

OPEN SPACE PRIORITIES INFORMAL PLAN

Norwich, Vermont

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This is an informal plan, developed for the purposes of the Conservation Commission and Norwich Special Places, until such time as a more formal plan can be adopted by the town. It seeks to provide a rational basis for the undertakings of the two bodies in land conservation on behalf of the town. In selecting priority open spaces it is guided by the Criteria for Use of the Conservation Trust Fund which were approved by the Selectboard May 20, 1996, the town plan of 1996, zoning regulations, and other town documents, as well as data from natural resources inventories gathered by the Conservation Commission, and surveys.

The Norwich Conservation Commission and Norwich Special Places Board welcome the public's comments and suggestions to this informal plan.

The public should make no assumptions, based solely on this report, that lands described or shown are open to public use without the explicit permission of the landowner.

It is the intention of the Conservation Commission and Norwich Special Places that , donation of easements, sale, or other options for land conservation for the purposes of implementing this plan are entirely voluntary.

We are grateful to Phil Dechert, Norwich Town Planner, for his guidance, to Denyce Gagne of the Upper Valley/Lake Sunapee Regional Planning Commission for creating an updated series of maps of natural resources, to Peg Merrens, Conservation Director of the Upper Valley Land Trust, for her participation, and to Vicki Smith, Planner in Hanover, NH, for her encouragement to adapt the Hanover Open Space Priorities Plan for use in Norwich. Thanks also are due to the Thetford Conservation Commission, for providing natural resource data for Norwich from Elizabeth Thompson, ecologist with the Vermont Biodiversity Project, and to Norwich citizens, Pete Richardson and David Sargent for consulting on parts of the plan.

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I. INTRODUCTION

Purpose

The Open Space Priorities Informal Plan has been prepared to guide the Conservation Commission and Norwich Special Places in protecting Norwich's significant open spaces,^{1*} in the belief that a rational open space system is fundamental to maintaining and enhancing the character of the town as it grows. The purposes of this informal open space plan are:

- To ensure thoughtful expenditure of the town's Conservation Fund, and to leverage additional money from other sources for implementation of the plan.
- To guide land-protection actions by Norwich Special Places, and
- To encourage and guide voluntary land-protection actions by individuals.

This non-regulatory plan complements the town plan and intends to accommodate plans for affordable housing and other growth. The Norwich Open Space Committee hopes town boards and committees will find this plan a catalyst to develop a more comprehensive open space plan with additional strategies for land protection, while guiding growth.

Background

In its history, its landscape and natural resources, as well as its educational, cultural, and recreational opportunities, Norwich, Vermont is a special place. It has been shaped by its location along the Connecticut River and by the historic New England development pattern of small villages surrounded by farms and forest. Its landscape is varied and beautiful, and its natural resource base is plentiful. It is "*a part of that rich vale of the Connecticut that seemed to smile....*" wrote Neith Boyce in 1923.²

Located in the Upper Valley of the Connecticut River, Norwich's proximity to Dartmouth College with its educational, medical and cultural resources in Hanover and Lebanon and to other economic and cultural organizations in the region, has profoundly influenced its growth, especially in the past fifty years. Norwich's traditional land uses are undergoing fundamental and permanent change. Most of the land cleared in earlier times for farming has returned to forest. Single residences and a few multi-house developments are springing up throughout the rural fields and woods. For most people, income is derived from their land only when it changes hands in the real estate market. The accelerating onrush of land use conversion indicates that there will never again be as many opportunities for conservation planning as there are today.

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* Open space refers to all land—field and forest-- which has no structures on it. For a more detailed definition, see p. 5.

² Neith Boyce, *Harry*, 1923. A memoir of her oldest son and their year in Norwich.

From the time of the 1973-74 Reports of the Town Planning Committees to the Town Plan adopted in 1996, Norwich citizens have shown solid support for municipal open space protection. Norwich's Planning Board is addressing evolving land use needs through its revision of the town's Master Plan, and its Revised Zoning Regulations.

While private landowners and public entities – at the town, state and federal levels – have established varying degrees of open space protection on individual pieces of land in Norwich, there has not yet been an integrated, town-wide open space plan for the future. This plan seeks to address that need, until a more formal one is adopted.

A committee comprised of members of the Conservation Commission and Norwich Special Places Board began its work in February 2003. It identified goals for the open space plan and criteria by which to evaluate important areas. Specific areas are designated for open space conservation.

The plan does not explore means outside of the purview of the two bodies and individual landowners that may be inspired by it.

Goals of the plan

The goals of Norwich's informal open space plan are:

- To promote the conservation, protection and sound management of the natural resource base;
- To protect and enhance the ecological integrity of the town's diverse natural communities and wildlife habitats;
- To sustain the scenic quality and visual character of the town;
- To maintain and expand landscape-based recreational and educational opportunities;
- To protect the town's historic sites and cultural landscapes; and
- To protect in-town open spaces.

Use

The use of this plan reflects its purpose:

- To guide the use of the town's Conservation Trust Fund, whose use is recommended by the Conservation Commission to the Selectboard or the town as a whole;
- To guide Norwich Special Places in its pro-active role: to open a dialogue with landowners whose property is considered of a high priority;
- To guide Norwich Special Places in raising and expending funds for land conservation in Norwich through the Norwich Special Places Fund, a special fund of the Upper Valley Land Trust; and
- To encourage donations or sale of conservation easements on private property, as landowners see their action as contributing to a town-wide system rather than solely as isolated efforts.

The Conservation Commission and Norwich Special Places want to be sure that the expenditure of public and private resources for the preservation of Norwich's open spaces secures as many open space benefits as possible. Funds raised for the conservation of open

space should conserve land offering two or more of the following benefits to the community: high natural resource value, including working farms and forests, wildlife habitat/biodiversity, scenic assets, recreational potential, educational options, and/or historic/cultural landscapes.

Each conservation/recreation area listed in this report is evaluated according to the community benefits described below. The areas were chosen because:

- They contribute to a plan of connected open space, thereby increasing their value for wildlife and recreation;
- They have multiple conservation/recreation benefits for the public; and/or
- They have unusually significant benefits in one or two categories.

The plan is ambitious, yet it is no means exhaustive. There may be areas worthy of conservation that are not included, for the plan concentrates on areas of multiple benefits to the public or areas of extraordinary value in one or two categories.

Conversely, there may be locations within the depicted conservation/recreation areas where development could happily co-exist without harming the overall pattern. The lines delineating areas on the map intentionally are broad strokes, not following specific parcel boundaries. Our hope is that a continuous corridor will be realized, conserving resources of great public benefit.

Finally, the plan is lean. Some citizens may wish that more open space lands were included. The plan utilizes already conserved lands to form a good portion of its backbone. Additional proposed areas help form a coherent pattern, linking conserved areas; they hold critical natural resources, and/or are not desirable lands for development according to the town's subdivision regulations.

Where there are not issues limiting development according to subdivision regulations, such as steep slopes or wetlands, the informal plan has been modest. More trails could be linked, for example, or more land with prime agricultural soils proposed for conservation. Development, including affordable housing in Norwich, is very compatible with conserving open space of public benefit. Our aim is to help open space be accessible to all Norwich's citizens, as the town grows.

Definitions

Open Space

Open space lands typically have no buildings or other complex man-made structures in current service. The lands may be in their natural state to serve important environmental and/or aesthetic functions, or they may be used for agriculture, forestry and/or outdoor recreation. Either way, they ensure the continued functioning of the natural infrastructure and the recreation resources that are essential to sustaining Norwich's quality of life.

Open spaces may have historic structures or have supported former uses that are important elements of Norwich's heritage. The existing pattern of open spaces between structures and between settlements, developed over time, is a key element in defining the small-town/rural character of Norwich

Size is not a limiting factor for open space in all cases, nor is public ownership a necessity. Protection in the public interest does not require public access to open space lands. Indeed, public access might be incompatible with other open space uses such as wildlife habitat, fragile plant and animal communities, flood control, or water supply. Also, public access might be incompatible with an individual property owner's right to privacy.

Conservation/Recreation Areas

Areas are indicated on the map with a broad brushstroke, intentionally not following parcel boundaries. They may contain anywhere from one lot to many parcels with many landowners, or in the village, rights of way through parcels. Practicality dictates that protection be accomplished both strategically and opportunistically - when individual owners express interest - in the assumption that, over time, a whole, linked open space system will take shape.

Open Space Benefits

Water Supply

Groundwater provides Norwich's water supply. The Fire District³ has wells north of the town center in the 27 acre parcel it owns, giving access to an aquifer which underlies the Connecticut River. The aquifer protection district includes the parcel and land on three sides, to the NE, SW, and SE to the shoreline of the Connecticut River, comprising a total of 68 acres. The Fire District owns additional land giving access to another aquifer as a potential source of water on both sides of Beaver Meadow Road. Another significant aquifer, unprotected, lies on both sides of the Ompompanoosuc River. Most of the town outside the village relies on private wells, tapping into groundwater in the Blood Brook and Ompompanoosuc watersheds.

Aquifers, areas with high potential for yielding sufficient water for public wells, are very limited and easily contaminated. They need to be protected, as do other groundwater sources providing water to private wells. Protection of the watersheds that feed the Norwich water supply is critical to maintaining continued water quality and quantity. Protection of Norwich's water supply is essential to the health of all life forms, and to the capability of the town's population to grow.

³ The Fire District refers to the area that is supplied with town water, and the organization that provides it, managed by a Prudential Committee. *Persons residing within the limits of the Fire District who are voters in Town Meeting shall be voters in the Fire District Meeting. Title 20 VSA, Pt 7, ch. 171, ss 2484.*

Surface Water and Floodplains

The Connecticut River, as well as Norwich's many ponds, streams, and brooks, contribute to the scenic and recreational values for people, in addition to providing a source of water for vegetation and wildlife. River channels, lakes and ponds also provide flood storage capacity and aquatic habitat.

Surface water protection is essential to the conservation and health of the natural resource base, wildlife habitat, scenic quality, and recreational and education opportunities. Pollution of surface water can result from a variety of activities within a watershed. In general, the closer the activity to the surface water, the greater the impact on the surface water quality and its dependent wildlife.

To sustain surface water functions, surface water is best considered as the water-covered area and its surrounding buffers of land.

Floodplains, areas of low-lying ground next to a river or brook that are subject to flooding, provide a natural flood control system, allowing waters to recede gradually, when left undeveloped.

Wetlands

Wetlands, including vernal ponds, are valued for their storage of flood waters, their storage and absorption of soluble nutrients which would otherwise contaminate downstream surface waters, the discharge of water to surface waters during periods of low precipitation, groundwater recharge, filtration of pollution, the habitat they provide for many species that depend on them for all or part of their life cycle; and for recreational and educational opportunities. As with surface waters, the surrounding buffers are essential to the protection of wetlands.

Wetland protection contributes to the conservation of the natural resource base, water quality, wildlife habitats, scenic quality, and recreational and educational opportunities.

Wildlife Habitat/Biodiversity

Norwich's forests, fields, wetlands and waterways currently are home to bear, fox, coyotes, mink, deer, beaver, turkey, songbirds, trout, frogs, salamanders, and migrating birds in season, among others! Rare native orchids as well as other more plentiful wildflowers and ferns, diverse trees and shrubs enrich our town. Norwich's landscape will continue to support a widely diversified assortment of plants and animals only by maintaining large, unfragmented areas of varied habitat, and by protecting the corridors that connect habitat areas in Norwich with neighboring towns.

According to the Vermont Biodiversity Project, there need to be large areas of contiguous forest uninterrupted by roads for a minimum of 1,000 acres and connecting lands across roads. In addition, there should be diverse landscapes in form – hilltop to valley bottom--, and in surface geology, such as in bedrock and unusual soils in floodplains and wetlands.

Significant natural communities of wetlands, vernal pools and riparian buffers, need special attention, because they constitute the habitat and breeding grounds of many forms of wildlife – birds, mammals, amphibians and fish – and are critical to the well-being of ecological systems. Lands that host known species of wildlife or support special populations of flora, including rare or endangered species, are important components of the town's biodiversity.

For a fuller report of the recommendations of the *Vermont Biodiversity Project*, see Appendix 1.

Productive Soils/Farmlands

Soil properties such as depth, permeability, wetness, slope and susceptibility to erosion, define the land's capability to support development, agriculture, healthy forests or pasture grasses. Prime agricultural soils and those of statewide importance are the town's most productive soils for food production. Similarly, forest soils have been categorized for their ability to grow marketable timber.

Conserving the most productive forest and agricultural soils, either in large tracts, or in smaller parcels in close proximity to one another and accessible to a trucking route, is key to economically viable farming in Norwich. Not only does it protect these natural resources for future use, it also protects wildlife habitat and biodiversity, scenic resources, and rural character.

Recreation

Outdoor recreation is highly valued in Norwich in all seasons of the year. It takes many forms - from the solitary enjoyment of seeing a wildflower while resting on a bench, to a group hike up Gile Mountain, from biking, cross country skiing, to sports, games, swimming, and boating. The benefits range from spiritual replenishment to good health to the acquisition of athletic and social skills.

Lands that offer personal or socially interactive recreation, or active or passive recreation, are essential elements of the open space system. Access should be provided at a variety of appropriate places where development of such access will not compromise the character of the area.

A goal of the Town of Norwich is to provide outdoor recreational opportunities for many kinds of users.

Connectors and Buffers

In addition to the Appalachian Trail, Norwich has town-maintained trails, some of which are connected to a network. Lands that provide connections between trail segments, or between parcels that allow public access, are valuable to the overall open space system. These connections improve recreational opportunities and provide wildlife with routes to different populations of the same species (important for health of the population), food sources and additional habitat.

