G.

4D. Vegetation

Summary **Most of Worthington is under forest cover, which helps protect water quality for the Westfield River Watershed, offers recreational opportunities for people, and provides habitat for animals. Generally, the forests in Worthington are of the northern hardwoods-hemlock variety. These forests, along with open croplands, help define Worthington's rural character.**

Forests

Forest cover dominates Worthington's landscape. These forests serve the important functions of mitigating stormwater runoff, providing habitat and cover for many animals, and providing recreational opportunities for people, including hunting and fishing. Forests occupy nearly 17,200 acres (approximately 84 percent) of the landscape in Worthington. Large uninterrupted forested areas include the Peru State Reservation, Worthington State Forest, Hiram H. Fox State Wildlife Area, portions of the Fox Den Wildlife Management Area, and other unnamed state wildlife management areas and private lands.

Worthington's forests are primarily northern hardwoods-hemlock, made up mostly of hemlock, beech, sugar maple, and yellow birch. Stands of white pines, red maple, and birch appear in abandoned agricultural lands and clearings. Herbaceous species in the forests include Canada mayflower, anemone, trillium, lady slipper, and wood

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aster. The high regional humidity combined with suitable soils make Worthington a major forest region. Approximately 2,046 acres of forested lands participate in the state's Chapter 61 forestry program. (see map: Natural Communities)

Forested areas covering 15,000 acres or more are important large mammal habitats and interior species habitats. These species include black bear, bobcat, mountain lion, pileated woodpecker, and barred owls. The Highlands region has some of the largest unfragmented forest areas left in Massachusetts. Worthington has a portion of a large forest core encompassing lands in neighboring Peru and Middlefield and extending into the southwest region of Worthington, through which the Middle Branch of the Westfield River flows. Conserving this area would help to ensure good water quality in the Middle Branch for years to come.

Farms

Worthington's agricultural areas cover 8 percent (1,716 acres) of the total land area. The high regional humidity, natural acidity, and low natural fertility make soils in Worthington ideal for potatoes, hay, and bush fruits (PVPC 2004, p.34).

Rare and Endangered Species

The conservation and protection of rare and endangered species is handled by the National Heritage and Endangered Species Program (NHESP) in the Commonwealth of Massachusetts. According to NHESP, three species of plants are endangered, threatened, or of special concern in Worthington.

Dwarf scouring rush *Equisetum scirpoides* – special concern

Slender cottongrass *Eriophorum gracile* – threatened

Hooded ladies' tresses *Spiranthes romanzoffiana* – endangered

Biodiversity – Priority Areas

Worthington has 334 acres of priority habitats for rare species with an additional 339 acres of estimated habitat areas. Priority habitats are areas of known state-protected rare plant and animal species occurrences and are regulated under the Massachusetts Endangered Species Act (MassGIS 2005). Estimated habitats are areas of wetland

that are estimated by NHESP to be habitat for rare wetland wildlife (MassGIS 2005). These areas are located in the Middle Branch of the Westfield River valley, east of the Radiker Road and Old Post Road intersection, and in an isolated location south of West Worthington (PVPC 2004, p.29).

BioMap Core Habitat and Supporting Natural Landscape

The NHESP developed the “BioMap” to identify the areas most in need of protection in order to protect the native biodiversity of the Commonwealth. BioMap focuses primarily on state-listed rare species and exemplary natural communities but also includes the full breadth of the State's biological diversity (NHESP). BioMap core habitats are areas with the highest priority for conservation and biodiversity conservation. They represent the sum total of viable rare plant habitat, viable rare animal habitat, and viable exemplary natural communities (NHESP). BioMap Supporting Natural Landscapes are the most intact lands adjacent to and near core habitat areas. These lands provide linkages between habitats, provide a buffer for core habitat, and may contain rare species not yet discovered.

Worthington has 737 acres of core habitat identified by the NHESP (PVPC 2004, p.29). The core habitat areas in Worthington are in the southwest corner of town in the valley of the Middle Branch of the Westfield River, south of West Worthington, along Worthington’s eastern border, and in the northeast corner of town. Worthington also has approximately 9,900 acres of Supporting Natural Landscapes (PVPC 2004, p.29).

The University of Massachusetts at Amherst has also just completed a study of the Priority Natural Communities in the Highland region. As a result of this study the Conservation Assessment and Prioritization System (CAPS) was developed (see map: Natural Communities). The study shows almost the entire area of the Middle Branch of the Westfield River valley to be a priority area for conservation regarding the natural communities and the biodiversity present there. The study also shows isolated areas in the eastern part of town and an isolated spot in the northern part of Worthington (CAPS, 2006).

Vernal Pools

Vernal pools, also known as ephemeral pools or temporary woodland ponds, usually dry up at some point during the year making them unable to sustain fish populations. Plant species possibly found in

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these vernal pool areas of Worthington are many species of ferns, mosses, horsetails, red maple, poplar, and butternut (see map: Natural Communities, see also Section 4E below).

Riparian Corridors

Riparian corridors provide important links between habitats, attract a wide range of species, and provide valuable vegetative buffers for associated waterways (see map: Riparian Corridors).

The Pioneer Valley Planning Commission says that there are 4,100 acres of riparian corridors in Worthington. These acres are within 100 meters of water sources (PVPC 2004, p.30). Plants within these riparian corridors include wetland species such as red maples, butternut, balsam poplar, black ash, eastern cottonwood, silver maple, arrowheads, and a variety of sedges, rushes, willow and alder.

Recreation Opportunities

The forests within Worthington provide a great opportunity to see and learn about the various vegetation communities within the town. Many of the town residents feel there are not enough developed and marked trails through these woodlands. More can be done to inform the community about the location of existing trails and the plant communities that they pass through.

4E. Fisheries and Wildlife

Summary **Worthington's varied forests, fields and water bodies provide a wide range of wildlife habitats. The region can support a diversity of species from small invertebrates to large mammalian predators. The diversity of Worthington's wildlife is in part due to the existence of large areas without major roads and development where animals and their habitats are relatively undisturbed. Though there is some protection of land that borders rivers and streams through the Massachusetts Wetlands Protection Act and the Rivers Protection Act and a few other federal and state regulations, Worthington currently has few by-laws that guarantee protection of most of the remaining critical natural resources within its boundaries.**

Fisheries

Some of the most important natural resources in Worthington are the aquatic habitats. The Westfield River Middle branch is a Class A coldwater stream (see sections 4C and 4F). Bronson Brook and many of the small inflows are among the best in the watershed for trout reproduction. They also have a high value as coldwater resources keeping waters further downstream at cooler, more healthy and natural temperatures. In many areas of the Northeast, small streams have been altered or the habitat degraded by development, water withdrawals, and impervious surfaces. These coldwater streams at the beginning of the river system are among the most important environments in Massachusetts and their protection should be of great importance to the community (Madden 2006).

The New England River Basin Commission rates the Westfield River as one of the best cold water fisheries in Massachusetts (PVPC, 2004). Worthington supports a wide variety of fish species including brook trout, brown trout, rainbow trout, blacknose dace, longnose dace, slimy sculpin, creek chub, lake chub, pumpkinseed, yellow perch, common shiner, Atlantic salmon, and white sucker. Atlantic salmon fry are stocked by the Fish and Wildlife Service in small streams in the spring. Currently, Bronson Brook, Trout Brook, Westfield River Middle Branch and the Little River are stocked with catchable-sized trout to supplement the existing fish populations and provide recreational fishing opportunities. Fishing is an accessible and family-friendly activity and consistent with the rural heritage of a town like Worthington (Madden 2006).

Forest Habitat

There are large contiguous tracts of forested lands and waterways that remain undeveloped and undisturbed. Throughout Worthington these areas support a great diversity of species from small invertebrates to large mammalian predators. These still-remaining undeveloped tracts not only provide adequate range for large species but also extensive corridors for migration (see maps: Regional Unique Environments and Unique Environments).

The predominant forest habitat is a hardwood-hemlock forest, much of which is approaching maturity since its last clearing. In well-drained areas the dominant trees are sugar maple, beech, and yellow birch with fewer numbers of white ash, black cherry, basswood, red maple and red oak. In less well-drained soils the trees include red maple,

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butternut, balsam fir, black ash, eastern cottonwood and silver maple. White pines are found in many clearings and abandoned fields.

Herbaceous plants in the forests are mostly spring blooming perennials and include Canada mayflower, anemone, bloodroot, trillium, violet, columbine, starflower, dog-toothed violet, lady slippers, jack-in-the-pulpit, wood asters and more. Up to twenty-five species of ferns, clubmosses, and horsetails can be found. Limestone pockets and ravines may contain unreported rare species. (Citizens may report sightings of rare species to the Massachusetts Fish and Wildlife Service's Natural Heritage Endangered Species Program so that the State can document their presence and protect the specific habitat.)

Riparian Corridors

Riparian corridors as defined by Mass GIS are 100-meter buffers of vegetated lands adjacent to water sources (see map: Riparian Corridors). The juncture of land and water attracts a range of species. These corridors serve to link habitats to each other for wildlife movement. The large acreage of unfragmented forest combined with miles of water resources provides approximately 4,100 acres of valuable riparian junctures in Worthington (PVPC 2004, p.30). Riparian plant communities also assist in keeping water resources clean.

Wetland Habitat

Wetlands are permanently or intermittently saturated areas, with shallow water or a high water table, or land-water margins that support an ecosystem of specific species of plants and animals that are adapted to wet conditions. They provide abundant food and cover for wildlife including bitterns, and other waterfowl, frogs, fish and more. Wetlands also filter toxins and store water (see Section 4C).

There are many wetlands and vernal pools throughout Worthington, though only a fraction of them have yet been certified by the Natural Heritage and Endangered Species Program (NHESP 2006). There are extensive wetland areas behind Tyler Farm on Old Post Road, along the Westfield River on Parish Road, at Jackson Swamp in South Worthington between Route 112 and Jackson Brook, and at Fuller Swamp in the southeast corner of town. There are also several active beaver ponds.

Vernal Pool Habitat

Vernal pools are temporary pools of water filled in the spring by rains, thawing snow, and ice which, after a short period of time (generally several weeks), dry out until the following spring. This keeps fish from establishing populations, making a safe environment for species dependent on vernal pools for all or part of their lifecycle. They support diverse communities of vertebrate and invertebrate species. Animals that require vernal pools for part of their life, usually breeding, are referred to as obligate vernal pool species.

Though common in upland forested areas, vernal pools can also appear in meadows, river floodplains, and other settings where a depression in the land will hold water for at least two months in the spring and early summer. The upland area surrounding a vernal pool is essential non-breeding habitat for amphibians that rely on vernal pools for reproduction.

Some vernal pools fall under the protection of the Wetlands Protection Act, but many pools remain unprotected because they are not certified by NHESP. Certifying vernal pools is under the charge of the NHESP. This process is started by local citizens who find vernal pools and document their location. Through aerial photographs, the NHESP has produced the Massachusetts Aerial Photo Survey of Potential Vernal Pools which helps to locate the likely spots for vernal pools. Currently, there are no certified vernal pools in Worthington, but there are 64 potential vernal pools.

Open Field Habitat

Many species require open fields rather than woodlands. If agricultural fields are lost, Worthington will likely also see a decrease of certain species such as swallows, northern flickers, and certain raptors which forage extensively in meadows. For some species, such as eastern meadowlarks, and bobolinks, management and mowing of open fields would need to be done appropriately to avoid interrupting nesting cycles.

Agricultural lands or open field habitat adjacent to wetlands provide yet another specific, unique habitat which is of critical importance for the survival of certain species such as the endangered American bittern.

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Transitional Areas

There are transitional areas such as abandoned fields and orchards at varying stages of growth with grasses and annuals, or shrubs, brambles, multiflora, blueberry, spirea, shadbush, and sumac and small tree areas with apples, birches, aspens, pines and mixed forest saplings. These types of landscapes provide a specific type of habitat that supports certain plant and animal species which depend on such environments such as the indigo bunting.

Biodiversity – Areas of Significance

Priority habitats are areas of known state-protected rare plant and animal species occurrences and are regulated under the Massachusetts Endangered Species Act (MassGIS 2005). BioMap core habitats are areas with the highest priority for conservation and biodiversity conservation. Worthington has approximately 700 acres of core habitat and 9,000 acres of supporting habitat (see Section 4D).

Rare, Threatened, and Endangered Species

The NHESP of the Massachusetts Fish and Wildlife Service is responsible for the conservation and protection of Massachusetts' native biodiversity. Primary responsibility of the NHESP is the regulatory protection of rare species and their habitats as codified under the Massachusetts Endangered Species Act (M.G.L. c.131A) and Wetlands Protection Act (M.G.L. c.131s.40) (Massachusetts Fish and Wildlife 2006; NHESP 2006).

Another major function of NHESP is to collect information on the abundance, distribution, and conservation needs of rare species and rare and uncommon natural communities. This information is collected through field surveys and reviews of the scientific literature. The following species classified as special concern, endangered or threatened are listed as observed in Worthington. *Species of special concern*: eastern box turtle, blue spotted salamander, sharp-shinned hawk, water shrew, black poll warbler, mourning warbler, long-eared owl. *Endangered species*: American bittern, bald eagle, upland sandpiper. *Threatened species*: northern harrier, northern parula, vesper sparrow (Massachusetts Fish and Wildlife 2006; NHESP 2006).

Compared to Worthington, the NHESP documents two to three times as many observances of rare species in the several adjacent towns. (Mass Fish and Wildlife 2005, NHESP). There may be less species

diversity in Worthington because the ratio of wetland habitat to upland forest habitat is lower than neighboring towns, and there is somewhat more diversity in wetland habitat. However, there may be many other reasons for the difference in numbers. Many rare species are difficult to detect even though they are present, and methodical surveys are not conducted in each town on a consistent basis. It may be that there are a few more rare species within the town limits that simply have not yet been found (Madden, 2006). Citizens may support NHESP efforts and the wildlife in their community by submitting reports to the NHESP for review.

Animals in Worthington

Worthington has large tracts of diverse forests, many open fields, rivers, streams, vernal pools, and wetlands. These natural landscapes throughout Worthington provide a wide range of wildlife habitats and therefore the region can support a diversity of species, from small invertebrates to large mammalian predators. The diversity of Worthington's wildlife is in part due to the existence of extensive areas which do not have major roads and development where animals and their habitats are relatively undisturbed.

The Massachusetts Department of Fish and Wildlife has documented the existence of the following animals in Worthington. Some listed are of special concern, threatened or endangered, and are so indicated.

Mammals

The following mammals may be found within the town of Worthington. Other species such as timber wolves and mountain lions have been reported by citizens here but the Massachusetts Fisheries and Wildlife professionals regard these sightings as either mistaken or extremely rare (Bob Randall 2006; Massachusetts Fish and Wildlife 2006).

gray fox	groundhog
red fox	beaver
red squirrel	striped skunk
gray squirrel	porcupine
flying squirrel	eastern coyote
eastern chipmunk	Virginia opossum
snowshoe hare	mink
eastern cottontail	river otter
New England cottontail	hairy-tailed mole
bog lemming	eastern mole
white-footed mouse	star-nosed mole
house mouse	long-tailed weasel

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pine vole	short-tailed weasel
woodland jumping mouse	fisher
masked shrew	little brown myotis
smokey shrew	big brown bat
water shrew – special concern	hoary bat
northern short-tailed shrew	silver-haired bat
northern long-tailed shrew	red bat
bobcat	white-tailed deer
raccoon	moose
muskrat	black bear

Amphibians and Reptiles

The Massachusetts Department of Fish and Wildlife has documented the existence of the following reptiles and amphibians in Worthington. Most of the amphibians depend on vernal pools (Bob Randall 2006; Massachusetts Fish and Wildlife 2006).

painting turtle	blue-spotted salamander – special concern
snapping turtle	red-bellied salamander
wood turtle – special concern	red-spotted newt
eastern box turtle – special concern	red-backed salamander
northern brown snake	spotted salamander
northern ringneck snake	bullfrog
eastern milk snake	leopard frog
red-bellied snake	wood frog
eastern garter snake	gray tree frog
northern water snake	spring peeper
	American toad

Birds

The following species of birds are likely to be found in Worthington in season. Starred (*) birds are rare visitors to the area. Worthington's many large open fields are considered by naturalists to be especially valuable and even unique for many struggling species (Bob Randall 2006; Massachusetts Fish and Wildlife 2006).

house wren	titmouse
Carolina wren	* yellow-billed cuckoo
winter wren	* black-billed cuckoo
tree swallow	blue-headed vireo
barn swallow	* red-eyed vireo
cliff swallow	veery
chimney swift	brown thrasher
great horned owl	bluebird
barred owl	rusty blackbird
eastern screech owl	red-winged blackbird