Some lands provide buffers for trail and recreation corridors or waterways. They protect the ecological stability and viability of an already-established park, conservation area, trail, stream or river. They also provide significant open space buffers between settlements and the natural/recreational resource and contribute positively to the open space system.

Class IV Roads and Trails

Class IV roads are an important resource for recreation. They are town roads which Norwich is not obligated to maintain, except for bridges and major culverts. Because Class IV roads have public right of ways, and are usually unpaved stretches through woods and fields, the public enjoys them for hiking, cross-country skiing, biking, horseback riding and other forms of recreation.

Trails are public right of ways which are not considered roads or highways. The town is not obligated to maintain them. Usually through woods and/or along brooks and streams, they provide people an opportunity to be connected to the natural world. They are used for walking, hiking, cross country skiing, horseback riding, and, when appropriate, biking.

Class IV roads often serve as recreation corridors; they connect to existing trails or other Class IV road segments forming circuits. These roads and trails are significant resources within the open space system.

Scenic Assets

Scenic resources are highly valued by Norwich citizens and should receive special consideration in the prioritizing of open space lands to be conserved. These are identified in the *Inventory of Scenic Resources, Norwich, Vermont* (2000). Lands that contribute to the protection of a view from a road or trail should be considered a high priority, as well as the places from which viewing can take place.

The natural skyline of the ridges in Norwich is an important visual component of the local landscape, and thus an important element of the open space system. Distant views, such as those of Mt. Ascutney, Smarts Mountain, Mt. Cube, Moosilauke and the White Mountains, should be enhanced and maintained.

Historic Sites and Cultural Landscapes

Important elements of the open space system are structures of traditional use (for example, stone walls, dams, barns, sugar houses), and/or land that enhance or protect an area of significant local or regional historic interest.

Education

If land, due to its natural characteristics and ease of accessibility, provides unique or unusual opportunities for education, it should be protected as a component of the open space system.

II. OVERVIEW OF PLAN

After reviewing maps of the natural resources of Norwich, as well as surveys regarding open space, the committee envisions a greenbelt, creating an arc at the periphery of the town with the town center as its apex. In the S, W, and N, the arc is in the higher elevations; it generally follows the ridge lines of the Blood Brook Watershed, stretching from the Appalachian Trail in the south to Gile Mountain in the NW, to the ridges near New Boston Road, and then the ridges delimiting the Ompompanoosuc watershed. It descends in the NE to the Ompompanoosuc River basin. The Connecticut River shoreline forms the eastern periphery of the arc. The greenbelt is in the more rural parts of the town.

Fingers lead from the arc towards the center of town, contributing significant conservation/recreational benefits to the town. They provide trail access and a wildlife corridor; at the same time they conserve scenic, agricultural, forestry and wetland resources.

Other key areas serve as protective buffers and/or connectors to conserved/recreational land.

Areas beyond the greenbelt arc contribute significantly to biodiversity-- providing habitat especially of fish, waterfowl and mammals-- and to related recreation. Farmlands in these areas contribute to crop/resource production, as well as the conservation of resources. These should also be considered in this Informal Open Space Priorities Plan.

The Greenbelt creating the arc is comprised of these areas:

- The Appalachian Trail Corridor to the S,
- Connectors to Gile Mountain from the AT in the W, following the ridges defining the western edge of the Blood Brook Watershed,
- From Gile Mountain to Meetinghouse Hill, along the ridges forming the northern edge of the Blood Brook Watershed,
- Ridges of the Ompompanoosuc Watershed to the Ompompanoosuc River, stretching from Bradley Hill Road, along Kerwin Hill Road, down to the river basin,
- From the Ompompanoosuc River basin to the Connecticut River, including Campbell Flats and the plateau of farmland above it, and
- The shoreline of the Connecticut River.

Fingers reaching from the town center include:

- A connecting trail corridor from Main Street to Hopson Road, from Hopson to the Hemlock Ridge development in Hartford with a trail leading from it under the powerlines to the Appalachian Trail Corridor.
- A connector whose core is the Fire District Land. Starting from the town-owned Ballard Land on Dutton Hill Road, it connects by the Norwich “Pool” to the Fire District Land with the Bill Ballard Trail. It reaches up to the Appalachian Trail via the Burton Woods Road to Bragg Hill Road to Brown Schoolhouse Road, and extends westward along Gile Mountain Ridge Trail;
- A connecting corridor along New Boston Brook and Wetlands and the ridge leading to Meetinghouse Hill above them; and
- A connecting corridor from the Old Town Center, starting with the Meetinghouse Farm (Van Arman) on Union Village Road, leading to the northeast part of town near Ompompanoosuc River.

Other key areas: connecting corridors, buffers and special places are...

- A corridor connecting Beaver Meadow Road to Huntley Meadows, from St. Francis of Assisi Church,
- A corridor/buffer along Blood Brook, from Elm Street to Hopson,
- A mid-corridor, connecting Olcott Road at New Boston Road to the Fire District land along Beaver Meadow Road via Tilden Hill Road and trails.
- Special places: Cemeteries.

Areas beyond the greenbelt arc include:

- Mitchell Brook and Tigertown,
- Beaver Meadow/Chapel Hill area, and
- Norford Lake.

General Comments

The proposed plan would provide access to open space within a short distance of most dwellings in Norwich.

The envisioned greenbelt, fingers, (corridors of open space reaching from the center) and other specific areas incorporate most of the open space locations named in surveys as important to conserve.

The plan builds on existing conserved open space in the village, as well as in the more rural parts of town. Proposed trails in the village link conserved parcels or lead to a recreational area, providing the refreshment of an off-road route along brooks, through meadows and woods. The “fingers” and greenbelt take advantage of previously conserved parcels.

III. CONSERVATION/RECREATION AREAS

(In this section each of the areas is described briefly and the natural and social resources that benefit the town—its open space benefits—are listed and described.)

A. The Greenbelt Arc

1. Southern Part of the Arc:

THE APPALACHIAN TRAIL CORRIDOR AND BUFFER Following the Ridgeline that Defines the Blood Brook Watershed

One of the nation's pre-eminent recreational treasures is minutes away from most Norwich homes. The Appalachian Trail (AT) is a continuous hiking trail from Mt. Katahdan in Maine to Springer Mountain in Georgia. One of the first two National Scenic Trails, the Appalachian Trail was created on property purchased by the National Park Service. In Norwich, the trail is maintained by the Dartmouth Outing Club. After traversing about two miles by roadway – from Ledyard Bridge, via Main Street to the trail entrance near the top of Elm Street, the AT threads its way through woodlands, sometimes close to open fields, as it climbs and descends slopes. It generally follows the ridgelines that define the southern part of the Blood Brook Watershed in Norwich and makes its way to Hartford. (The watershed is the specific land area that drains into a brook or river, in this case, into Blood Brook, which flows into the Connecticut River at the “lagoon” adjacent to the Montshire Museum.)

The Appalachian Trail Conference and the Upper Valley Land Trust started a process of accepting conservation easements on abutting lands to create a buffer for the trail. The buffer conserves a scenic woodland/farm landscape near the trail, as well as a wildlife corridor for animals. The practice of accepting conservation easements should be continued to complete the buffer around the Appalachian Trail. In Norwich the Appalachian Trail Corridor owned by the National Park Service comprises 697 acres. Currently the buffer of conserved lands has 556 acres.

Open Space Benefits

Wildlife Habitat/Biodiversity

The AT corridor permits wildlife dispersal through a landscape increasingly subdivided and disrupted by human activity. Widening narrow portions of the corridor would improve dispersal and habitat opportunities.

Ecologically, the trail corridor provides habitat for a diversity of flora and fauna. Harboring a full array of common woodland plants and animal species, the area includes some fine wetlands and an area of rich "mesic forest," with plant species rare in Vermont, in addition to the matrix natural community of Northern Hardwood Forests and the related, Hemlock Northern Hardwood Forest. The forest condition is excellent along the Trail corridor.

Recreation

The Appalachian Trail allows quick escape from the bustle of daily life in the Upper Valley to a peaceful and relatively wild landscape dominated by second growth forest.

Connectors and Buffers

This major open space corridor serves as a backbone of protected recreational land, a driving force to develop connecting trails in town. The diligence of the conservation commission's trails committee and the generosity of landowners all contribute to the creation of multiple connections to the Appalachian Trail.

- The AT crosses Cossingham Trail.
- It connects to Happy Hill Road, via the Tucker Trail.
- By means of the Burton Woods Road and Brown School House Road it is linked to the Bill Ballard Trail in the Fire District Land which connects to the Norwich Pool.
- Via the top of the Fire District Land the Ballard Trail also connects to the Gile Mountain Ridge Trail, thus linking the AT with a favorite destination point and the highest spot in Norwich. This Gile Mountain Ridge Trail, hiked with the generous permission of private landowners, does not have permanent protection.
- From the intersection of the AT with the trail under the powerlines, hikers can hook up with the local Heyl Trail, leading to the top of Elm Street, or to Bragg Hill Road. In the other direction, SW, the trail under the power lines leads to the Hemlock Ridge Development in Hartford. From there hikers can follow a woods road/trail to Hopson Road.

Scenic Assets

The entire Appalachian Trail is designated a National Scenic Trail, providing hikers with the refreshment of woodlands, wetlands, wildlands, and streams. The Trail Corridor also provides a wooded backdrop for the former Sise farm (now Russell) on Cossingham Road. The farm is ranked of high priority in Norwich's *Inventory of Scenic Resources*, because of the pastoral foreground and spectacular view of New Hampshire mountains,

visible from the open hillsides. Protected with a conservation easement, its hiking and cross-country ski trails provide recreational opportunities for townspeople, connecting to the Appalachian Trail.

2. Western Part of the Arc: A RECREATIONAL/WILDLIFE CORRIDOR Following the Ridgeline of the Blood Brook Watershed

This arc is the western part of the recreational/wildlife corridor, following the ridgeline that defines the Blood Brook Watershed, continuing from the Appalachian Trail in the southwestern part of town to Gile Mountain in the NW. The corridor is located on a forested ridge line with steep slopes and on occasional open fields.

Open Space Benefits

Wildlife Habitat/Biodiversity

A wide continuous corridor provides habitat for wildlife, such as deer, bear, bobcat, and birds.

Recreation

This corridor links a favorite destination point, Gile Mountain, to the Appalachian Trail in the south. From the Gile Mountain fire tower there is access along the new Ridge Trail to the Bill Ballard Trail, which continues into the town center or to the Appalachian Trail. Along the way there are side trails and class IV roads, forming a web of access for four-season recreation.

It should also be noted that the trail leading up to Gile Mt from Turnpike Road has been recognized by the Vermont Trails and Greenways Council as part of the Vermont Trails System. Additional areas with public access could enhance Gile Mountain recreational opportunities.

Connectors and Buffers

Snowmobile trails and class IV roads connect to West Hartford, at the SW end and from the upper end of Turnpike to Chapel Hill Road, connecting to both Sharon, where the trail goes through Downer State Forest, and to Strafford.

Scenic Assets

The 360 degree panorama from the fire tower atop Gile Mountain is one of the area's most extensive views, and most accessible. On a clear day, a half hour walk reveals views of the Green Mountains, White Mountains, and much of the Connecticut River valley in between. Gile Mountain with its proximity to Hanover [and Norwich] is worth climbing in all seasons to appreciate the variety of New England's landscape. [From Dartmouth Outing Guide, Second Edition, 1992)

The woodlands are lovely when hiking through; there are vistas from Gile Mountain and occasional views from the high ridgelines. Keeping the ridgelines as open space conserves the views from the roads in valleys following streambeds.

3. The Northern Part of the Arc FROM GILE MOUNTAIN TO MEETINGHOUSE HILL Following the Ridgeline of the Blood Brook Watershed

The area from Gile Mountain to Meetinghouse Hill straddles the boundary of the Blood Brook watershed, whose waters flow into the Connecticut River at the “lagoon,” adjacent to the Montshire Museum. This area connects the less recreationally developed eastern part of the Blood Brook watershed to the central and western areas, creating a broad arc of greenway along the entire Blood Brook watershed boundary.

From Gile Mountain, east, this section comprises the highest reaches and furthest distance from the town center within the Blood Brook watershed. Included are the class IV sections of Turnpike and Upper Turnpike Roads, Rock Ledge Road, Ladeau Road, leading to Kerwin Hill Road, Bradley Hill Road and Powers Road. Also included is the Bradley Hill Trail connecting Bradley Hill Road and Ladeau and Kerwin Hill Roads. The greenway continues along the southern valley ridge above New Boston Road, crossing New Boston Road south of the intersection of New Boston, Ladeau, and Norford Lake Roads to Meetinghouse Ridge, which is the ridge between New Boston Road and Bradley Hill Road.

Open Space Benefits

Surface Water

This area includes the uppermost reaches and intermittent streams of Lord Brook, Blood Brook, Upper Turnpike Brook, New Boston Brook in the Blood Brook Watershed, and Avery Brook, and other streams flowing east in the Ompompanoosuc watershed.

Wetlands

The area includes National Wetlands Inventory wetlands at the top of Turnpike Road and in the New Boston Brook valley.

Wildlife Habitat/Biodiversity

The most remote areas of land in northwestern Norwich, and the fingers extending down from the arc are designated as core habitat for wildlife, because the land is uninterrupted by roads. Between Upper Turnpike/Turnpike/Needham Roads there are 1,731 acres; between Upper Turnpike/Douglas/ New Boston Roads, 1,800 acres; and between New Boston Road and Bradley Hill Roads, 1,440 acres. The last of these is also identified as deer wintering habitat, as is the land between New Boston Road and Norford Lake Road. This last section of forest extends into Thetford.