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northern saw-whet	evening grosbeak
* long-eared owl – special concern	pine grosbeak
catbird	red-breasted grosbeak
rufous-sided towhee	yellow warbler
blue-gray gnatcatcher	chestnut-sided warbler
water pipit	black and white warbler
ruby-throated hummingbird	black-throated blue warbler
northern flicker	black-throated green warbler
pileated woodpecker	yellow-rumped warbler
* red-bellied woodpecker	common yellowthroat
yellow-bellied woodpecker	blue-winged warbler
hairy woodpecker	magnolia warbler
downy woodpecker	blackburnian warbler
great-crested flycatcher	ovenbird
least flycatcher	* black poll warbler – special concern
eastern kingbird	* northern parula – threatened
alder flycatcher	Nashville warbler
willow flycatcher	cerulean warbler
eastern wood phoebe	* mourning warbler – special concern
* bald eagle – endangered	Canada warbler
* goshawk	bobolink
* sharp-shinned hawk – special concern	common grackle
American kestrel	northern cardinal
* Cooper’s hawk	scarlet tanager
red-tailed	house sparrow
* red-shouldered	white-throated sparrow
broad-winged	Lincoln’s sparrow
* northern harrier – threatened	chipping sparrow
crow	dark-eyed junco
Canada goose	American tree sparrow
common merganser	song sparrow
black duck	field sparrow
wood duck	swamp sparrow
mallard duck	* vesper sparrow – threatened
ruffed grouse	savannah sparrow
American woodcock	* indigo bunting
great blue heron	snow bunting
green-backed heron	Lapland longspur
turkey vulture	European starling
turkey	black-capped chickadee
hermit thrush	* upland sandpiper – endangered
wood thrush	cowbird
American robin	bluejay
cedar waxwing	Virginia rail
northern mockingbird	sora
Baltimore oriole	killdeer
belted kingfisher	golden-crowned kinglet
white-breasted nuthatch	ruby-crowned kinglet
red-breasted nuthatch	rock dove
brown creeper	mourning dove
	northern shrike

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goldfinch	Louisiana waterthrush
house finch	northern waterthrush
purple finch	horned lark
* American bittern – endangered	eastern meadowlark
* northern raven	

4F. Scenic Resources and Unique Environments

Summary **Worthington’s complex geologic, settlement, and agricultural history, active agricultural fields, abundance of streams, rivers and wetlands, and expansive woodlands contribute to the beauty and character of the town. This history has also created a great deal of core wildlife habitat. Many historic buildings and other structures throughout Worthington add to its character and the residents’ sense of place.**

“Worthington’s water resources, unfragmented forests, and rich agricultural lands provide for a varied natural landscape and directly and indirectly improve the quality of life for town residents as well as the entire region.” (PVPC 2004, p. 35)

Water

Many opportunities exist for enjoying the beauty of nature throughout the town. There are several significant streams and rivers as well as many intermittent streams, small ponds and lakes. The cold, clean rivers and streams naturally support diverse fish populations. Worthington’s wide variety of fish species and rural character make the town one of the best fishing locales in the region (see Sections 4C, 4D and 4E).

Hills and Woodlands

Worthington has many forest-covered hills. The ridges and valleys provide a marvelous scenic backdrop for hiking and countless spaces to observe and connect with nature. In autumn the hills exhibit brilliant red, yellow and orange fall foliage.

Many of the residents’ favorite views encompass stone walls, agricultural fields, and distant hilltops. Many views are toward, from, or across unprotected land. Development and loss of farmland has affected some of these views (see Sections 4A and 4B).

Historic Places

Worthington's early Colonial settlement is evidenced in the stone walls and winding roads that connected farmsteads and villages. There are many historic homes and cemeteries throughout the town (see map: Historic Points of Interest, and Section 4B).

In the past, Worthington has received preservation planning assistance from the Department of Conservation and Recreation's Historic Landscape Preservation Initiative for Center Cemetery and Ringville Cemetery. The Historic Landscape Preservation Initiative provides matching grants, sponsors special initiatives and offers technical assistance and training to support the preservation of historically significant landscapes throughout the Commonwealth (Massachusetts DCR 1999).

Cultural

The Massachusetts Department of Environmental Management, now the Division of State Parks and Recreation, identified scenic landscapes as part of the Massachusetts Landscape Inventory Project. Although the data was general in nature and was intended for general planning purposes, over 6,000 acres of scenic landscape were identified in Worthington. These areas are located in the north-central portion of town, from the Worthington border south to Sam Hill Road.

Several areas are significant in defining the rural character and unique atmosphere of the Worthington landscape. These lands, including Berkshire Park Campground, wildlife sanctuaries and wildlife management areas and state forests, are vital to enhancing the community's character, drawing visitors, and improving the quality of life for residents (see Section 4B).

Additionally, the Sevenars Concert Hall (formerly Conwell Academy) is an important cultural location. Worthington is interlaced by an extensive network of snowmobile trails, providing a significant wintertime recreation resource for residents and visitors.

As Routes 112 and 143 traverse the town, they set a course for scenic and historic road bicycle tours. On such tours, riders can observe historic sites, beautiful distant hillsides over wide open agricultural fields, babbling streams and massive old sugar maples. These aging sugar maples are yet another important part of the agricultural landscape and history of Worthington.

4G. Environmental Challenges

Summary **Environmental challenges in Worthington center on protecting water quality. To this point Worthington has had high quality water. Most of the possible water contamination in town comes from on-site sewage disposal units. Stormwater run-off and erosion control are two other concerns for the town’s water supply and overall water quality.**

The adoption of a Source Water Protection Plan in 2005 furthers the town’s desire and ability to protect its water quality for the future. The Middle Branch of the Westfield River has been classified as “Class A” surface water and is a great resource for recreation. Its continued protection and the protection of the streams and brooks flowing into it will help ensure its high quality for years to come. Steps should be taken to limit the pollutants and sedimentation from local rural roads and local croplands from entering the stream system and other hydrological entities. Development along roads and in fields should be limited and systems put in place to mitigate the increased impervious surfaces that development brings. A groundwater contamination assessment for one site will be done by the EPA this year (2006).

Potential Water Pollution Sources

Groundwater Contamination

A fire at the Albert Farms site along Radiker Road in the early 1980s led to groundwater contamination from the toxic chemicals that were stored in and around the barns. The contamination led to Worthington adding more length to its water main to serve the affected homes. The Department of Environmental Protection will be in Worthington this year (2006) to assess the contamination of the site and the steps then necessary to clean it up. This site could potentially become valued conserved open space. Its open agricultural land has beautiful views and lends to the rural character of the town.

Worthington’s history of agriculture carries with it a darker side for the environment. The effect of the many chemicals used over the years on the town’s water quality is not fully understood and needs to be quantified in the future.

On-Site Sewage Disposal

Worthington does not have any town waste management systems. Residents all have on-site sewage disposal systems, with the exception of The Maples Apartments. (The Maples Apartments, formerly Worthington Senior Housing, has had a NPDES permit to discharge sanitary waste water into Wards Brook since 1982.) Soils in Worthington, as with the rest of Hampshire County, do not allow easy placement of systems due to a high water table, steepness, or shallowness to bedrock. Worthington residents are concerned about these septic systems failing, affecting the water quality. The inspection of these systems is purely voluntary unless the property is to be sold. Diane Brenner, the Worthington Board of Health representative, says one-third to one-half of the properties inspected under Title V need an upgrade to comply with state regulations (PVPC 2004, p.27).

Solid Waste Facilities

Worthington has two solid waste facilities. Currently, the transfer station is located off Route 112 and has been used since 1978. The Worthington Landfill, closed in 1988 but not capped or lined, is located on Dingle Road.

Underground Storage Tanks

Worthington has one active underground gasoline storage tank, according to the MA Department of Fire Services database, located at the Corners Grocery at Packard Common. This tank should be monitored closely for damaging leaks. No underground storage tanks maintained at private residences for home heating are kept in this database (PVPC 2004, p. 27).

Reported Releases

The Massachusetts DEP has received reports of eleven releases of oil and hazardous materials in Worthington. After response outcome reports were completed on 10 of these properties, the Massachusetts DEP determined that there was “no significant risk” to public health. The DEP rated one property “not a disposal site” (PVPC 2004, p. 27).

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Road-Salt Contamination

Road salt can directly affect public and private groundwater wells. The proximity of many roads to riparian corridors in Worthington makes them very susceptible to contamination also. Statewide regulations exist to restrict amounts of road salt applied within water supply areas. The Massachusetts Highway Department (MassHighway) instituted a low-salt zone along portions of Route 9 in 1983 at the request of PVPC and the Town of Cummington due to the contamination of nearby wells from road salt. One of these zones is a one-mile section from the Dudley Manor Bridge in the east to the western entrance of Main Street. This section of road is posted with Low-Salt Zone signs at each end (MRWA, 2006, p.23). The Cummington Section of Route 9 was one of the four model reduced road salt areas initially designated in the Pioneer Valley region. This program was so successful that it led to a statewide policy on reduced road salting in water supply areas (Massachusetts. Rural Water Association 2005, p.23).

Stormwater Management

Better management of stormwater can help to maintain water quality by reducing pollutants entering the water systems and by maintaining the proper temperature of the stormwater as it does enter the town's water systems.

Section 5: Inventory of Lands of Conservation and Recreation Interest

Worthington is rich in open space. Protecting open space is important because it provides habitat for all living things, protects natural resources, preserves community resources, promotes biodiversity, and generally helps to enrich our lives. According to the American Farmland Trust (2002), lands that are left or maintained as open space in a community, on average, cost the community less than if the same land were used for residential purposes. Residential land use costs more for the services it requires than the added tax revenue the town gains.

The definition of open space for this document is given by the Executive Office of Environmental Affairs of the Commonwealth of Massachusetts as “any undeveloped land with particular conservation or recreation interest.” This includes forested, agricultural, and park land, as well as land under conservation restrictions, or having recreational interest (e.g., baseball or soccer fields, trails for walking). These lands are either public or private and can have permanent, temporary, limited, or no protection.

About 25 percent of Worthington’s 33.5 square miles (or 21,440 acres) is permanently protected open space. These lands are made up of public lands, state forests, wildlife management areas, wildlife sanctuaries, and private lands involved in either the Agricultural Preservation Restriction (APR) program or the Conservation Restriction (CR) program. About 22% of Worthington’s land is protected in a limited fashion under three state tax-abatement programs. Some of this land is also under permanent protection. The Chapter 61 program is a forest management program that gives the landowner a tax incentive for the management of woodland for wood production. Chapter 61A offers a tax incentive for agricultural use, and Chapter 61B offers a tax incentive for land managed for recreation.¹

¹ The acreage figures in this section are determined from Mass GIS, except for the tables listing land enrolled in Chapter 61, 61A and 61B, which come from town records. Maps are based on Mass GIS. Discrepancies between the Worthington Community Development Plan (2004) and Mass GIS have been found in acreage and number of parcels for Chapter 61 and permanently protected lands. The town should work to digitize its parcel information so that this information will more readily be available for review and allow more precise analyses to be made.

5A. Private Parcels

1,137 acres of privately owned land in Worthington are permanently protected, 823 acres under the Agriculture Preservation Restrictions program (APR), and 314 acres through Conservation Restrictions (CR). (Table 5-1). Shortly before publication, over 400 acres of protected lands along the Middle Branch of the Westfield River, listed as owned by the Esther Sena Land Trust and Hickory Hill Touring Center, were purchased by the state Department of Fish and Game.

Fee Owner	Easement Owner	Type of Easement Held	Site Name	GIS Acres	Purpose	Public Access
Kellogg, Chester & Susan	DAR	APR	HLT/Kellogg	31.8	A	None
HLT/Albert	DAR	APR		89.4	A	None
Kellogg, Chester & Susan	DAR	APR	HLT/Kellogg	32.2	A	None
Timm, Spencer and Ruth	HLT	CR	Jackson Swamp	38.3	B	Limited
Cain Jerrilee	HLT	CR		51.7	C	None
Gull Wing Herbs	DAR	APR	HLT/Gull Wing Herbs	56.2	A	None
MFCLT/Paul	DAR	APR	MFCLT/Paul	45.6	A	X
Sena , T, et. al.			Former Hickory Hill Touring Center	65.0	B	Yes
Gull Wing Herbs	DAR	APR	HLT/Gull Wing Herbs	30.0	A	None
Albert	DAR	APR	Albert	231.9	A	X
Mollison	DAR	APR	Mollison	99.1	A	X
Plehn Trust	HLT	CR		224.1	C	Limited
Kellogg, Chester & Susan	DAR	APR	HLT/Kellogg	15.9	A	None
Kellogg, Chester & Susan	DAR	APR	HLT/Kellogg Gift	190.8	A	None

DAR Department of Agricultural Resources
HLT Hilltown Land Trust

A Agriculture
B Recreation
C Conservation

Privately owned parcels under the Chapter 61, 61A, and 61B programs are temporarily protected and receive a special tax status for their use as forest, agriculture, or recreation lands.

Section 5: Inventory of Lands of Conservation and Recreation Interest

MassGIS only lists Chapter 61 Forestry lands in Worthington. Mass GIS maps did not have current Chapter Land information at the time of making this map.

As of July 2006, according to town records, 2,046 acres of land in Worthington were enrolled in the Chapter 61 Forestry program, 1,594 acres were enrolled in Chapter 61A Agriculture program, and 1,186 acres were enrolled in Chapter 61B Recreational program (Table 5-2). When these lands are put up for sale the town has the right of first refusal. This right gives the town a limited window, 120 days, to buy the property at a fair market value. The town either must have the funds necessary to purchase the property or have negotiated with a land trust to purchase the property on the town's behalf. Thus, the town should prioritize those private parcels which are most important for conservation before their status changes and identify potential sources of funding for such a purchase

Private lands that should be considered for conservation include those that help to protect and preserve water quality, namely, those lands containing town water supplies (including interim wellhead protection areas) and riparian corridors (lands bordering streams, rivers, wetlands, and ponds). Private lands defining the rural character or helping to protect the scenic quality of the town should also be considered for conservation. These lands are defined by the town as agricultural land and lands of historical significance. Also lands to be considered for conservation are the lands identified by the Natural Heritage and Endangered Species Program as core habitats for rare and endangered species, large parcels, parcels that immediately connect with already permanently protected open space, and parcels that permit access for recreational uses.

Lands that contain two or more of the desired characteristics should be considered priority parcels for conservation. Higher priority should be given to parcels that are not already protected by the River Protection Act, the Wetland Protection Act, floodplain, steepness, or other inherent development restrictions. If the town's parcel map is digitized, it can be overlaid with existing analyses, a process that would help in the identification of priority lands.

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Owner	Acres	Access	Program
Bannish Land Preserves Inc	273.9	No	Forestry
Brown, S. R.	31.2	No	Forestry
Brown, W. and L.	32.42	No	Forestry
Burr, F. A.	48.76	No	Forestry
Burr, H.	78.16	No	Forestry
Carbin F. and A.	53.85	No	Forestry
Clarke, J. B and J.	171.96	No	Forestry
Claydon Realty Trust	96.5	No	Forestry
Comparetto, D; King, S; Comparetto, K	145	No	Forestry
Cook, R. M and K. K	93.94	No	Forestry
Dandy Realty Llc	10	No	Forestry
Drazen, L., Bloom, Gabel-Brett	27	No	Forestry
Feakes, M. L	104.52	No	Forestry
Fisk Family Realty Trust	43.96	No	Forestry
Gage, D. H and Wyman, N.	21.79	No	Forestry
Hastings, W. R	48	No	Forestry
J.son, J.	29.68	No	Forestry
Kerley, L. M	50.31	No	Forestry
Kramer E. L and E Douglas	46.91	No	Forestry
Mansfield, R.	30.4	No	Forestry
Mcanulty, J. L Reid	50.17	No	Forestry
Mcginn J. F and Smith, L.	8	No	Forestry
Metzger, H. and G.	16	No	Forestry
Millman, J. and D.	41.36	No	Forestry
Mix, E.s	102.7	No	Forestry
Noonan S and M	20.53	No	Forestry
Oleksak III, A. T and D. A	106	No	Forestry
Plehn H. M.	221.78	Limited	Forestry
Porter K. A III	36	No	Forestry
Roy, G. W and Adamczyk, K. A	250	No	Forestry
Salewski R. J and K.	58.6	No	Forestry
Samuel N Margola G Freedman Freedman Robin Luberoff Trust, Freedman Marc B Trustee	113.5	No	Forestry
Scharbach, S.	24.87	No	Forestry
Scharbach, S. M and Puentes, Rishi O	25.32	No	Forestry
Sebest, E. and Stafford, S	34.81	No	Forestry
Strasburg P. A	279.53	No	Forestry
Theberge, R; Thomas, D; Gendron, N	42.57	No	Forestry
Timm S. and R.	42	Limited	Forestry
Upton J.I M and S. D	44.4	No	Forestry
Van Buren, W. and S.	226.7	No	Forestry
Wright W. E and Buie S. D	69.81	No	Forestry
Zeh J. P	83.69	No	Forestry