Productive Soils/Farmlands

The lower slopes of the areas support active hayfields used to feed horses, cows and sheep. On New Boston Road beyond the intersection with Norford Lake Road, continuing toward South Strafford, there are numerous landowners raising horses, sheep and cattle. The land is in hay production and used for grazing. Windy Hill Farm on New Boston Road commercially raises chickens, sheep, beef, turkeys and eggs. From Gile

Mountain to Turnpike Road to Upper Turnpike, a continuous corridor of land is enrolled in the Current Use program. Another group of parcels is in Current Use along the top of Meetinghouse Ridge above New Boston Road and Bradley Hill Road.

There are historic farming sites and stonewalls indicating the old partitioning of land for grazing and timber.

Recreation

The upper reaches of a watershed are typically the last to be disturbed for development. Because this area is remote and shows very little evidence of human alteration, it is extremely popular for recreational pursuits.

The class IV sections of Turnpike Road, Upper Turnpike/Rock Ledge Road, Ladeau Road, Bradley Hill Road and Powers Road form “passes” from the undeveloped parts of the Blood Brook Watershed to the neighboring watersheds. These “recreation pathways” are extensively used for four-season non-motorized recreational activities. The passes along the ridgeline form the core of many recreational loop “trails” for mountain bikers, hikers, walkers, Nordic skiers, snowshoers and equestrians. The Norwich Recreation Program sponsors mountain biking classes, which use these recreation pathways, almost on a daily basis. Hunters access the upper reaches of the watershed from these pathways.

This section of the arc has wonderful potential for the creation of a recreation trail meandering along the Blood Brook watershed boundary.

Connectors and Buffers

This area connects the trails of Gile Mountain with the area to the east along the Blood Brook watershed ridge toward the Ompompanoosuc River and the Connecticut River to the east. This area connects the less recreationally developed eastern part of the Blood Brook Watershed to the central and western areas, creating a broad arc of potential greenway and recreational opportunities along the entire watershed boundary.

Class IV Roads and Trails

The area includes the class IV sections of Turnpike Road, Upper Turnpike/Rockledge, and Ladeau Roads. It links with Bradley Hill Trail and the class IV Powers Road, which connects Bradley Hill Road to Patrell Road

Scenic Assets

The ridgeline is the continuation of Gile Mountain and is the highest land within Norwich. The ridge is almost all forested so views from the ridge are not plentiful. However, the ridge is viewed from the valley floors as you travel throughout Norwich on Bragg Hill, Turnpike, Upper Turnpike, New Boston, Bradley Hill and Patrell Roads. The view up from these roads is defined by the ridge and forms the viewshed from these lower vantage points.

Historic Sites and Cultural Landscapes

Existing stonewalls and abundant woods roads are evidence of historic farming, grazing, and working woodlot.

4. Continuing a Northern Arc FROM MEETINGHOUSE HILL TO THE OMPOMPANOOSUC RIVER In the Ompompanoosuc Watershed

The Arc of Land Stretching across parts of Bradley, Pattrell, and Union Village Roads, and reaching down across sections of Rt. 132 to the Ompompanoosuc.

This swath of land composed of well over 1,000 acres encompasses all the characteristics that have been identified as being important in the Open Space Priorities Plan. Open fields and mixed forest predominate in the arc. While there are pockets of development of homes on 10-45 acres, there are also large, contiguous tracts of farmland. These tracts are from 98-261 acres and are important for their scenic, natural, and historic qualities.

Open Space Benefits

Water Supply

A significant aquifer has been identified on parcels of this land near the Ompompanoosuc River. Needless to say safeguarding this is essential.

Surface Water and Floodplains

Several streams fed by springs and runoff from the surrounding hillsides score these lands. A few ponds have been created by damming these water sources. These sources of water are very important for wildlife, recreational pleasure, and fire safety. Their purity helps keep groundwater clean.

Wetlands

Many vernal pools exist within this area.

Wildlife Habitat/Biodiversity

By having so many large, contiguous, open and forested parcels of land, there is the opportunity to preserve important and diverse wildlife habitats and corridors. Some of the animals frequenting this swath of land are foxes, muskrats, beaver, mink, otter, owls, deer, wild turkeys, and moose. Because this land has a mix of fields and forest, interrupted by streams and ponds, there is rich biodiversity. Some rare endangered plants may have been identified along land bordering the Ompompanoosuc.

Productive Soils/Farmlands

Portions of the open fields have been identified as having prime agricultural soils, especially near the river and on Kerwin Hill Road and Union Village Road. The area has farms with horses, cattle, and extensive hayfields,

Recreation

Bradley Hill, Pattrell, and Kerwin Hill Roads are all dirt roads except for the very beginning of Bradley Hill Road. All are used for recreation, such as hiking, biking, and horseback riding. Bradley Hill Trail continues from Bradley Hill Road and provides a link to Kerwin Hill Road and Ladeau Road. Powers Road closes the loop of Bradley Hill Road and Trail, Kerwin Hill Road, and Pattrell Road.

Connectors and Buffers

The Bradley Hill/Pattrell loop was just described. No trails exist in the block of land between Pattrell/ Middle Road and Union Village/Route 132, and Kerwin Hill Roads. Such a connector might be worth exploring. There is also the opportunity to connect with other parts of Norwich through Ladeau Road.

Class IV Roads and Trails

Powers, Bradley Hill, and Middle Roads are included in this swath of land and are important resources for recreation.

Scenic Assets

This area's open fields, accessible by public road, afford views of forests, hills, and long-range vistas into New Hampshire. Other sections, also having public access, are forested thus affording a totally different aesthetic experience.

In the *Inventory of Scenic Resources*, five sections along roads within this swath are identified as of priority for protection. Three are of the highest priority (A), and two of high priority: (B).

- Bradley Hill Road (area of Smith & Ladd farms) A
- Upper Section of Bradley Hill Road A
- Upper Section of Pattrell Road A
- Kerwin Hill Road by Thorburns' B
- Rt. 132 – Graybarns B

If the lands bordering these roads were altered, the scenic qualities would be compromised, unless carefully planned.

Historic Sites and Cultural Landscapes

Kerwin Hill, Pattrell, and Bradley Hill Roads are all named for early settlers of these respective areas. Cellar holes and stone walls crisscross the area and are indicative of earlier settlement patterns and ways of life.

Education

By working with landowners to conserve part or all of these contiguous parcels of land, a landscape of historic and natural beauty can be preserved. The existing trail and road

network gives the public the opportunity to explore the natural and cultural resources evident in this landscape.

5. The Greenbelt Arc in the Northeast THE OMPOMANOOSUC RIVER BASIN INCLUDING CAMBELL FLATS, AND THE PLATEAU OF FARMLAND ABOVE IT

Campbell Flats is the beautiful, flat stretch of fertile agricultural land on both sides of the road which bears its name and the farmhouse near its beginning off Route 132 in the north part of town. Campbell Flats, the shorelines of the Ompompanoosuc River and the high plateau of farmland and woods that border Thetford to the north and northwest are worthy of consideration as part of the town's open space.

Open Space Benefits

Water Supply

An aquifer of significant size – a potential source of drinking water and a resource of key importance – underlies the river and lands on both sides of the Ompompanoosuc.

Surface Water and Floodplains

The Ompompanoosuc, originating in East Orange County, dammed in at Union Village, Thetford, meanders in Norwich around glacial eskers before emptying into the Connecticut River. A wide basin at its mouth offers birds and other wildlife a valuable breeding and feeding area.

Moving swiftly with the spring run off and in heavy rainstorms, the river could damage nearby lands and dwellings. The river's banks with their trees and shrubs and the floodplains mitigate negative impacts of flooding. Conserving a buffer around the river provides habitat for birds and other wildlife. It also protects the bank from erosion and pollution from agricultural and road runoff. The water quality, currently compromised because of runoff from old copper mines in Strafford, will benefit from the anticipated clean up by the federal government. Preventing other pollution to the Ompompanoosuc and the Connecticut Rivers will benefit the whole river system, offering recreational opportunities and a potential source of drinking water.

Underwater often when the river is high, open fertile floodplains absorb floodwaters, thus mitigating their effect.

Wetlands

The wetlands are part of a complex riparian system with forests, meadows and streambanks, providing a rich variety of habitat for animals, finding food and cover, and plants. They help purify the river.

Wildlife Habitat/Biodiversity

The Ompompanoosuc River provides habitat for birds with its low lying wetlands near the mouth of the river and further upstream. It is in the migrating birds' flyway. A full compliment of birds and mammals use the river and its shores for water, food and shelter.

Productive Soils/Farmlands

Currently used for growing corn and pasturing cows, the fields in the floodplain are mostly prime agricultural soils The Windsor Loamy Fine Sand. The farmland on the high plateau is used for pasturing cattle and growing corn and vegetables.

Recreation

There are several swimming holes up and down the river, all currently abutted by private land. Public access to at least one would provide an opportunity to many who enjoy the pleasures of a special, untamed place. The river is navigable in all seasons up to Campbell Flats for canoes, kayaks, and crew shells. In springtime, canoers and kayakers can enjoy the waters for an extensive stretch.

There are many trails for horseback riding on both sides of the river and fording it in two places, used by general agreement between the private landowners and the riders. The trails could be open to the public for riding and other uses.

Class IV Roads and Trails

Wight's Cemetery Road, leading to the cemetery in the middle of a field, is used for hiking and access to the old town cemetery. A bridge over a stream has washed out that would lead from Campbell's Flats Road to Hogback Road.

Scenic Assets

The river, the flat fields and the undeveloped steep slope to the high plateau provide a scenic viewshed from Campbell Flats Road and Route 132. Campbell Flats was designated a scenic resource of the highest priority in the Scenic Resources Inventory.

6. The Eastern Part of the Arc THE CONNECTICUT RIVER SHORELINE

The Connecticut River is one of the most significant natural, scenic and recreational resources in Norwich. In recognition of its significance to the nation, the entire watershed became the Silvio O. Conte National Fish and Wildlife Refuge in 1995, and in July 1998, the river was named an American Heritage River. (SRI, p. 10)

Yet public access in Norwich is extremely limited. The railroad line from White River Junction to Wells River, built in the mid 1880's, has prevented access to most of the river, yet also has protected the shoreline. Access for swimming, as well as additional access for boating, are high priorities of the Norwich Recreation Council. At present the town owns 1/8 of an acre on River Road, used for car-top boat access.

On the Ompompanoosuc River, nearly at its confluence with the Connecticut River, the Vermont Fish and Wildlife Service owns a parcel with boat access. Patchem's Point on the former Loveland property is a five-acre parcel owned by the Vermont Department of Forest, Parks and Recreation. There is a primitive canoe campsite accessible from the river.

A conservation easement on a parcel near the junction of River Road and Rte. 5 North protects a vital wetland, as well as a field with prime agricultural soils. The field is used to grow commercial vegetable crops. The railroad track on this parcel prevents public access to the river.

The Montshire Museum of Science, with 90 acres south of Main Street and east of Route 91, owns over 2,000 feet of Connecticut River shoreline property, as well as land facing the railroad right of way between it and the river. Its property includes an inlet, the lagoon, where Blood Brook enters the Connecticut – a favorite spot for birds, water-related mammals, and recreational boaters. The museum's web of trails includes one along part of the shoreline. Its private canoe access in the lagoon and its shoreline trail are open to visitors of the museum.

Open Space Benefits

Water Supply

Continued protection of the river from the adverse effects of nonpoint source pollution and development – such as road salts, agricultural fertilizers, untreated storm water, and increased impervious area – should be a priority since the river represents an important potential water supply for the towns along its shores, including Hanover and Norwich.

Surface Water and Floodplains

The Connecticut River is one of the designated American Heritage Rivers. Because of the passage of the Clean Water Act, the water quality has improved dramatically.

Wetlands

There are several areas of riverine and submergent wetlands along the shoreline, where waterfowl are observed and where "nursery" conditions and food are available for many aquatic species.

Wildlife Habitat/Biodiversity

The Connecticut River is a major route for bird migration. The marshes and other wetlands along the Connecticut River provide migrating song birds and raptors with food, water, and shelter. Numerous species of waterfowl, including ducks, egrets and blue herons, nest along the river. Non-game small mammals such as beavers, fishers and otters that need continuous access to water abound along the river. The Connecticut River now is home to trout and, further downstream, to salmon.

The critical element needed to ensure ecological diversity in our natural communities is water. Protecting the banks of the Connecticut River conserves critical habitat for wildlife.

Productive Soils/Farmlands

The flat lands along the Connecticut River are some of the most productive agricultural soils in the northeastern U.S. Some of the flood plain fields with prime agricultural soils are used for winter, as well as summer vegetable crops.

Recreation

The Connecticut River could provide wonderful opportunities for public swimming, if an appropriate parcel could be purchased that is east of the railroad tracks. Boating access, too, requires finding appropriate parcels. The Connecticut River shoreline is potentially a magnificent corridor for walking, biking, bird watching and cross country skiing, if permission could be obtained to use the railroad right of way for a recreational corridor, in addition to its use as a rail line. This may be possible in the northern reaches of Norwich: *A Connecticut River Rail-with-Trail Feasibility Study, White River Junction to Wells River, Vermont*, September 2002, recommends a “6.68 mile segment from River Edge Lane (Kendall Station) to Bridge Road in Thetford” for further consideration as a trail (p.2).

Scenic Assets

The entire stretch of the Connecticut River has been designated of the highest priority in Norwich’s *Inventory of Scenic Resources* (January 2000). Views of the meandering river with its shoreline of wooded banks, open fields, and marshes up and down the river, give way to views of the surrounding hillsides.

Historic Sites and Cultural Landscapes

Norwich developed as a town because of its location on the Connecticut River. Prosperity for early settlers of the Upper Valley was a function of access to water transportation, productive soils and favorable terrain along the floodplains of the Connecticut River. Along tributaries of the river, such as Blood Brook, power was available for mills.

Education

Greater public access along the shoreline of the river could provide an outdoor classroom for teaching the importance of environmental protection and open space conservation.