Section 5: Inventory of Lands of Conservation and Recreation Interest

Table 5-2: Chapter 61 61A, and 61B Lands (continued)			
Owner	Acres	Access	Program
Albert, B. M	521.87	No	Agriculture
Archambault, W. A and L.	40	No	Agriculture
Bateman C. L	23.1	No	Agriculture
Burr, F. A.	20	No	Agriculture
Fay W. Douglas	10	No	Agriculture
Gage, D. H and Wyman, N. L	8.41	No	Agriculture
Jensen, R. J and I.	54	No	Agriculture
Joyner R. C and C. M	46.71	No	Agriculture
Kellogg C and S	328.33	No	Agriculture
Lake, Antonia	122.65	No	Agriculture
Lyon, W and J	11.86	No	Agriculture
MacLean, M. E.	35	No	Agriculture
Mason, G. R.	22.5	No	Agriculture
Mason, J. L	17	No	Agriculture
Mcginn J; Smith L	2	No	Agriculture
Mollison J. S	76	No	Agriculture
Rida, J. and K.	65	No	Agriculture
Sawyer, J. T. and B.	43.18	No	Agriculture
Sena, T. J and Rude-Sena C.	36	No	Agriculture
Souccar K. and Rapinchuk, T. E	45	No	Agriculture
Van Buren, W and S	41	No	Agriculture
Welch J and M	24	No	Agriculture
Ahmed Sr, H. G and V.	16	No	Recreation
Albert, B. M	62	Yes	Recreation
Colby, I. H	10	No	Recreation
Esther Sena-Sanders Irrevocable Trust	405	No	Recreation
Fay W. D.	16	No	Recreation
Ives, Donald F	97.04	No	Recreation
Jacobson, C.	241	Yes	Recreation
Kramer E. L and E Dugas	12.87	No	Recreation
Ramming S□ and J.	9.4	No	Recreation
Ryan C. V Jr and J. M	106	No	Recreation
Schulze, S. P.	45	No	Recreation
Sena T. J and Rude-Sena C.	4.75	No	Recreation
Worthington Golf Club	144.73	Yes	Recreation
Worthington Rod and Gun	15.75	Yes	Recreation

5B. Public and Non-profit Lands

Public and non-profit lands make up most of the permanently protected open space in Worthington (see Table 5-3). The Commonwealth owns 3,883 acres in Worthington, about 19 percent of the total acreage in Worthington. This state land is 74 percent of the permanently protected open space in Worthington. These lands consist of town parks, wildlife management areas, and state forests (see maps: Regional Open Space and Protected Open Space).

Municipal Lands

The Town of Worthington owns approximately 245 acres of land. Land set aside for recreational use includes the Worthington Town Park (13 acres) and the Conwell School Playground (12 acres). Both have limited protection, are zoned residential-agricultural, and public access is not limited.

	Managed by	Use	Condition	Potential
Park	No agency: Recreation Committee, Volunteers	Ice skating on pond	Poor	Recreation for children if there were new play equipment & more distance from road
Playground	Parent Teacher Organization	Playscape for children, ball field for T-ball, baseball and soccer	Fair	Upgrades to ballfield, undeveloped space for other types of recreation

State Lands

The state lands in Worthington are split between the Department of Fish and Game and the Department of Conservation Resources, Division of State Parks and Recreation. The recreation opportunities of these lands were not available at the time of this writing. Discussions with members of the Open Space and Recreation Committee and with community members in the public forums revealed that many residents seem unsure of what trails and other opportunities exist in these parcels. The town should work with the state to manage these parcels for more defined recreation opportunities and help to inform the town of the opportunities that exist.

In 2006 over 400 acres of protected lands along the Middle Branch of the Westfield River were purchased by the Department of Fish and Game.

Section 5: Inventory of Lands of Conservation and Recreation Interest

Peru State Forest: The Peru State Forest is a 2,760-acre forest in Peru, Middlefield, and Worthington, 832 acres of which are in Worthington. The forest is open year-round to hiking and to snowmobiling in the winter.

Worthington State Forest: The Worthington State forest is a 183-acre state forest in the northern part of town. The forest is open year-round to hiking and to snowmobiling in the winter.

Westfield River Access: These two parcels (totaling 46 acres), along the Middle Branch of the Westfield River just north of Route 143, are owned by the Department of Fish and Game and provide access points to the river for canoers and kayakers. These parcels are permanently protected.

Wildlife Management Areas (WMA): The Fox Den Wildlife Management area is made up of several parcels in the towns of Worthington, Chester and Middlefield. The total acreage of the WMA is 4,471 acres, 2,487 of which are in Worthington. This area is open year-round for hiking and during certain times of the year hunting and fishing are allowed. The parcels in Worthington are rugged in nature and are home to some high priority areas for natural community protection. Three hundred thirty-six acres of the Hiram H. Fox WMA are located in Worthington. The rest of the 3,801 acres are located in the neighboring towns of Chester, Huntington, and Chesterfield. This area is also open to hiking, hunting, and fishing.

Worthington Fire District

The Worthington Fire District manages eleven sources of water supply. These sources consist of seven bedrock wells and four springs, which are in proximity to each other in the northern part of town. Not all of the land defined by the Zone II area is permanently protected. The town should work with land owners to get these lands enrolled in a conservation program so that the town will have the right of first refusal when the status of the lands changes.

Non-profit Lands

The Road's End: The Massachusetts Audubon Society owns 157 acres at the end of Corbett Road. This wildlife sanctuary has a short trail system and is open to the public every day from dawn till dusk for a small fee. The sanctuary is situated along a ridge and comprises fields, wetlands, and forest. It is home to many woodland bird species and

Worthington Open Space and Recreation Plan – 2006

bluebirds have been seen in the meadows. Other animal residents include bears, coyotes, and otters.

Table 5-3: Public and Nonprofit Lands

Site Name	Fee Owner	GIS Acres	Current Use	Public Access	Level of Protection
CONWELL SCHOOL PLAYGROUND	M349	11.5	R	Y	Limited
WORTHINGTON TOWN PARK	M349	13.5	R	Y	Limited
WORTHINGTON STATE FOREST	DCR	182.6	B	Y	Protected
PERU STATE FOREST	DCR	832.1	B	Y	Protected
WESTFIELD RIVER ACCESS	DFG	25.8	C	Y	Protected
WESTFIELD RIVER ACCESS	DFG	20.1	C	Y	Protected
FOX DEN WMA	DFG	123.8	C	Y	Protected
FOX DEN WMA	DFG	53.8	C	Y	Protected
FOX DEN WMA	DFG	61.4	C	Y	Protected
FOX DEN WMA	DFG	84.4	C	Y	Protected
FOX DEN WMA	DFG	85.7	C	Y	Protected
FOX DEN WMA	DFG	587.3	C	Y	Protected
FOX DEN WMA	DFG	17.8	C	Y	Protected
FOX DEN WMA	DFG	208.8	C	Y	Protected
FOX DEN WMA	DFG	210.7	B	Y	Protected
FOX DEN WMA	DFG	428.1	C	Y	Protected
FOX DEN WMA	DFG	101.9	C	Y	Protected
FOX DEN WMA	DFG	109.3	C	Y	Protected
FOX DEN WMA	DFG	125.2	C	Y	Protected
FOX DEN WMA	DFG	289.8	C	Y	Protected
HIRAM H. FOX WMA	DFG	9.8	C	Y	Protected
HIRAM H. FOX WMA	DFG	138.3	C	Y	Protected
HIRAM H. FOX WMA	DFG	5.5	C	Y	Protected
HIRAM H. FOX WMA	DFG	77.4	C	Y	Protected
HIRAM H. FOX WMA	DFG	43.6	C	Y	Protected
HIRAM H. FOX WMA	DFG	60.9	C	Y	Protected
HIRAM H. FOX WMA	DFG	60.9	C	Y	Protected
ROAD'S END WILDLIFE SANCTUARY	MAS	157.1	C	Y	Protected

M349	Town of Worthington	B	Recreation/Forestry
DCR	Department Of Conservation Resources	C	Conservation
DFG	Department of Fish and Game	R	Recreation
MAS	Massachusetts Audubon Society		
WMA	Wildlife Management Areas		

Section 6: Community Vision

6A. Description of Process

Worthington has been discussing open space and recreation for many years. Surveys were conducted in 1985 for its first Open Space and Recreation Plan, in 2000 for the Worthington 20/20 report, and most recently in 2003 with the Community Development Plan. The summaries of these surveys have been analyzed by the Conway team. The surveys all show that in recent decades Worthington residents have been most concerned with the town losing its “rural character.”

A public meeting was held on Saturday, January 28, 2006, facilitated by the Conway team, to clarify what the term “rural character” means to the citizens of Worthington. Flyers, posters, an announcement in the newspaper, and a sandwich board were used to inform the community of the meeting. Worthington townspeople were also telephoned individually by various members of the Open Space and Recreation Committee and informed of the meeting.

Twenty-six Worthington residents came out on Saturday, January 28, to attend the community meeting that was held to identify community goals, interests, and areas of special concern for the development of the OSRP. This workshop was highly successful in generating ideas from a diverse group of Worthington’s residents.

Progress towards the five-year action plan was presented at a second community meeting on Wednesday, March 8, to gain further input from residents before the completion of the action plan.