B. Connecting Fingers to the Greenbelt Arc

1. A TRAIL FROM THE GATEWAY ON MAIN STREET TO HOPSON ROAD, FROM HOPSON ROAD TO HARTFORD, AND ON TO THE APPALACHIAN TRAIL CORRIDOR The Southernmost Corner of Norwich

A possible trail corridor connects the Gateway of town going west to conserved lands, and then through private lands to Hopson Road and beyond. The trail starts on an old

carriage road; it traverses down the slope to the conserved area along Blood Brook, crosses the brook (a bridge would have to be built⁴) and continues through conserved meadows to woods and meadows on Hopson Road. On the other side of Hopson Road, an old woods road/trail continues west to the Simpson Hemlock Ridge development; from there hikers can turn north to walk on a trail which generally follows the powerline, intersecting with the AT Corridor, or, if continuing further under the powerline, with the Heyl Trail. The Heyl Trail leads east to the top of Elm or continues north to Bragg Hill Road (at a point approximately 1 mile up from Beaver Meadow Road).

Open Space Benefits

Surface Water and Floodplains

The shoreline of Blood Brook is already conserved in this area. After cascading down the ledges at Elm Street, the Brook flattens out and becomes wide and marshy. Abundant with wildlife, it has flood storage capacity and also serves to filter/catch sediment. The trail provides access to the brook within 1/4 mile of the mouth of Blood Brook at the Connecticut River.

Wildlife Habitat/Biodiversity

The corridor has diverse natural communities of wetlands (swamp and marsh), hemlock and hardwood forest, streambed, fertile fields, rolling meadows, and steep wooded hillsides with ledge outcroppings. Accordingly, it provides habitat for various wildlife, including deer, turkey, fishers, and songbirds.

Productive Soils/Farmlands

The long meadows on Hopson Road are almost all composed of prime agricultural soils. There are also prime agricultural soils in the woods on the other side of the road.

Recreation

A trail from the Gateway at the beginning of Main Street to Hopson Road would nicely complement the popular and well-used walking loop, originating in the village that includes Elm Street, Hopson Road, and Beaver Meadow Road. This circuit walk passes the conserved Warner Meadows. The trail would provide close contact with waterfalls of Blood Brook, hayfields and woods, right from the Gateway.

The trail would provide a largely off-road path for children from the Marion Cross Elementary School to the Dresden School District lands (proposed playing fields) on Route 5 South. School children have access from the School through the Milt Frye Nature Center (the former Peisch Land) to Main Street on the town-owned right of way. After directly crossing Main Street, they would use this new trail, leading to Hopson. After a short walk along Hopson, they could cross directly to the playing fields. Safe crossings would need to be added at Main Street and at Route 5.

Since Blood Brook flows between the two conserved properties. At the location where a bridge is needed, the Upper Valley Land Trust could recruit volunteers for a bridge building workshop, or the Student Conservation Association might be able to build it if the Town hires/funds a summer crew.

The current woodland trail across Hopson Road is popular with many residents of the Hemlock Ridge Development. From that development there is an immediate link to the trail under the powerline, which dips into the woods around steep ledges, and then back under the powerline to connect with the Appalachian Trail Corridor.

Scenic Assets

The trail has views of the lively brook with its varied vegetation and of open meadows. The long meadows along Hopson Road with a forested backdrop and views of New Hampshire Hills are of high priority for protection in the Norwich *Inventory of Scenic Resources*. The south side of Hopson is a pleasant woods walk through mixed hardwoods and evergreens with fine stonewalls in many places. There are views from the powerline of the valley below and of the New Hampshire hills.

2. THE FIRE DISTRICT LANDS A Connector Reaching Down from the Greenbelt Arc to Conserved Land Near the Center of Town

The Fire District Lands are comprised of 917 acres in six parcels, five of them contiguous, on both sides of Beaver Meadow Road. They protect an aquifer that was once the town's primary water supply. Today, these lands serve as vital recreational, scenic, educational and historic assets, and as animal habitats. They form the gem and a major portion of a finger-shaped "greenbelt connector" to the Appalachian Trail, and from the downtown area to the outlying, rural greenbelt that arcs around the town. The Fire District Lands link to both the Appalachian Trail and the Gile Mountain Ridge Trail. Development rights to the property were conveyed by the Fire District to the town in the mid-1990s, restricting, but not preventing future development.

Open Space Benefits

Water Supply

The Fire District Lands protect the significant aquifer that was once the town's water supply. It is of paramount importance to the Prudential Committee of the Fire District, as well as the Management Committee for the Fire District Lands, that the aquifer be protected for potential future use by the town.

Surface Water and Floodplains

Charles Brown Brook, a main tributary of Blood Brook, starts high in the ridges that define the Blood Brook Watershed north of Beaver Meadow Road. It descends into the valley that the road traverses, carving a deep canyon along part of its path. The Fire District Lands on both sides of the road buffer the streambed.

Wetlands

There are many vernal pools, and a marshy area near the intersection of Beaver Meadow Road and Tucker Hill Road, the site of an extensive series of old beaver dams.

Wildlife Habitat/Biodiversity

Deer, fisher, fox, turkeys, hawks, and other species call this area home. There are some reports of moose, as well. The expanse of land uninterrupted by roads, between Beaver Meadow/Turnpike/Tilden Hill Road and Chapel Hill Road is approximately 3,500 acres, providing invaluable habitat to wildlife.

Wildflowers are plentiful along the Ballard Trail and other trails on the property. The area, having been heavily touched by mankind in the past, has monocultures (i.e., stands of red pine, white pine, hemlock, hardwoods).

Productive Soils/Farmlands

This is an area of abandoned farms, now largely grown up to woods. Soil maps indicate extensive prime agricultural soils on both sides of the brook, S of Beaver Meadow Road and on both sides of Bragg Hill Road.

Recreation; Connectors and Buffers

The Ballard Trail, which runs along Charles Brown Brook, is entirely within Fire District lands. The Gile Mountain Ridge Trail (also called the blue ribbon trail by mountain bikers) is in parcels 2 and 3, and goes to the top of Gile Mountain. It is about three miles long, and efforts should be made to protect it. Private property owners have granted permission to travel along this informal trail that runs from the end of the Ballard Trail, across Beaver Meadow Road, to the Gile Mountain Ridge Trail.

In parcel 5, new trails are being planned and constructed for hiking, biking and cross-country skiing. Fire District Lands connect with the Appalachian Trail by going up Brown Schoolhouse Road, to Bragg Hill Road, and Burton Woods Road to the Appalachian Trail.

The property provides a buffer for Charles Brown Brook and the significant aquifer that was once the source for the town water supply.

Class IV Roads and Trails

The property connects to the Brown Schoolhouse Road, leading via Bragg Hill Road and Burton Woods Road to the Appalachian Trail.

A small section of Kate Wallace Road connects the Fire District via Tucker Hill Road to Chapel Hill Road in the Beaver Meadow Community.

Class IV Tildon Hill Road connects the Fire District on both sides of Beaver Meadow Road. It could serve as part of a trail link to Turnpike, and through woods and fields to New Boston near the crooked half mile by the town dump, and from there to Union Village Road, via the Class IV Olcott Road.

Scenic Assets

The Ballard Trail with its ferns, wildflowers, a “grand canyon” cut by the Charles Brown Brook is included in the *Inventory of Scenic Resources* as of high priority.

Historic Sites and Cultural Landscapes

From early colonial days, there are many stone walls, as well as house and barn foundations, including the Wheeler barn foundation on parcel 5. This large foundation is particularly striking, and is close to Beaver Meadow Road.

Education

At this writing, Marion Cross School sixth grade classes are creating an interpretive nature loop on parcel 5, identifying flora, fauna and historical sites. Peggy Robinson's *Norwich Vermont Wildflowers Blooming Time Order* (May, 1997) is a guide to the Ballard Trail. All who wish are encouraged to help monitor wildflowers along the trail. School children have created painted wooden disks – each with unique symbols for flowers and animals – to mark water crossings and interpretive sites on the Ballard Trail. School children have also been studying a vernal pool along the trail.

3. A Connecting Corridor ALONG NEW BOSTON BROOK AND WETLANDS AND THE RIDGE ABOVE

Starting from Meetinghouse Hill (called Westinghouse Hill on USGS quad maps) a north-south trending ridge forms the eastern boundary of the Blood Brook watershed; below, to the west, are the New Boston Brook and extensive wetlands.

The ridge (highest elevation approx. 1220 ft.) and brook valley below form one of the fingers of land that reaches into Norwich from the outer, less developed areas of town. It is located to the east of New Boston Road, north of Olcott Road and west of Bradley Hill Road; it is bound to the north by Bradley Hill Trail and the class IV Ladeau Road.

Open Space Benefits

Surface Water

The waters of this area flow into three separate drainage basins. Water from the west side flows into New Boston Brook then into Blood Brook and the Connecticut River. The east side flows into a small stream which empties directly into the Connecticut River. The northern waters flow into Avery Brook and into the Ompompanoosuc River.

Wetlands

East of New Boston Road, New Boston Brook contains a large system of NWI mapped ponds and wetlands. At the intersection of New Boston Road and Ladeau Road is another wetland system, which drains into Avery Brook.

Biodiversity/Wildlife Habitat

The ridge is mapped as deer habitat; this information from earlier studies needs to be verified. The extensive emergent and shrub wetlands, stretching almost two miles, varying in width, are included in the National Wetlands Inventory. A wide corridor would provide not only for breeding grounds for wildlife and route to and from the more remote Greenbelt.

Productive Soils/ Farmlands

There are two areas of prime Ag soils, one in an open field in the New Boston valley floor, and another in the woods just north of Olcott Road.

The New Boston Valley and the area above Bradley Hill Road are used for grazing.

Recreation

Creating a trail in this corridor would provide access to the network of class IV roads and trails in the Greenbelt: Class IV Ladeau Road, Bradley Hill Trail and Bradley Hill Road are well used connectors to other recreational pathways and corridors from the south to the northern parts of Norwich and into Thetford.

Connectors and Buffers

This finger is a key connector to the Greenbelt. It also serves as a buffer, protecting the brook and wetlands.

Class IV Roads and Trails

Class IV Ladeau Road, Bradley Hill Trail and Bradley Hill Road connect with class IV Powers Road which connects to Pattrell Road to the east . Ladeau Road connects to the class IV part of Kerwin Hill Road and recreational opportunities to the north.

Scenic Assets

From New Boston Road, one sees the open fields along the brook and wetlands give way to a steep wooded ridge beyond, Traveling north along Bradley Hill Road, the ridge is to the left. From the top of the Meetinghouse Hill Ridge there are long range views to the east towards Bradley Hill Road and beyond.

Historic Sites and Cultural Landscapes

The name of Meetinghouse Hill derives from its prominence, overlooking the earliest Meetinghouse in the Old Town Center. It has a lookout tower that was used for civil defense purposes.

4. ALONG UNION VILLAGE ROAD

The Old Town Center and Beyond on Union Village Road

The Old Town Center

The Old Town Center, just north of the village along Union Village Road, offers historic and scenic sites of unusual value. With its colonial houses and barns, with views of distant hills and open fields abutted by wooded ridges, it is highly prized by Norwich citizens. The Meetinghouse Hill Cemetery near the site of the first town meeting house, and the Olcott Class IV road connecting the Old Town Center to a green corridor, provide additional historic, scenic and recreational benefits. The land includes natural communities – wetlands – significant for biodiversity. It rises from Meetinghouse (van Arman) Farm to the Olcott-Johnson (Zea) house and barn and extends westward to connect with other open space areas. Informal trails and Class IV roads make connections northwards to land near the Ompompanoosuc River, as well.

Because each part of the Old Town Center is distinctive (as well as contributing to the whole), it will be described with its open space benefits separately: The

Meetinghouse Farm (Murdock-Pierce-Van Arman), the Olcott-Johnson (Zea) House and Barn, and the Meetinghouse Hill Cemetery.

MEETINGHOUSE FARM (MURDOCK-PIERCE-VAN ARMAN)

The farm at 128 Union Village Road is one of Norwich's identifying landmarks, valued especially for its scenic and historic significance, as well as its continuing productivity. The farm is on both sides of the road, with 87 acres east of Union Village Road, and 27 on the west.

Open Space Benefits

Wetlands

A small pond and wetland area on the east side of the road are identified on the National Wetlands Inventory and, more extensively, on the conservation commission's inventory of wetlands.

Productive Soils/Farmlands

About 55% of the 87 acres on the right hand side, driving from the center of town, and about 67% of the 27 acres on the left, are open fields, used for pasture and hay crops. Prime agricultural soils form a significant portion of the 87 acre parcel.

Connectors and Buffers

With its scenic and historic agricultural landscape, the farm serves as a buffer of open space to the tightly clustered town center, right below it. Other open fields across from the farm buildings also give shape to this buffer. It is connected through the Class IV Olcott Road to a potential finger of open space, extending up the New Boston Valley and ridges above it to Meetinghouse Hill, and thus to the greenbelt at the periphery of the town.

Scenic Assets

Because of its prominence high on a hillside, Meetinghouse Farm is visible from the Interstate 91, from Beaver Meadow Road, Hopson Road, Main Street and Route 5 S. The view of the traditional house-barn complex, as one travels towards town on Union Village Road, encompasses the buildings, the open fields and forested ridgelines in the foreground, as well as distant peaks in New Hampshire. The farm is identified in the *Inventory of Scenic Resources*, January 2000, as one of the prime reasons for designating Union Village Road as worth of the highest priority for conservation. Featured on the cover of the Inventory and in a watercolor in Tracy Hall, it is one of the identifying landmarks in Norwich, and part of an area of high scenic value.

Historic Sites and Cultural Landscapes

Located in the area which was the first town center, the house is designated in the Vermont's register of historic sites. The statement of significance for the ca. 1788 house reads: *An outstanding example of a 2-story, wood frame, Georgian style house with symmetrically paired interior chimneys, a hip roof, and a "Georgian" first floor plan;*

i.e., basically two relatively equal size rooms flanking each side of a center stair hall with two chimney stacks symmetrically positioned on either side of the center stair hall between the flanking rooms.

The statement then refers to p. 36 of the book, *Early Houses of Norwich, Vermont*. By Philip Aylwin White and Dana Doane Johnson, second ed., 1973, which adds that the house . . . *is the only example in Norwich of the fully developed Georgian style*. This historically rich area includes an old town cemetery and the Zea farm with its house and restored barn (see below).

THE OLCOTT-JOHNSON (ZEA) HOUSE AND BARN

The farmstead is located at 65 Maple Hill Road. The distinctive shape of the Georgian house with its central chimney and hip roof sloping down on four sides, is part of the view of this beautiful colonial New England farm with the historic barns, surrounded by open fields, located along a tree-lined road.

Open Space Benefits

Productive Soils/Farmlands

The open fields are used for hay crops.

Scenic assets

From Union Village Road, the view across open fields of the handsome 18th century house and barn against a backdrop of further fields and wooded hillsides evokes the spirit of an earlier time, treasured in the present.

Historic sites and cultural landscapes

Perhaps the oldest house in town, Peter Olcott's fine house was used for town meetings from 1774 to 1780. The Georgian style house with its hip roof and center chimney, as well as the barns are on the state of Vermont's register of historic sites.

MEETINGHOUSE HILL CEMETERY

On a hill above the corner of Union Village and Olcott Roads, the early town cemetery offers a place of quiet solitude, connected to the past.

Open Space Benefits

Connectors and Buffers

Olcott Road, a class IV road that leads from the cemetery on a hill above, through woods, along old stone walls, connects the area with New Boston Road, and a desirable potential trail network along New Boston Brook or the ridgeline above it, and to another possible trail link, over New Boston Road, through woods to Turnpike, and via Tilden Road, connecting with Fire District Lands.

Scenic Assets; Historic Sites and Cultural Landscapes

With views of distant hills and farmland, the cemetery is a place of peaceful repose. Gravestones of many early Norwich settlers can be found, including the Olcotts, Murdocks, Newtons and Lovelands. It is next to the site of the first town meetinghouse.

Beyond the old Town Center along Union Village Road

The major route from Norwich to Union Village and Strafford beyond the Old Town Center offers close-up and distant scenic views of farmland and hills. Natural communities of wetlands are close to the road on both sides, in forested areas and in fields.

Open Space Benefits

Wetlands

Several wetlands on the National Wetland Inventory and on the Norwich Conservation Commission Inventory are found near Goodrich Four Corners Road and further north along Union Village Road, including a vernal pool that is a Natural Heritage Site.

Connectors and Buffers

Informal trails, used by hikers and horseback riders with permission of the owners, connect from Maple Hill Road to Blood Hill road. A network of informal trails leads from there to Middle Road and Old Farm Road, and across Rte. 132 to the Ompompanoosuc River.

Scenic Assets

While some houses are nestled near the road, the overall impression is of views across open fields, woods and partially closed canopies of trees, making the entire stretch of Union Village Road scenic. The entire road is considered a resource of highest priority for protection in the Norwich *Inventory of Scenic Resources*.

C. In-Town Connectors, Buffers and Special Places: Cemeteries

1. OPEN FIELDS CONNECTING ST. FRANCIS OF ASSISI CHURCH ON BEAVER MEADOW ROAD AND HUNTLEY MEADOWS

The 22 acres of fields connecting St. Francis of Assisi Church on Beaver Meadow Road and Huntley Meadows on Turnpike Road consist of three parcels of private land. Today, these three landowners generously allow foot traffic, and the area serves as a safe and convenient access route between the playing fields and Beaver Meadow Road. This area

is also popular for dog walking. In winter, it is used for cross-country skiing and snowshoeing. Its in-town location (the church is about 0.2 miles from Dan and Whit's), flat terrain and connection to Huntley Meadows make it a unique asset.

Open Space Benefits

Surface Water and Floodplains; Wetlands

The land runs along the eastern edge of Blood Brook, and much of the land (particularly the main corridor used between the church and Huntley Meadows) is floodplain. In addition, a portion of one property is designated as wetlands on the National Wetlands Inventory.

Wildlife Habitat/Biodiversity

The area is a major deer corridor; a variety of birds can be seen nesting in the meadow grasses or perching in the understory trees and shrubs near the brook.

Productive Soils/Farmlands

This is an area of prime agricultural soils as defined by the Natural Resources Conservation Service (NRCS).

Recreation; Connectors and Buffers

This land serves as a major connector to Huntley Meadows, the town's main recreation area and playing fields that are used for sports such as soccer, lacrosse, baseball and tennis. The land is used for walking, dog walking, cross-country skiing and snowshoeing and as a safe off-road route (and shortcut) from the center of town and the Marion Cross School to the playing fields.

These open fields serve as a buffer for Blood Brook and as an important in-town open space buffer between highly developed areas.

Scenic Assets

This land abuts Huntley Meadows, a scenic resource of high priority in the *Inventory of Scenic Resources*. By itself, this connection has views to the north of Meetinghouse Farm, which is ranked as a scenic resource of the highest priority in the *Inventory* and one of the identifying landmarks of Norwich.

Education

Students from the Marion Cross School frequently conduct studies on another section of Blood Brook. If public access were to be acquired, this property would provide another opportunity for further studies.

Historic Sites and Cultural Landscapes

This land was once a part of the original Parker farmstead.

2 ALONG BLOOD BROOK, A WILDLIFE/RECREATION CORRIDOR

From Hopson Road to Elm Street

A scenic corridor along Blood Brook, passing through open fields and woods, provides wildlife with shelter, food, and water, and could provide human beings with an in-town trail, giving the refreshment of nature to those who work and live nearby.

Warner Meadow, a gentle hillside along Hopson Road where beginning skiers used to learn their first turns, slopes down to Blood Brook. It provides an anchor for a potential corridor for wildlife and people along the brook from Hopson Road to Elm Street.

Conserved with an easement granting public access, it is owned by abutting neighbors, who joined together to keep it as open space. With an edge of shrubs and trees along the brook, it provides a resource for wildlife. A wooded parcel and then open fields could provide access along the stream to Elm Street.

Open Space Benefits

Surface Water

A conserved corridor would protect the water quality of Blood Brook by providing a buffer to the stream.

Wildlife Habitat/Biodiversity

It provides food, shelter and water for wildlife.

Recreation

The open hillsides above the stream in Warner Meadow are used for frisbee, cross country skiing and other play.

A corridor would provide a trail, a place for refreshment in nature, within 1/4 mile of Main Street, that could become part of the favorite walking loop from the center of town.

Connectors and Buffers

This is part of a buffer for Blood Brook, on both sides of Hopson Road. Perhaps a buffer could also be conserved between the conserved parcel with the waterfalls near the access of the Hillside Cemetery to Beaver Meadow Road.

Scenic Assets

The cascading falls of Blood Brook by Elm Street cause walkers and bikers to pause, stop and look. They are ranked as a scenic resource of high priority in the *Inventory of Scenic Resources*. The falls on the NW side of Hopson Road similarly are a place of beauty, enjoyed by many.

Education

Children in the Marion Cross School would have access to a larger stretch of this nearby stream. Pupils regularly use Blood Brook in their science classes, learning about stream ecology and monitoring the water quality.

3. SPECIAL PLACES: CEMETERIES

(from the *Inventory of Scenic Resources, Norwich, Vermont*)

These paragraphs, written by Bill Flynn, L.A, illustrate the importance of cemeteries as public open space:

In the latter half of the nineteenth century, American cemeteries were cherished as significant public spaces. Communities boasted of their beauty in travel brochures making them one of the country's earliest tourist attractions. Today cemeteries enjoy a less prestigious role in our communities but nonetheless they remain very important civic spaces.

. . . Cemeteries offer the solitude and serenity required for quiet contemplation *in our contemporary world*. Many communities promote not only the spiritual value of their cemeteries, but also the cultural, and even, the ecological significance. Cemeteries serve as a repository of the history and culture of the community. The names on the headstones trace the ethnic evolution of the community. The elaborately sculptured headstones and monuments reflect the skills of talented local artisans who down through the ages have carved beautiful designs in slate, marble and granite. Cemeteries, if thoughtfully designed, not only accommodate the dead but also improve the quality of life for the living by enhancing local environmental conditions. Designers, naturalists, and government agencies are recognizing the importance of including cemeteries in community open space plans. Cemeteries offer opportunities to improve wildlife habitat and wetlands.

Communities should encourage visitation within their cemeteries and develop promotional programs aimed at increasing the public's awareness of their value and significance.

Cemeteries are important not only for historical and religious reasons. They are often the only public open lands near roads traveled by pedestrians and other recreational users. While visitors should respect the old stones, with appropriate precautions, cemeteries can be reclaimed as places of quiet recreation for present and future generations.

Norwich has eleven town cemeteries. Three contain the remains of people who died before the Declaration of Independence was signed. The largest two, Fairview, across from the beginning of Hopson Road on Beaver Meadow Road, and Hillside, off Hopson, are near the village and are mowed frequently. They offer an easily accessible place of solitude. The smallest are near abandoned roads in the Podunk section of town and are reminders of the tough lives families led in the mid 1800's. Several, like Meetinghouse Hill Cemetery off Union Village Road, offer views of distant hills, villages or scenic farms in town.

D. Beyond the Arc Forming the Greenbelt

1. MITCHELL BROOK AND TIGERTOWN ROADS AREA

This largely wild area of forests, brooks, pond, and wetlands with its varied topography is a haven for biodiversity and for recreation that takes advantage of abundant wildlife and peaceful, secluded woodlands.

The area in the southwest corner of Norwich borders the towns of Sharon on the west and Hartford on the south. Approximately six miles from the Norwich town center, it is reached by traveling west out Beaver Meadow Road and southwest on Mitchell Brook Road to Tigertown Road. The area encompasses both sides of Tigertown Road, and Podunk Road to Illsley Road and the Class IV Burton Woods Road. The northern boundary runs from Mitchell Brook Road to Griggs Mountain, the second highest peak in Norwich.

Open Space Benefits

Surface Water

Mitchell Brook, which feeds into the White River and Lake Mitchell in Sharon and Tigertown Brook, are the main sources of surface water. There are many small tributaries which feed into these two brooks, as well as a wetlands area and several ponds.

Wetlands

Three connecting ponds and a surrounding bog area along Tigertown Road are designated wetlands according to the NWI. The Lake Mitchell Trout Club Inc. owns this land. A smaller wetland is further south along Tigertown Road.

Wildlife Habitat/Biodiversity

The area provides cover and feeding grounds for a variety of small and large mammals, birds, insects, and fish. It is popular with hunters. A National Heritage Inventory Site indicates the presence of a rare plant near the Sharon border.

Not only are there large areas of contiguous forest, uninterrupted by dwellings or roads, but there are large *parcels* (500-1,000 uninterrupted acres) of undeveloped land, making this area of significant interest, because of the biodiversity of plant and animal life. Much of the land is undisturbed due to its steep terrain, distance from the center of town, and its wealth of wildlife, which has attracted ownership by a sportsman's club and other landowners who prefer the relatively wild environment. A section of 150+ acres just west of Burton Woods Road is conserved land. Currently, however, there is a 430 acre tract for sale in the southwest corner (Norwich/Sharon/Hartford) that is being advertised for development purposes.

Three places on Griggs Mountain are Natural Heritage Inventory sites for rare or endangered species of plants and animals.

Recreation

Both Sue Spaulding and Burton Woods Roads are important class IV roads, linking the area to other recreational resources. They connect this area to the Appalachian Trail at Illsley Road, leading into Sharon. The AT goes south and continues along the Hartford/Norwich town line, crossing Tigertown Road. Burton Woods Road also connects this part of Norwich to the network of trails in the western arc of the Greenbelt. The terrain is steep, offering more challenging opportunities for hikers, snowshoers, hunters and naturalists.

The Lake Mitchell Trout Club owns a large tract of land (348 acres in Norwich and 719 acres in Sharon) along Tigertown Road, including the wetlands and Lake Mitchell in Sharon. Members enjoy the secluded wilderness, its wildlife, and associated recreation. None of this land is permanently conserved at the present time, although it is in Current Use.

Connectors and Buffers

The area near Podunk Road and north would serve well as part of the buffer to the Appalachian Trail. As mentioned previously, there are several class IV roads that connect this area to the Appalachian Trail, town trails and Norwich proper. These class IV roads also connect Norwich to the towns of West Hartford and Sharon.

Class IV Roads and Trails

The area includes Sue Spaulding Road, Burton Woods Road and the upper section of Podunk Road.

Scenic Assets

Griggs Mountain (1,680 ft) lies just east of Burton Woods Road and is the second highest peak in Norwich. The ridge is forested so views are more important from the valley as one travels throughout Norwich. Tigertown and Mitchell brooks cross under the road numerous times as it meanders through the area offering visual and auditory serenity. Spectacular stands of birch dot the mixed forest, while rock outcroppings appear in the steep slopes rising up from Tigertown Road. The peaceful, secluded atmosphere of this area, plant diversity and the abundant wildlife are great scenic assets.

Historic Sites and Cultural Landscapes

Vermont Place Names: Footprints in History by Esther Munroe Swift (pgs 534-5) mentions the name of Podunk. It derives from a Natick Indian word meaning “a boggy place” but may also have been used “as it has been in other parts of the United States, in a derogatory sense, meaning a rural or out-of-the-way place.” The meaning of Tigertown Brook has also been lost, but in 19th century slang a “tiger” referred to a “rough or hard fighting man”. It can be construed that the Tigertown Brook area was a neighborhood that in other towns was called “Tough End.”