6B. Statement of Open Space and Recreation Goals

Six broad goals were identified through the two community meetings, discussions with Open Space and Recreation Committee members, conversations with townspeople, surveys from previous plans, and a short survey at the last community meeting (see Appendix for more information).

- The natural systems of Worthington, including forests and fields, are healthy and available for future generations to enjoy.
- Worthington protects its rural character through the preservation of its historical sites, agricultural lands, and natural landscape.

Worthington Open Space and Recreation Plan – 2006

- Recreational opportunities are significant throughout town, are available to all members of the community, and satisfy the needs of the community.
- Farms and open agricultural fields remain open, healthy, and valuable scenic resources for the community.
- Pedestrian and bicycle trails give residents a safe alternative to vehicular travel, provide access to recreational opportunities, and provide access to all town centers.
- Worthington’s residents know the importance and methods of overall land stewardship and the recreational opportunities existing within the town.

Section 7: Analysis of Needs

7A. Summary of Resource Protection Needs

Summary **With almost a quarter of its lands permanently protected, Worthington has large tracts of forested land that help to protect the town’s water quality as well as provide habitats for rare and endangered species. Parcels of open agricultural land also are protected under the Agricultural Preservation Restrictions Program. These parcels define the rural character of the town for Worthington’s residents. Environmental challenges, discussed in section 4G, stem mostly from the growth the town has seen. Although a significant portion of their land is not susceptible to development, the town still needs to ensure the protection of this land and take measures to protect the most crucial lands yet under no level of protection.**

Protecting Water Quality

Forested areas are integral to protecting water quality. They filter pollutants from soils, limit sediments from entering water systems, and help keep the system’s proper temperature through shading.

To preserve water quality, forested lands within the areas identified by the River Protection and Wetland Protection Acts should be targeted for conservation. The steep forested areas along the eastern slope of the Middle Branch of the Westfield River are significant because of their rich biodiversity and effect on the river’s quality. Protection of this area will help to retain the wild and scenic appearance of the river valley, provide links between the already existing parcels of protected open space, and help to maintain this source of water. In addition, protection of these forested areas in Worthington will allow the development of more trails, something the community desires.

Worthington’s town water supply consists of eleven sources, four springs, and seven bedrock wells. The Zone II water supply protection area northeast of Worthington Corners consists of some protected land but also has private unprotected lands. The town should work with landowners of these parcels as well as the owners of parcels surrounding the non-community non-transient IWPA’s to get these lands under a conservation restriction or in a “right of first refusal” status so that these important lands can be protected as they become available.

On-site sewer systems are a major threat to Worthington's water quality (see section 4G). Education programs should be undertaken to inform residents of the threat failing systems can be to water quality. Potential funding programs to check and maintain current septic systems should also be pursued.

Protecting Rural Character

Worthington's residents have defined rural character primarily as the open agricultural fields in town. They especially appreciate the scenic quality that these fields provide. From these open lands, the distant ridge-lines help to define the scenic quality of the town.

In 2000, 86 percent of residents stated they would regret the town losing its open agricultural lands. Currently, a few parcels are protected under the Agriculture Preservation Restriction Program. The remaining lands are unprotected and are the lands most susceptible to development due to their level nature, good soils, and proximity to roads. Once these lands are developed, they will be lost for agricultural purposes as well as scenic value. These lands should be studied for their continued viability and agricultural value. Open parcels that contain priority habitats, are near riparian areas, or have scenic value due to their proximity to roads should be looked at for conservation. In particular, the brownfield property along Huntington and Radiker Roads should be studied for its value for either development or open space and recreation.

Worthington's terrain has significant ridgelines. Development in these areas can have a great impact on the scenic landscape and could cause erosion of the shallow soils and degradation of habitat corridors. Worthington should work with surrounding towns to adopt ridgeline protection guidelines to maintain the high scenic value of the region.

7B. Summary of Community's Needs

Summary **Surveys conducted over the past forty years have shown that Worthington residents desire a wider range of recreational pursuits, indoor and out, than is currently available in the town. Massachusetts SCORP 2000 results showed that hiking, biking, cross-county skiing, swimming and playground activities ranked high on the list of preferred outdoor activities. A more thorough analysis of recreational and other community needs should be**

made to determine precisely what facilities to develop and what resources to focus on in order to meet these needs.

Recreation

Through surveys and public meetings, community members have expressed their concern about the lack of outdoor and indoor recreation facilities in town. Several residents expressed the need for an indoor facility particularly for teenagers and seniors. The town has a building just behind the town hall but it is not suited for recreation use. The town does have a thirteen-acre park between Worthington Corners and Worthington Center which has some playground equipment but is rarely used due to its proximity to the road and some safety concerns about the ponds found there. The ponds do get used for ice skating in the winter months, however. Most of this thirteen-acre property is forested, so there is great potential for expanding or relocating equipment to an area further from the road. Some residents suggested that the facilities at the Russell Conwell School and the school itself could be more effectively used for activities for all age groups.

According to Massachusetts SCORP 2000, residents of the Connecticut Valley Region, of which Worthington is a part, ranked hiking, mountain biking, and cross-country skiing higher than residents in any other region in the Commonwealth. Also ranked high were road biking, swimming, and playground activity. Consistent with these regional desires, Worthington residents also expressed an interest in creating designated trails for hiking, skiing, and snowmobiling. This would take the cooperation of many private land owners but would be a great asset to the community and could be a boon to tourism, especially with high regional interest for these activities.

Many of Worthington's recreational facilities do not meet ADA standards. The decision to upgrade or replace with new facilities must be addressed. Regardless of where and what new facilities are established, recognition of accessibility for individuals with disabilities must be addressed.

Activity Centers

The integrity of Worthington's village centers is also an important issue. Worthington Center and Worthington Corners are the town's hub for community life. Town residents have expressed a desire to see the central villages regain their vitality by concentrating local

businesses and services within them. This is especially important to residents who don't drive, including children and some elders. One way to do this is to site new town facilities in this central area and connect them to other village centers via pedestrian and bike trails. This, of course, would require a change in the zoning by-laws.

7C. Management Needs, Potential Change of Use

Summary **New planning tools are needed for Worthington to manage its future growth. Better communication with the Commonwealth can improve Worthington's recreation opportunities. The town's success in planning its future depends on the involvement of its enthusiastic citizens, who are needed to protect the town's abundant natural resources for future generations.**

Present zoning strategies may not be adequate to serve Worthington's long-term goals. In developing an open space and recreation plan that works for the town, Worthington must explore new strategies for planning its future. Most current development is occurring through the conventional two-acre single-family residence model. Town residents do not know for sure what the cost of community services will be as a result of residential expansion in Worthington. Site plan review procedures, which the Town recently enacted, can be used to ensure that development occurs in a pattern that retains the character of the community and encourages connections among open space parcels.

The Town needs to make a concerted effort to advocate for its financial needs by seeking more financial help from the Commonwealth. Much of the protected open space in town is owned by the Commonwealth, and Worthington gets inadequate payment in lieu of taxes to compensate for this loss of tax base. However, an analysis of income versus expenses for varying ownership in Worthington may prove, as it has elsewhere, that state-owned land actually keeps tax rates low. At the same time, getting the state to improve public access to these areas could draw tourist revenue into the area. Working with land trusts and state agencies to acquire funding to improve signage, create trail maps, and improve public access might help to get the attention of the state and involve it more in future public open space planning.

Additionally, many landowners would like to protect their land in some way, yet lack the information they need to make conservation-oriented decisions. Worthington residents voiced their desire in the community meetings that they would like this information to be more

readily available. Digitizing the Town's parcel map would be a great help toward streamlining access to data.

Also, whenever any preserved open space, such as Chapter 61 land, is about to come out of the state program, the local Conservation Commission should be in contact with the Open Space and Recreation Committee so as to allow them, collectively, to pursue other protective actions for the property.

Worthington is at a crossroads in its development and has the opportunity to preserve what is special about it for future generations. Good coordination between its boards, committees and citizens is essential to keeping the town's goals on track. Worthington does not have a sufficient tax base to fund many projects it may desire to undertake, but it may be able to make use of grant programs to see them realized. Volunteer efforts have always been a significant force in Worthington, and continued citizen involvement is critical if the town is to reach its goals. Indeed, many of the ideas discussed at the public forums and many of the actions outlined in this plan could become projects spearheaded by citizens.

Section 8: Goals and Objectives

The following presents Worthington's six open space and recreation goals along with their more specific objectives. The actions to achieve these goals and objectives are listed in Section 9, Worthington's Five-Year Action Plan.

Natural Systems

Goal: The natural systems of Worthington, including forests and fields, are healthy and available for future generations to enjoy.

Objectives: Protect public water, aquifers, and groundwater supplies from pollution points and take steps to ensure that supply stays ahead of need.

Protect natural communities and core habitat areas through conservation measures.

Ensure that any development is planned in a sound manner.

Pay special attention to the following sites due to their importance to the health of local natural systems and take measures to protect them:

Middle Branch of the Westfield River

Jackson Swamp

Areas outlined by the Zone II and IWPA designations

Forested slopes of Middle Branch of Westfield River valley

First order streams

Historical and Rural Character

Goal: Worthington's historic integrity and unique rural character is preserved.

Objectives: Protect valuable historic sites.

Protect farmlands, forested slopes, ridgelines, tree-lined streets, and stone walls.

Worthington Open Space and Recreation Plan – 2006

Recreational Opportunities

Goal: Recreational opportunities are significant throughout town, are available to all members of the community, and satisfy the needs of the community.

Objectives: Ensure access to open spaces, forests, and waterways and enhance their usefulness to community members.

Provide active and passive participation facilities and opportunities in public lands for community members of all ages as well as those with disabilities.

Provide access to municipal parks and its facilities for people with disabilities.

Target the following sites for developing recreational opportunities and future projects:

Worthington Town Park
Conwell School Playground
The Peru State Forest
The Worthington State Forest
The Middle Branch of Westfield River
Bashan Hill
Knowles Hill

Agricultural Systems

Goal: Farms and open agricultural fields remain open, healthy, and valuable scenic resources for the community.

Objectives: Evaluate agricultural soils to determine their health and production capabilities.

Support owners of prime agricultural lands to help them sustain healthy production.

Non-Vehicular Infrastructure

Goal: Pedestrian and bicycle trails give residents a safe alternative to vehicular travel, provide access to recreational opportunities, and provide access to all town centers.

Section 8: Goals and Objectives

Objectives: Establish bike trails that will allow residents a safe access to town centers, reduce the need for automobile use, and provide recreational opportunities.

Establish a network of trails that provides a pedestrian infrastructure for all age groups with access to recreational opportunities and town centers.

Education, Participation, and Implementation

Goal: Worthington's residents know the importance and methods of overall land stewardship and the recreational opportunities existing within the town.

Objectives: Provide education programs that will inform residents of responsible stewardship practices and, with support from regional sources, promote best management practices.

Encourage town boards, individual citizens, regional entities, businesses, and land trusts to provide support for open space programs that help protect natural resources.

Plan for the support of open space protection and recreational opportunities.

Section 9: Five-Year Plan

The five-year action plan is based on the goals and objectives presented in the previous section. This section creates priorities and recommends specific actions to achieve open space and recreation goals. This action plan is flexible in nature, recognizing that not all actions will be completed in the time frame originally anticipated. This plan should be revisited and reworked each year to understand which goals were achieved the previous year and which were not. The success of this action plan and the open space and recreation plan in general hinge on the combined efforts of the various town committees and their cooperation with town and regional entities

Natural Systems

Goal: The natural systems of Worthington, including waterways, forests, and fields, are healthy and available for future generations to enjoy.

Objective: Protect public water, aquifers, and groundwater supplies from pollution points and take steps to ensure that supply stays ahead of need.

Action:	Year 1	Year 2	Year 3	Year 4	Year 5
Educate community about potential hazards to water supply from use of toxic substances, including road salt. Funds & Support: Mass Rural Water Association		X	X		
Educate landowners about ways to maintain wells and septic systems to preserve water quality. Funds & Support: Mass Rural Water Association.		X	X	X	X
Revise Water Supply Protection bylaw to extend protection to Zone II or IWPA areas Funds & Support: Planning Board,		X	X		
Encourage property owners to restore vegetated buffers along streams and around ponds and wetlands. Funds & Support: Massachusetts Riverways Program, Westfield River Wild & Scenic Advisory Committee					X
Expand Westfield River Overlay District to include steep slopes to east and west of River. Funds & Support: Planning Board				X	X

Worthington Open Space and Recreation Plan – 2006

Objective: Protect natural communities and core habitat areas through conservation measures.

Action:	Year 1	Year 2	Year 3	Year 4	Year 5
Prioritize lands and vernal pools in need of protection due to location, value, or degree of threat Funds & Support: Northeast Utilities community grant	X	X			
Create Community Preservation Act Committee to work to adopt Community Preservation Act (underway) Funds & Support: Highland Communities Initiative	X	X			
Offer seminars to landowners about conservation goals and options. Funds & Support: Hilltown Land Trust, Trustees of Reservations	X		X		X
Target areas for connecting open spaces and for their proximity to priority habitats and natural communities. Funds & Support: Highland Communities Initiative			X	X	X\

Objective: Ensure that any development is planned in a sound manner.

Action:	Year 1	Year 2	Year 3	Year 4	Year 5
Adopt zoning bylaw to encourage higher density development in existing town centers and lower density development in outlying areas. Funds & Support: Smart Growth Technical Assistance (underway)			X	X	
Extend erosion control provisions to non-wetland areas. Funds & Support: Planning Board, Conservation Commission				X	X
Adopt Best Management Practices for minimizing storm water runoff in order to prevent erosion. Funds & Support: Planning board, Conservation Commission;					X

Historic and Rural Character

Goal: Worthington’s historic integrity and unique rural character is preserved.

Objective: Protect valuable historic sites.

Action:	Year 1	Year 2	Year 3	Year 4	Year 5
Identify and prioritize sites of historic value. Funds & Support: : Historical Society, Historical Commission; Highland Communities Initiative	X	X	X	X	X
Enact Demolition Delay bylaw for historic properties. Funds & Support: : Planning Board, Historical Commission, Historical Society					X

Objective: Protect farmlands, forested slopes, ridgelines, tree-lined streets, dirt roads, and stone walls.

Action:	Year 1	Year 2	Year 3	Year 4	Year 5
Establish Roads Committee to consider ways to enhance scenic values of all roads, especially dirt roads. Funds & Support: Historical Society, OSRC	X				
Identify and publicize scenic and historic sites on town roads Funds & Support: Historical Society, Highland Communities Initiative		X	X		
Enact bylaws to protect ridgelines, slopes, and open agricultural lands where important for scenic value, biodiversity, or habitat Funds & Support: Planning Board, Smart Growth Tech. Assistance			X	X	X

Recreational Opportunities

Goal: Recreational opportunities are available to all members of the community and satisfy the needs of the community.

Objective: Ensure access to open spaces, forests, and waterways and enhance their usefulness to community members.

Action:	Year 1	Year 2	Year 3	Year 4	Year 5
Mark and identify existing trails in public lands ¹ ; educate community to their presence. Funds & Support: Recreation Committee, Boy Scouts		X	X		
Locate new access points to natural features and extend existing trails in public lands. Funds & Support: Recreation Committee, Conservation Commission, Boy Scouts			X	X	
Install signs showing access points to public lands. Funds & Support: Boy Scouts, CPA funds				X	X
Prepare map(s) showing access points and trails in public lands; publish in print and/or on town website. Funds & Support: PVPC, CPA funds			X		

Objective: Provide active and passive participation facilities and opportunities in public lands for community members of all ages as well as those with disabilities.

Action	Year 1	Year 2	Year 3	Year 4	Year 5
Inventory existing park facilities to determine improvements needed. Funds & Support: Recreation Committee		X	X		
Survey community for desired uses of town parks. Funds & Support: OSRC, CPA			X		

¹These areas are presently known to include the Worthington Town Park, Conwell School Playground, Peru State Forest, Worthington State Forest, Hiram Fox Wildlife Management Area.

Identify additional recreational needs and/or desires Funds & Support: Recreation Committee		X			
Develop management plan to maintain and improve municipal lands as necessary. Include Americans with Disabilities Act (ADA) needs. Funds & Support: CPA funds (if passed)			X	X	
Make improvements to park facilities to meet identified needs Funds & Support: CPA funds				X	X

Agricultural Systems

Goal: Farms and other undeveloped lands remain open, healthy, and valuable scenic resources for the community.

Objective: Support owners of prime agricultural lands to help them sustain healthy production.

Action:	Year 1	Year 2	Year 3	Year 4	Year 5
Educate community on values of purchasing and using locally-produced products. Funds & Support: Agricultural Commission		X			
Develop scorecard for prioritizing open space. Funds & Support: Planning Board	X				
Prioritize land in event town has the opportunity to purchase such as with chapter lands. Maintain and update priority lists Funds & Support: Planning Board		X	X	X	X

Non-Vehicular Infrastructure

Goal: Pedestrian and bicycle trails provide a safe alternative to vehicular travel, provide recreational opportunities, and offer alternative means of access to all town centers.

Objective: Establish walking and bike trails that allow safe access to town centers, reduce the need for automobile use, and provide recreation.