There is historical significance to the Lake Mitchell Trout Club, which was incorporated as a non-profit organization with the State of Vermont in 1893. Among its first members

was Charles Downer, a businessman born in Sharon, who represented Sharon in the Vermont legislature in 1898 and 1904 and was senator from Windsor County in 1902

(Taken from: *Encyclopedia Vermont Biography: A Series of Authentic Biographical Sketches of the Representative Men of Vermont and Sons of Vermont in Other States*. Dodge. Burlington: Ullery Publishing Company, 1912, p. 173.)

2. BEAVER MEADOW COMMUNITY

A Rural Community in the Western Part of Norwich

The Beaver Meadow Community is approximately five miles from the center of town, on the Beaver Meadow Road. The gateway to “The Meadow” is protected by the Fire District Land, which gives the entrance, down Howard Hill a sense of a compact rural community. The community has a rich history, with documentation back as far as 1764. References to the historical characters and geographic sites of Beaver Meadow have been compiled in a book, *The Good Men Do, A Tribute to the Folks of Beaver Meadow Community*, by local resident, Elsie Sniffin.

Open Space Benefits

Surface Water

Small tributaries feed into Mitchell Brook, which flows into the White River.

Wetlands

The Meadow floor has one of the largest wetland systems in Norwich, partly created by active and abandoned beaver dams. It is home to many animals and birds. Numerous vernal pools provide salamanders and frogs with a place to breed.

Wildlife Habitat/Biodiversity

The area provides habitat for deer, fisher, fox, turkey, porcupine, moose, ground hogs, snowshoe hare, hawks, black bear, blue herring, owls, grouse and of course beaver. The forests are the matrix natural community, the Northern Hardwood Forest, and the Hemlock Northern Hardwood Forest. Some of the wetlands are shrub scrub with alders and willows.

This area has many wildflowers, including the grass of Parnassus and the rare fringed gentian.

Productive Soils/Farmlands

This community once was mostly working farms with cleared and open fields. (The former open fields can be viewed in the famous painting “Beaver Meadow” by Paul Sample, on display at the Hood Museum of Art.) At present there are no working farms in the Meadow. There is a small sugaring operation on Sugar House Road.

Recreation; Connectors and Buffers

Beaver Meadow offers a wide range of opportunities for recreation and hunting in all four seasons. It is another hub in the network of Norwich's recreation trail system. The Beaver Meadow area has always been a destination for hunters from other towns and for the local community. Hunting is a vital part of the community because of the availability of large tracts of undeveloped land. The small tributaries to the White River are popular for fishing. The Beaver Meadow Schoolhouse is a "trailhead" for mountain bikers to connect to several class IV roads, The Gile Mountain Ridge Trail (The Blue Ribbon Trail) and other trails. The Meadow is noted for the opportunities for mountain bikers to explore a variety of terrains and travel a great distance, connecting to other communities and to the center of town. The Meadow has many opportunities for leisure walks on dirt roads, old woods roads and trails. These walks follow small streams and lead the traveler over rolling hills to wooded ridgelines. The Meadow also has a Valley Quest Adventure, an educational walk, informing people about the history of the area. There are many longer hikes and bike rides that connect the Meadow to the Ballard Trail, Appalachian Trail, other class IV roads and other towns. The recreational opportunities are abundant for the winter explorer as well, traveling by ski, snowshoe and snowmobile.

Conserving land on the east side of Chapel Hill Road would provide a buffer for the Gile Mountain Ridge Trail (currently unprotected). The Fire District Land protects the gateway.

Class IV Roads and Trails

The Meadow has three class IV roads: Kate Wallace Road connecting to Tucker Hill and Bragg Hill Roads-- Ruellah Road and Sugar House Road.

Scenic Areas

This active rural community captures a sense of the past with large tracts of undeveloped land filled with small streams, rolling hills and forested ridgelines.

Historical Sites and Cultural Landscapes

The woods are full of stone walls, old foundations and family cemeteries offering a glimpse of the community's history. There are rich stories of Native Americans and their presence in the Meadow. The Beaver Meadow Chapel is registered with the National Registry of Historic Places. More can be read about the history of Beaver Meadow in *The Good Men Do, A Tribute to the Folks of Beaver Meadow Community* and viewed in Paul Sample's painting, Beaver Meadow at the Hood Museum.

Education

There are many opportunities for the study of wetlands and wetland habitat for school groups (Marion Cross School students studied beavers in the Meadow in the fall of 2003) and others wanting to study wetlands. There also is the opportunity for tracking animals and understanding how they move through a wooded forest. There are stone walls, old cellar holes and many historical sites to discover in the woods and in the beginning of newer forest.

3. NORFORD LAKE AREA

A lake with an undeveloped shoreline, highly prized by sportsmen and women, gives the area its name. It is bounded by New Boston Road to the south and Norford Lake Road to the east. It extends into Thetford to the north.

Open Space Benefits

Surface Water

This area is in the Ompompanoosuc River watershed. Norford Lake is in this area's central core. It is approximately 26 acres and is just below 1000' elevation. Most of the lake is in Thetford. A privately owned fish and game club surround the lake.

Wetlands

Just to the south of the lake is a National Wetland Inventory wetland at below 1080' elevation, forming the headwaters of Avery Brook, which flows east and drains into the Ompompanoosuc River.

Wildlife Habitat /Biodiversity

The wetlands and Norford Lake are home to moose, deer and other wildlife typical of this forest type. The continuous, uninterrupted area makes it a core area for biodiversity according to the Vermont Biodiversity Project. This area is a gateway to undeveloped lands north and east into Thetford. Gove Hill Road in Thetford forms the northern boundary. Route 132 and the Ompompanoosuc River forms the eastern boundary.

Class IV Roads and Trails

Norford Lake Road is class IV beyond Norford Lake. In Thetford Picknell Road and Cream Street start as class IV roads. There is a popular mountain bike circuit ride on Norford Lake Road to Picknell Road to Gove Hill Road to New Boston Road and back to Norford Lake Road.

Scenic Assets

The area to the north of New Boston Road has been designated "high" priority on the Norwich's *Inventory of Scenic Resources*.

IV. RECOMMENDATIONS

Guiding this Informal Open Space Priorities Plan is a vision of Norwich in times to come, a town shaped physically by its varied topography, generous open spaces, and various built structures. It is a town where every resident benefits from a stable and bountiful resource base and a variety of outdoor recreation opportunities. The plan

encourages stewardship of our cultural and natural surroundings, and voluntary citizen participation in achieving open space goals. Effective open space planning involves a town, organizations and citizens working together, respectfully, to realize community and individual goals.

The goals of the Informal Open Space Priorities Plan, as stated in Chapter I, are:

- To promote the conservation, protection and sound management of the natural resource base;
- To protect and enhance the ecological integrity of the town's diverse natural communities and wildlife habitats;
- To sustain the scenic quality and visual character of the town;
- To maintain and expand landscape-based recreational and educational opportunities;
- To protect and preserve the town's historic sites and cultural landscapes; and
- To protect and preserve existing in-town open space.

Because this is an informal plan for the use of the Conservation Commission and Norwich Special Places, recommendations are non-regulatory; they concern working together with willing landowners to achieve long-term goals for the town. This plan guides the Conservation Commission in recommending expenditures from the Conservation Trust Fund to the Selectboard, or the town voting in town meeting. It is thus meant to ensure the thoughtful expenditure of public moneys from the town's Conservation Trust Fund. It guides Norwich Special Places in choosing projects to work on and help finance. It guides landowners who wish to conserve land in a way that contributes to the overall open space plan. Finally, it can provide guidance to other conservation organizations.

This section is in two parts: General Recommendations and more specific Conservation/Recreation Area Recommendations.

GENERAL RECOMMENDATIONS

An effective open space program involves long-range planning and opportunistic action by landowners and the town. The recommendations that follow are ones that can be taken by landowners who wish to participate, the Conservation Commission and Norwich Special Places.

Usually, when landowners want to realize the dollar value of their land, they approach realtors, because their community has not given them other options for realizing its value in a way that gives the town a say, as well. When a community takes the initiative in communicating with owners of priority lands long before there is a need to sell, there is a better chance of fostering a good combination of conservation and development. Estate

planning can benefit both parties—Norwich can conserve more of its open space and landowners will realize their financial goals through wise planning.

The Conservation Commission, having started with an idea and vision, has created a trail link from the Appalachian Trail to Gile Mountain with the generous consent of private landowners. It has encouraged neighborhood groups to present requests for use of town's Conservation Trust Fund, usually in proposals with matching neighborhood funds.

Norwich Special Places—affiliated with the Upper Valley Land Trust—has as its mission fostering communication with landowners and being able to act quickly when the time is right.

General recommendations are:

1. To implement this Open Space Priorities Informal Plan the Norwich Conservation Commission and Norwich Special Places should develop a coordinated strategy, which they review and update periodically.
2. They should encourage and solicit conservation projects.
3. The two organizations should establish a means for on-going communication regarding the conservation of open space. This could be, for example, through reports at definite intervals and/or through representatives coming to each other's meetings.
4. At least one representative of the Conservation Commission should be on the Projects Committee of Norwich Special Places, because it carries out a proactive role in implementing the open space plan to benefit to the town. The Conservation Director of the Upper Valley Land Trust should also advise the committee.
5. In addition to the financial records of the Conservation Trust Fund kept by the Town of Norwich's Treasurer and records of the Norwich Special Places Fund and Lois McGean Fund kept by the Upper Valley Land Trust, the treasurer of the Conservation Commission and the treasurer of the Norwich Special Places Board should develop a history and ongoing record of the use and balance of the respective funds, with a higher level of detail than accounting standards would require, but needed for a review of prior and continuing history.
6. Norwich Special Places and the Conservation Commission should take the lead in helping to educate the public, by inviting staff from the Upper Valley Land Trust and natural resources scientists to assist residents in understanding
 - The natural resources that exist on their property and in their neighborhood
 - Techniques for voluntary, permanent land protection
 - Estate planning techniques

- Best management practices (BMPs)
 - Current use assessments
 - Open space economics
7. Norwich Special Places and the Conservation Commission, possibly in conjunction with the Recreation Council and Norwich Historical Society sponsor an annual community-wide event to educate and Norwich's open space, focusing on a particular natural area.

CONSERVATION/RECREATION AREA RECOMMENDATIONS

(This section has specific recommendations for each area.)

The Greenbelt Arc

The Southern Part of the Arc

THE APPALCHAIN TRAIL CORRIDOR AND BUFFER

Purpose:

To provide an ample buffer around the footpath of the Appalachian Trail, so that Norwich residents and other hikers experience wilderness and farmlands, uninterrupted by views of residential or commercial development, and so that there is a substantial corridor for wildlife and biodiversity.

To conserve the multiple connecting recreational links and their surrounding corridors of open space for wildlife and biodiversity.

Recommendations:

1. Work with the Appalachian Trail Conference (ATC) and the Upper Valley Land Trust to establish ample buffers where they are currently narrow.
2. Make money from the Conservation Trust Fund and the Norwich Special Places Fund available to match ATC Land Trust funds to create the buffer.
3. Encourage the donation or sale or conservation easements on lands abutting the connecting class IV roads and trails, offering at least to defray the related costs of donating an easement from the Conservation Trust Fund.

The Western Part of the Arc

FROM THE APPALACHIAN TRAIL TO GILE MOUNTAIN

Purpose:

To conserve a trail corridor as part of the Greenbelt arc and keep it well connected to other parts.

To conserve a substantial habitat for wildlife and biodiversity, and maintain connections to other conservation areas.

To conserve the character of the connecting class IV roads from the Fire District to the Appalachian Trail via the Burton Woods Road, to Tigertown and Mitchell Brook via the Sue Spaulding Road, and to Beaver Meadow via the Kate Wallace Road.

Recommendations:

- 1) Protect the trail by encouraging donation or sale of trail easements or conservation easements, sale of an option or right of first refusal.
- 2) Encourage the donation of conservation easements on lands abutting the trail.
- 3) Encourage the donation of conservation easements on lands abutting class IV roads
- 4) Offer financial contributions from the town's Conservation Trust Fund, as available, to defray costs of donating easements.
- 5) Make available monies from the Conservation Trust Fund, the Norwich Special Places Fund to purchase conservation easements, options or rights of first refusal.

**The Northwestern Part of the Arc
FROM GILE MOUNTAIN TO MEETINGHOUSE HILL**

Purpose:

To continue a Greenbelt, providing recreational and wildlife habitat connections along Norwich's highest elevations; to protect water quality in the uppermost reaches of the Blood Brook watershed; to maintain and encourage working forests in the lesser developed areas of town; to protect forested ridge views from the valley floors.

Recommendations:

1. Hold a neighborhood gathering to discuss conserving open space in this area,
2. Create a continuous trail along the watershed boundary connecting the existing trails that lead to Gile Mountain, provide recreational access to the ridge formed along the Blood Brook watershed,
3. Encourage the donation of trail easements or conservation easements,
4. Encourage the donation of conservation easements on lands abutting the class IV sections of Turnpike, Upper Turnpike and Rockledge Roads, and
5. Encourage conservation easements on large parcels and contiguous groups of parcels that form core habitat areas between Turnpike, Upper Turnpike and New Boston Roads.
6. Make available funds from the Conservation Trust Fund, at least to defray the costs related with the donation of easements.

**Northern Part of the Arc
FROM MEETINGHOUSE HILL TO THE OMPOMPANOOSUC RIVER**

Purpose:

To sustain a substantial wildlife habitat/biodiversity core area which connects to other parts of the greenbelt, to protect scenic views to and from hillsides and ridgelines of

Bradley, Kerwin Hill and Pattrell roads; to protect a potential aquifer, wetlands, and vernal pools; to conserve existing recreational systems, both trails and class IV roads.