Action:	Year 1	Year 2	Year 3	Year 4	Year 5
Establish Trails Committee to work on public lands access concerns above and to plan development of new trails. Funds & Support: Interested citizens, Boy Scouts	X				
Create plan for trails connecting various locations. Funds & Support: Cultural Council grant, CPA		X	X	X	X
Investigate and apply for non-town funds to help in developing new trails for bikes and walking. Funds & Support: Recreation Committee, OSRC		X	X	X	X
Promote walking and bicycling as alternative modes of transportation. Funds & Support: OSRC			X	X	X

Education, Participation, and Implementation

Goal: Worthington’s residents know the importance and methods of land stewardship and the recreational opportunities existing in the town.

Objective: Provide education programs that will inform residents of responsible stewardship practices and, with support from regional sources, promote best management practices.

Action:	Year 1	Year 2	Year 3	Year 4	Year 5
Initiate speaker series on conservation related topics. Funds & Support: Local Cultural Council,		X	X	X	X

Section 9: Five-Year Plan

Highland Communities Initiative, Conservation Commission					
Regularly inform community about Open Space and Recreation projects in order to achieve maximum buy-in and participation. Funds & Support: Open Space & Recreation Committee	X	X	X	X	X
Promote environmental education in school curriculum. Funds & Support: Local Cultural Council		X	X	X	X
Promote and adopt programs such as Backyard Habitat Funds & Support: Open Space & Recreation Committee			X	X	X
Promote sound land management practices and provide information about invasive plant control, non-toxic lawn care, and the hazards of pesticides and herbicides. Funds & Support: Conservation Commission, NOFA			X	X	X

Objective: Encourage town boards, individual citizens, regional entities, businesses, and land trusts to support open space programs that help protect natural resources.

Action:	Year 1	Year 2	Year 3	Year 4	Year 5
Retain the OSRC to implement OSRP. Funds & Support: OSRC, HCI, PVPC	X	X	X	X	X
Review plan annually to note accomplishments, revise goals and priorities. Funds & Support: OSRC		X	X	X	X
Digitize town parcel maps into vector-based format, update quarterly to facilitate land use planning and future town plan updates Funds & Support: Assessors, PVPC			X	X	X
Require subdivision plans to be filed in digital format as well as on paper Funds & Support: Highland Communities Initiative	X				
Facilitate periodic meetings of town committees specifically to address open space and recreation concerns. Funds & Support: Selectboard		X		X	



TOWN OF WORTHINGTON

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www.Worthington-MA.gov

BOARD OF SELECTMEN

TO: Jane Christensen, Open Space Committee

DATE: September 22, 2006

RE: Comments on Open Space Plan

The Worthington Selectboard congratulates the Committee on a job well done. The draft Open Space Plan contains an excellent summary of information about the town, and conveys a good sense of the physical characteristics and the need for preservation of open space.

Your entire report is a concise and very readable report and the contributions of time and expertise of many people is evident.

We were particularly impressed with the Goals and Objectives and the Five-Year Plan. Hopefully you have assigned committee members to follow up on your progress and the Selectboard would appreciate periodic updates on the six goals and objectives identified.

Again, the Selectboard would like to thank you and the committee for all of your hard work.

Sincerely, On behalf of the Selectboard,

Evan T. Johnson
Selectman



TOWN OF WORTHINGTON

PLANNING BOARD

December 7, 2006

Dear Open Space and Recreation Committee:

I want to commend you on the excellent update of the Worthington Open Space and Recreation plan. It is a very complete, thoughtful, and interesting document. The maps are a valuable addition to the plan and help to clarify much of the data contained in it. This is a document that should be circulated widely throughout both the town and the highlands region as a model for planning.

The plan offers a very good overall picture of where Worthington stands today as a rural community in a region that is increasingly facing the pressures of development and the changing face of the rural lifestyle. It makes clear that the residents of the town seek to maintain the rural character of the town although the majority of them are no longer involved in rural occupations. This requires a shift in focus from a productive agricultural landscape to a recreational, open space landscape. The plan addresses this change well.

The tasks outlined by the plan, however, are very ambitious and difficult to implement. As a member of the planning board, I know how difficult it is to pass zoning legislation. The process of legislative change through the writing of bylaws and revising zoning is one that is cumbersome. It requires public hearings and special town meetings. The changes called for in the plan, the protection of wetlands, the creation of village centers, and the fundamental changes in the way that land is subdivided in Worthington have all been discussed by the board and are in various stages of implementation. The board has also been working on the creation of a pedestrian trail from the Maples to the Corner Grocery and continues to encourage the creation of more trails. We also agree with the need to prioritize land for conservation and open space as well as seeking appropriate sources of funding to encourage the town to act on its right of first refusal on certain parcels of Chapter lands. We actively encourage the adoption of the Community Preservation Act in order to continue to preserve and maintain open space and historic treasures.

The implementation of the goals of this plan requires a tremendous amount of volunteer effort. The planning board itself is a volunteer board that is presently addressing basic changes in Worthington's subdivision control bylaw that requires a great deal of time. We have discussed changes in the water protection zone and we also have discussed the

possibility of a wetlands protection by law, but the time involved in each one of these activities is beyond the reach of the board at the moment.

In order for this open space plan to succeed, aggressive outreach and education are key. Residents of all ages must become involved. This alone is a huge challenge. It would be wonderful to see a group of energized volunteers certifying vernal pools and negotiating with landowners for permission to create hiking trails on public lands. In order to achieve this, it will be necessary to work through the schools and existing clubs such as the snowmobile, garden, and rod and gun clubs. The open space and recreation committee must continue to find ways in which to maintain its momentum in order to carry out this ambitious plan and build upon the fine effort begun with the updating of the 1987 Open Space Plan.

Once again, on behalf of the planning board, I would like to commend your work on the Worthington Open Space and Recreation Plan, and encourage you to continue to follow through on its implementation. We look forward to working with you.

Sincerely,

A handwritten signature in cursive script that reads "Roan Katahdin".

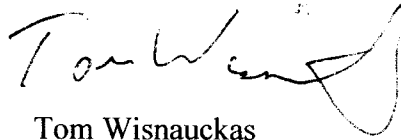
Roan Katahdin, secretary
Planning Board

November 17, 2006
Ms. Jane Christensen, Chair
Worthington Planning Board
Worthington, MA

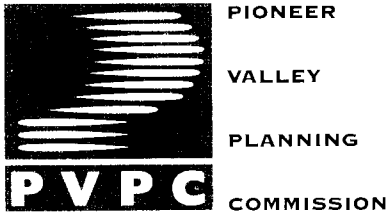
Dear Jane,

The Worthington Conservation Committee is pleased to endorse the draft Open Space Plan prepared by the Worthington Open Space Committee. The plan reflects the many hours of work put in by this volunteer group and its members are to be commended for their work.

The draft plan will serve as a good catalyst for discussion within the Town and by identifying parcels of particular scenic, natural or agricultural value the Committee has provided an excellent tool for residents to review. The Commission looks forward to working with the Committee as this report becomes finalized.

A handwritten signature in black ink, appearing to read "Tom Wisnauckas". The signature is fluid and cursive, with a large loop at the end.

Tom Wisnauckas
Chairman Conservation Commission



26 Central Street-Suite 34, West Springfield
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Tel.: (413) 781-6045
Fax: (413) 732-2593
www.pvpc.org

September 18, 2006

Jane Christensen, Chair
Worthington Planning Board
P.O. Box 247
Worthington, MA 01098

Reference: Worthington Open Space and Recreation Plan Update, 2006.


The Pioneer Valley Planning Commission has carefully reviewed the above-referenced plan, and finds it to be consistent with regional goals and objectives.

It is apparent the Town of Worthington has carefully assessed its open space/outdoor recreation needs and opportunities. Your coordinated approach to protect and conserve important cultural/natural resources, coupled with enhancing existing recreational facilities, will go far towards realizing the Plan's overall goals.

The Commission is pleased to see Worthington placing a priority on preserving its town character through protecting and enhancing its water resources, agricultural heritage, historic assets, scenic vistas, unique natural areas and wildlife habitat while enhancing recreational opportunities for all its citizens. Your understanding of these issues coupled with a responsible approach towards assessment and proper management of both environmentally sensitive areas and existing recreation resources, will prove useful as Worthington initiates strategies to protect its open spaces and direct development in a fashion consistent with the character of the community. In keeping with this approach, we encourage your continued support of state and regional initiatives to protect Westfield River resources and development of municipal strategies consistent with the *Pioneer Valley Regional Greenways Plan*.

We congratulate the town in this endeavor and support the community in its efforts in realizing the Plan's goals.

Sincerely,



Timothy W. Brennan
Executive Director

TWB/SMH
cc: Roan Katahdin, PVPC Commissioner
Richard E. Pulley, PVPC Alternate

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