Recommendations:

- 1) Hold neighborhood gatherings to discuss conserving open space,
- 2) Encourage conservation easements on designated scenic areas, and as a buffer along class IV roads, Middle, Powers and Bradley Hill, and Trail,
- 3) Create further trails if landowners amenable,
- 4) Protect the aquifer with conservation easements, and
- 5) Encourage easements to create buffers around vernal pools (300 feet).
- 6) Make available funds from the Conservation Trust Fund at least to defray the costs related with the donation of easements.

Northeastern Part of the Arc

**THE OMPOMPANOOSUC RIVER BASIN, INCLUDING CAMPBELL FLATS,
AND THE PLATEAU OF FARMLAND ABOVE IT**

Purpose:

To protect groundwater in an aquifer of significant size, the water quality of the river, habitat for birds, mammals, fish and insects along its shores, to prevent negative impacts of flooding, to conserve prime agricultural soils, scenic areas and farmland; to create access to special recreational opportunities for swimming; and to conserve trails for horseback riding, hiking and cross country skiing.

Recommendations:

- 1) Protect the aquifer, shorelines and floodplains with conservation easements.
- 2) Encourage the donation of conservation easements to conserve prime agricultural soils, scenic areas and farmlands, and trail easements on the network of trails.
- 3) Consider the purchase of a parcel which provides access to a swimming hole with funds from the Conservation Trust Fund and/or the Norwich Special Places Fund,

Eastern Part of the Arc

THE CONNECTICUT RIVER

Purpose:

To protect the water quality of the river, conserve the habitat for birds and other wildlife along its shores; to retain the scenic quality of the river and its shoreline, especially as seen from Route 5 and River Road; to provide a place to swim and a boat access. To provide a safe route for walking, running, biking, and as close to the river as possible, trails for birding and hiking; to conserve parcels with outstanding prime agricultural soils.

Recommendations:

1. Purchase a parcel along the river that is suitable for swimming from a landowner who will consider a present or future sale to the town.
2. Purchase a parcel that is suitable for car top boating access, whose owner will consider a present or future sale to the town.
3. Recommend that the Conservation Trust Fund and the Norwich Special Places Fund, in addition to private fundraising, be used to purchase the properties or to secure an option or right of first refusal.
It goes without saying that donation of such properties would be gratefully received.
4. Encourage the donation or sale of conservation easements on lands with outstanding prime agricultural soils, critical wildlife habitat and/or scenic qualities.
5. Explore the creation of a 6.68 rails to trails route from Kendall Station to Bridge Road in Thetford with our neighboring town; explore grant possibilities and other financing, including some use of the Conservation Trust Fund and the Norwich Special Places Fund.
6. Explore the possibility of creating a trail in the public right of way in River Road and Route 5, where such a trail is not possible nearer the river.

Fingers reaching from the Town Center

The Southernmost Corner of Norwich**A TRIAL FROM THE GATEWAY ON MAIN STREET TO HOPSON ROAD, FROM HOPSON ROAD TO HARTFORD, AND ON TO THE APPALACHIAN TRAIL CORRIDOR IN NORWICH****Purpose:**

To create a trail corridor for recreation and scenic benefits; and in parts for wildlife/biodiversity; create a connector to the Greenbelt Arc and local trails; conserve the scenic fields with prime agricultural soils, edged by woods on the NE side of Hopson Road; provide an off-road access from the Marion Cross School to the open meadows of conserved land on Elm Street and to Hopson Road as a path to the proposed Dresden Athletic Fields on Route 5.

Recommendations:

- 1) Encourage the granting of public access across the already conserved open meadows,
- 2) Consult with landowners about creating a trail corridor and, if amenable, with potential permanent protection through trail easements and protection of the fields off Hopson with a conservation easement, and
- 3) Determine what permissions would be needed to allow public access on the trail under the Powerlines and in the nearby woods, from Hartford up to the AT Corridor.

A Connector extending from the center of town to the Greenbelt Arc ANCHORED BY THE FIRE DISTRICT LANDS

Purpose:

To protect the aquifer, surface water and wetlands; to conserve the recreational and educational opportunities and substantial wildlife habitat in the corridor, as well as the scenic qualities, especially along the “Grand Canyon;” to conserve access to the historic and cultural features. To create the key trail link between the Ballard Land and Fire District Lands.

Recommendations:

- 1) Ask the town and Prudential Committee to consider an easement, permanently protecting the Fire District Lands from development,
- 2) Have a neighborhood gathering to discuss conserving open space
- 3) Encourage the donation or sale of a trail easement, linking the Ballard Land to the Fire District Land, or permission, granting public access.
- 4) Encourage the donation or sale or conservation easements on lands abutting class IV roads linking the Fire District Lands to the Appalachian Trail, the Brown Schoolhouse Road and the Burton Woods Road, as well as on lands abutting the stretch on Bragg Hill Road between them, and Gile Mountain, and on lands abutting the connecting Class IV roads.

A Connecting Corridor ALONG NEW BOSTON BROOK AND WETLANDS AND THE RIDGE ABOVE

Purpose:

To protect water quality, wetlands and habitat for the New Boston Wetlands; to provide wildlife and recreational connections from the greenbelt outer arc south along the watershed boundary “finger” from the town center.

Recommendations:

- 1) Hold a neighborhood gathering to discuss conserving open space and creating a trail
- 2) Protect wetlands
- 3) If possible, create a trail in the valley or along the height of land to connect to the outer arc to the town center along Meetinghouse Ridge. This trail would connect with the class IV roads and Bradley Hill Trail at the northern part of this section for access to existing recreation corridors.
- 4) Encourage landowners to donate trail easements, giving public access to the new trail.
- 5) Encourage donations of conservation easements on lands along the ridge top and in the valley.

ALONG UNION VILLAGE ROAD: THE OLD TOWN CENTER AND BEYOND

Purpose:

To conserve scenic and historic sites in the Old Town Center, integral to our character as a town; to conserve a buffer of open space to the village, to protect prime agricultural soils and wetlands, to protect scenic views along the road; to protect existing recreational routes or create alternates, and create a link to trails in the Fire District Land.

Recommendations:

1. Communicate with owners of historic farmsteads, so that long-range plans include options for the town to help conserve the property in ways that meet their wishes and needs.
2. Recommend use of money from the Conservation Trust Fund and the Norwich Special Places Fund, as needed, for various options to conserve them, including the purchase of conservation easements.
3. Explore ways to maintain the Meetinghouse Hill Cemetery in ways that welcome and enhance quiet visits and educational use.
4. Hold a neighborhood gathering to discuss conserving the recreational trails, linking the Old Town Center to class IV roads and trails to the north.
5. Encourage conservation easements to protect scenic views and wetlands along Union Village Road, and along class IV roads, as well as trail easements for recreational corridors.
6. Make available funds from the Conservation Trust Fund to defray the costs related with the donation of easements.

Other key areas

A connecting corridor

OPEN FIELDS CONNECTING ST. FRANCIS OF ASSISI CHURCH ON BEAVER MEADOW ROAD AND HUNTLEY MEADOWS

Purpose:

To create a buffer for Blood Brook and Huntley Meadows; to provide an open-space buffer in downtown Norwich; to ensure a viable corridor for wildlife and sustain wildlife; to provide a safe and direct walking connection from downtown Norwich to the recreation fields; to preserve a popular walking, dog-walking, cross-country skiing and snowshoeing route; to allow additional opportunities for student observation of Blood Brook.

Recommendations:

- 1) Contact the current landowners, who generously allow public access, asking them to consider granting permanent access through an easement on the property or trail, offering at least to defray the related costs of donating an easement from the Conservation Trust Fund.
- 2) Establish a trail from Beaver Meadow Road to Huntley Meadows with access to Blood Brook.

**A wildlife/recreation corridor
ALONG BLOOD BROOK FROM ELM STREET TO HOPSON**

Purpose:

To create a corridor for wildlife/recreation in the fields and woods along Blood Brook; to provide an educational opportunity, close to the Marion Cross School.

Recommendations:

- 1) Have a neighborhood meeting about conserving the wildlife/recreation corridor,
- 2) Encourage the donation of conservation easements with public access or the donation or sale of a trail easement in lands abutting Blood Brook, and
- 3) Create a trail near the brook, linking Elm Street and Warner Meadow on Hopson.

NORWICH CEMETERIES

Purpose:

To provide open space that offers solitude and serenity; to sustain wildlife habitat and preserve critical open space; to preserve the Town's cultural heritage.

Recommendations:

1. Increase the community's awareness of the significance of the Town cemeteries as important civic spaces through a series of articles in the Norwich Times, the Valley News, The Spectator and other publications.
2. Develop promotional programs to engender a sense of civic pride and shared responsibility for the care and management of the cemeteries.
3. Enhance the natural and aesthetic character of cemeteries through the planting of trees, shrubs and groundcovers.
4. Encourage visitation; create seating areas and reflective gardens suitable for quiet contemplation.
5. Develop a series of children's educational programs that focus on the cultural and historical significance of the Town's cemeteries.
6. Preserve the Town's cultural heritage and artifacts; repair deteriorating or broken headstones and monuments.

Areas beyond the Greenbelt Arc

MITCHELL BROOK & TIGERTOWN

Purpose:

To discover and communicate the unique history and features of this area; to maintain the wildness of a core habitat area and corridor for wildlife and biodiversity; to conserve its

scenic qualities and recreational assets; protect views of Griggs mountain; provide an ample buffer around the Appalachian Trail, connect the area other trail systems. Protect the Natural Heritage Site, the habitat of a rare plant species.

Recommendations:

- 1) Encourage, the Norwich Historical Society or Lake Mitchell Trout Club to research and record the history of the area, especially of the Trout Club.
- 2) Communicate with Hartford and Sharon conservation commissions regarding the conservation of core habitat for wildlife/biodiversity, and linked recreational resources.
- 3) Work with the Appalachian Trail Conference and the Upper Valley Land Trust to create ample buffers to the AT
- 4) Encourage the Trout Club to consider placing a conservation easement on its property and other landowners, on contiguous parcels, thus creating buffers around its wetlands and surface waters, and conserving a substantial core habitat
- 5) Encourage the donation of conservation easements on land abutting the class IV roads to maintain the recreational network.

BEAVER MEADOW/CHAPEL HILL AREA

Purpose:

Conserve the rural character of a scenic, historic village with its center and surrounding open space; protect wetlands, core wildlife habitat, and recreational opportunities; conserve a buffer for the Gile Mountain Ridge Trail, and buffers along class IV roads

Recommendations:

- 1) Hold a neighborhood gathering to discuss conserving open space in Beaver Meadow
- 2) To coordinate open space planning and conserve a substantial core wildlife habitat Communicate with the conservation commissions of neighboring towns of Sharon and South Strafford to conserve a corridor of core wildlife habitat and recreational opportunities along class IV roads
- 3) Encourage the donation or sale of conservation easements on lands abutting the Gile Mountain Ridge Trail,
- 4) To conserve recreational opportunities that now exist via the class IV roads and trail networks encourage the donation or conservation easements on lands along class IV roads
- 5) Contribute monies from the Conservation Trust Fund to defray the costs associated with the donation of easements;
- 6) Make available funds from the Conservation Trust Fund and or Norwich Special Places Fund to help purchase conservation easements for the buffer to the Gile Mountain Ridge Trail, as needed.

NORFORD LAKE AREA

Purpose:

To protect water quality, wetland and wildlife habitat in the Avery Brook-Ompompanoosuc watershed. Protect the large wildlife/biodiversity core area centered on the lake including the wetlands to the south of the lake.

Recommendations:

1. Partner with Thetford on conservation efforts. Most of this area is in Thetford.
2. Contact the Norford Lake Club regarding conservation planning, especially contingencies in the event of a change in ownership of the club.
3. Hold a neighborhood gathering with landowners adjacent to the Norford Lake Club and encourage land protection and voluntary easements in conjunction with the Norford Lake Club's efforts.

V. OPEN SPACE PROTECTION AND FINANCING METHODS

Just as motivations for open space preservation vary from person to person, and circumstance to circumstance, protection techniques vary to meet differing needs. Landowners may give or sell part or all of their interest in property. By means of easements, they may restrict some uses of a piece of land for a stated time span or in perpetuity. In some situations, development rights may be transferred from one site to a distant site owned by another party. In Norwich there is the option for the town to purchase a key parcel or easement, or help defray costs related to a donation, provided by use of the town's Conservation Trust Fund and fundraising by Norwich Special Places.

A variety of protection techniques are available to private landowners, non-profits, and the town. Those most commonly used in Vermont and elsewhere are described below.

PROTECTION OPTIONS

Acquisition of Fee Simple

The purchase of the Farrell Farms to conserve farmland and develop affordable housing in Norwich used funding available from the Vermont Housing and Conservation Trust Fund, matched by monies from the town's Conservation Trust Fund and private donations. Purchase of a property in fee simple is a straightforward, direct transaction, on

the one hand, and possibly challenging to finance. It is a secure method, important for key properties the town will want to own or resell, assured of the protection of open space.

If a landowner donates a property, as Bill Ballard gave 42 acres in 1997, it is, of course, a wonderful gift to the town, while providing some tax benefits to the donor. The value of the real estate donated to a governmental or non-profit conservation organization is recognized in the tax code as a charitable contribution. Part of or all of the value of the land may be tax-deductible.

Bargain sale at a less-than-market-value price is a financially attractive variant of an outright purchase. It benefits the town because the cost of purchase is less. It can also benefit the landowner because the difference between the bargain sale price and the fair market value may be considered a charitable contribution and therefore qualify as an income tax deduction.

Conservation Easements and other Partial Interests in Land⁵

A conservation easement is a voluntary agreement to preserve land in perpetuity. Although filed with the deed, it does not transfer land ownership, but rather spells out a landowner's commitments to protect the existing character of this property. It is a flexible document and may be written to protect land in accordance with the landowner's wishes. A conservation easement may be given or sold to either a qualified non-profit organization, such as the Upper Valley Land Trust, the Vermont Land Trust, or The Nature Conservancy, and/or a public body, such as a town, a state, or federal agency.

Real estate is more than the piece of property; it carries with it a complex bundle of rights, including the right to improve the property, to mine the property, to take water from the property, to graze animals, to prevent others from visiting the property and to simply enjoy the property, to name a few examples. The bundle of rights and responsibilities that comprise land ownership may remain intact or may be allocated among a number of parties.

Typically, conservation easements restrict residential or commercial development on some or all of the property. Easements may also limit excavation and major disturbance of the natural ground surface. They can be used to control the number, location and design of buildings, assuring, not only the conservation of valued open space, but that a quality development plan is maintained in perpetuity. An additional advantage is the charitable deduction for income tax purposes, equivalent to the value of the difference between the appraised value with and without the conservation restriction.

Another common type of partial interest that can be donated or sold by landowners is a trail easement, providing a public right of way for certain specified uses.

⁵ * This section draws on *Wenham's Landscape: Guiding Growth for Tomorrow*, by The Open Space and Housing Study Committee, 1988, as well as the *Hanover Open Space Plan*.

Option and Right of First Refusal

In cases when there is a key parcel of land for the open space system, but immediate purchase is not possible, an option or a right of first refusal are interim measures that can be arranged with a willing landowner. They guarantee that there will be an opportunity to respond to the owner when the property is available for sale.

An option establishes a price at which the land could be purchased at any point during a specified period of time in the future. It gains time for raising money for the fee simple purchase, for completion of applications for grant assistance, for obtaining town appropriations, or whatever else is necessary to consummate the purchase.

A right of first refusal is less specific. It guarantees a future opportunity to purchase the land at a price equal to a bona fide offer from another party. It buys time, but does not establish a fixed price or date of purchase.

Options and rights of first refusal provide legal ways for eventual property ownership while providing time to organize and assemble financial resources. Neither obligates the town to make the purchase, but these options should not be employed, unless there is a high probability the town or other organization will exercise the option. While a landowner may grant an option or right of first refusal, typically the town or other organization purchases it.

Current Use Assessment

Norwich is fortunate that several landowners of farms and managed forests avail themselves of Vermont's Current Use Assessment Program. It helps protect their land temporarily, by keeping property taxes at an affordable rate.

The purpose of the program is to encourage and assist the maintenance of Vermont's productive agricultural and forest land; to encourage and assist in their conservation and preservation for future productive use and for the protection of natural ecological systems; to prevent the accelerated conversion of these lands to more intensive use by the pressure of property taxation at values incompatible with the productive capacity of the land; to achieve more equitable taxation for undeveloped lands; to encourage and assist in the preservation and enhancement of Vermont's scenic natural resources; and to enable the citizens of Vermont to plan its orderly growth in the face of increasing development pressures in the interests of the public health, safety and welfare. (Vermont Statute Title 32, ch. 124, PP. 3751.)

A Use Value appraisal is *the price per acre which the land would command if it were required to remain henceforth in agriculture or forest use* Vermont Statute, Title 32, chapter 124, paragraph 3752 (12) Farms and managed forest lands of 25 acres or more may be assessed at their value for their "current use" as farms and forests, rather than at their value, if purchased for development, called the "highest and best use" value. Forest management plans may include conserving and enhancing wildlife habitat, in addition to managing for the sustained harvest of timber, They may also be designed to conserve significant natural resources, that is, *areas with special ecological values; fragile areas; rare or endangered species; significant habitat for wildlife; significant wetlands; outstanding resource waters; rare and irreplaceable natural areas; areas with significant historical value; public water supply protection areas; areas that provide public access to public waters; open or natural areas located near population centers, or historically frequented by the public.* (PP. 3755, A & B).

Once in the program, the land cannot be developed without the owner being assessed a penalty equivalent to 20% of the fair market value of the land taken out of current use, or if in the program for 10 years or more, 10%. In Vermont, as of July 2003, the penalty is paid into the state's General Fund.

In sum, while current use does not prevent a property from being developed, it provides assistance and an incentive to keep land undeveloped, since annual taxes are lower.

FINANCING METHODS

The above recommendations often include use of the Town of Norwich's Conservation Trust Fund and the Norwich Special Places Fund. To create a coherent open space plan funding from public and private sources is critical. These sources can help defray costs for landowners, who generously donate easements, but are stretched to meet the related costs of their gift; they can be used to purchase conservation easements in key areas from landowners who are agreeable to a sale, but who reasonably desire to realize the financial equity of their property. They are not the only sources; these two funds may be used to leverage grants and revenues, public and private. The following paragraphs describe the funds, their founding, history, and use. They indicate the continuity of the present plan with the past, and the current balances.

NORWICH'S CONSERVATION TRUST FUND

The fund was an integral part of the Proposal for a Conservation Commission, in the *Norwich, Vermont 1973 to 1974 Reports of Town Planning Committees*. The Commission was established on July 8, 1974, the first in Vermont. The same year, "townspeople voted the first appropriation of \$5,000 to a fund now known as the Conservation Trust Fund. Additional appropriations of the same amount were voted in the next four years. "(Town Report, 1982, p. 40) The Conservation Commission, "charged with acting in the Town's interest when opportunities arise for the acquisition or control of high priority sites,"(1973-74 Reports, p. C1; PP 2C.) recommend the use of the fund to the Selectboard or to the townspeople, which may approve its use by affirmative majority vote in town meeting.

It is used: "to acquire property interests to protect and preserve the Town's natural and social resources. . . ." Natural and social resources are listed as Conservation/Recreation Benefits in this plan on pp. 6-9. They include natural resources such as aquifers—areas with ample groundwater as a potential water supply to a habitat of rare orchards, and social resources, such as a recreational trail or a "little park near the center of Norwich where elderly citizens can sit and visit with neighbors." (*Town Report, 1982, p. 41*)

The fund has been used several times: it helped purchase the 5.6 acres Loveland Strip along the bank of the Connecticut River, matching state funds, to purchase 7.3 acres

adjacent to the 50 acres Gile Mountain Tract to provide legal access and a parking area; for 1/3 of the library's new lot, for a small park near the Senior Housing. (p. 41), and to help purchase a conservation easement and land on the Farrell Farms on Route 5 North, conserving a farm and providing affordable housing, as part of a 2:1 private:public match with the Vermont Housing and Conservation Trust Fund. In 1990, again matching a grant from the VHCTF, \$10,000 was used to help purchase a conservation easement on the Stickney Farm in the Pompanoosuc. It has been used to cover acquisition costs, such as surveying, appraisals, and legal fees of landowners donating conservation easements to create a buffer for the Appalachian Trail Corridor, and on fields that were part of the Sommerville farm on Turnpike Road, both times matching private contributions. Typically, the Conservation Trust Fund has been used to leverage other public funds and privately raised contributions.

Since the initial funding by the town, the Conservation Trust Fund has grown from year-end solicitations by the Conservation Commission almost every year since 1995, by other donations, by profits from the "Good Humor Team" of teen-agers selling ice cream in the summer of 1996, and by the sale of their "uniform," beautiful blue T-shirts with a logo designed by Kate Emlen Chamberlin of the showy lady slipper, which Kate considers Norwich's flower.

The current balance is \$92,033. When used to defray costs related with donations of easements, it can go far. It could be spent in a minute, as part of the purchase price for significant open space, such as a place to swim on the Connecticut River.

In the present plan, offering to defray costs associated with the donation of easements is frequently mentioned. Landowners who have decided to generously give up development rights on their property are often surprised and dismayed by the costs associated with donation of a conservation easement. These include a property survey (if one does not already exist), a title search, legal counsel for preparation and/or review of the easement deed, stewardship fund fee, appraisal (if the easement is to count as a charitable contribution) and often land planning and/or financial planning assistance. Although the tax savings to the landowner resulting from the donation of a conservation easement typically exceed the associated costs, even the most willing and generous landowner can experience "sticker shock".

In order to encourage voluntary donations, the Conservation Commission recommends the use of the Conservation Trust Fund to assist property owners with defraying the costs of easement donation to implement this plan (except for the landowner's appraisal and professional counsel fees solely for the landowner's tax deduction purposes), whether to the town, a land trust or to another governmental entity. The terms of the conservation easement must meet clear professional writing and legal standards and be agreeable to the Conservation Commission in order for the project to qualify for these funds.

In special cases, the plan recommends use of the fund for the purchase of conservation easements or of land itself, seeking other funding, and leveraging with other funds, to the extent it is possible.

The Conservation Commission should research ways other towns raise moneys for their Conservation Trust Fund and bring a recommendation to the Selectboard or to the town as a whole.

THE NORWICH SPECIAL PLACES FUND AND THE LOIS MCGEAN FUND

A special fund of the Upper Valley Land Trust, the Norwich Special Places Fund was launched with an anonymous \$500 gift in December 1996, and has grown through unsolicited donations in its first five years, raising the total of donated funds to of \$13,193.23. \$8000 were used to pay costs associated with placing an easement (surveying, stewardship, etc.) on the town-owned Peisch land (the Milt Frye Nature Center). The board had been instrumental in placing a warrant article in town meeting, recommending a conservation easement be placed on the land. The current balance of the Norwich Special Places Fund is \$4589.89.

In addition, the *Lois McGean Fund* at the Upper Valley Land Trust, established by Michael McGean to honor his wife's memory, may be used for Norwich Special Places' projects, as well as other land conservation projects in Norwich and neighboring towns. Michael, a founding member of the original Norwich Special Places Committee, was delighted to offer the use of this fund to the new local arm of UVLT. The Norwich Special Places board participates in advising its use. The current balance is about \$3650.

Major fund raising is urgently needed to achieve the goals of this plan.

APPENDICES

1. Biodiversity: *The Vermont Biodiversity Project* applied to Norwich
2. The Conservation Commission's Criteria for Recommending the Use of Conservation Trust Funds to the Selectboard or the Town, voting in town meeting
3. Norwich Special Places' Criteria for Selection of Projects
4. Inventory of Conserved and/or Publicly-Owned Land in Norwich
5. List of Natural Resources Maps
6. Public comment on the Open Space Priorities, Informal Plan—an additional document

1. BIODIVERSITY

In January 2004 Norwich received a set of natural resource maps that help determine the habitats of diverse plants and animals in our town, thanks to the generosity of our neighbors to the north: The Thetford Conservation Commission hired ecologist, Elizabeth Thompson, the author of the *Report from the Vermont Biodiversity Project (Vermont's Natural Heritage: Conserving Biodiversity in the Green Mountain State, A Report from the Vermont Biodiversity Project, 2002)*⁶ to understand biodiversity in Thetford and surrounding towns. A Thetford resident, Heather Carlos, a graduate student in geology at Dartmouth, created the maps under her guidance.

Elizabeth Thompson interpreted maps of natural resources which serve as a “coarse filter” for the habitat of plant and animal species, as well as the natural heritage sites which identifies locations of rare species.

These maps include:

- Deer wintering habitat
- Natural Heritage Sites: habitats of rare or endangered plants or animals.
- Wetlands of several different types with a 100' buffer around them
- 100' Riparian Buffer around rivers and streams
- Surface Geology--such as silt in floodplains, wetlands, or sand and gravel--and Land Classification, e.g., forest, agriculture, commercial, residential
- Unique soils, such as the Windsor Loamy Fine Sand—along the Ompompanoosuc
- Core Habitat-- areas uninterrupted by roads and dwellings with a 500' buffer from them. The map shows E 911 Sites.

⁶ *The Vermont Biodiversity Project is the work of a group of natural resource agencies--including the Vermont Agency of Natural Resources and the U.S. Fish and Wildlife Service-- and conservation organizations, such as The Vermont Land Trust and The Nature Conservancy. Its purpose is *to create a coordinated statewide effort to identify and conserve biodiversity.... (p. 5)* While being widely used by towns and organizations, its goals and recommendations have not been formally adopted as the policy of the agencies involved.

The goal at the community level is to conserve:

1. at least a few large landscape areas in a town,
2. connecting links between them, and
3. appropriate buffers for key fragile features.

The landscape areas ideally contain representatives of the diverse bedrock and surface layers—such as gravel or fertile river-valley soils, which exist in a town. In addition, they should contain examples of the various upland, wetland and aquatic natural communities found in our southern Vermont Piedmont biophysical region. These landscapes can be *core areas* conserved for wildlife and low impact recreation, or *stewardship lands*, such as farms and forests managed to support biodiversity, and/or contribute to recreation, as well as provide resources. Areas of at least 1000 acres uninterrupted by roads or dwellings are important to provide habitat for plants and wildlife.

(The Appalachian Trail Buffer proposed by the Appalachian Trail Lands and the Upper Valley Land Trust varies from widths of approximately 1 mi. to 2.5 miles.)

Connecting corridors should ideally be 1/4 mile in width, although wildlife does travel even along narrow hedgerows, where there is cover.

The project recommends a 100' buffer around wetlands as the minimum for protecting water quality and habitat. (The state requires a 50' buffer)

Scientists involved in the statewide project also recommend a 300' buffer around vernal pools, --pools with no outlet streams so that fish cannot prey on them--the habitat for breeding amphibians, which migrate into the surrounding woods as adults.

100' riparian buffers are recommended to protect the water quality and habitat of streams and rivers. *(The Connecticut River Joint Commissions recommends buffers of 150' for rivers, 100' for medium streams and 75' for small streams, as one option. Other options vary the width according to site-specific conditions.) (Buffers to streams and wetlands can include recreational trails, as the Norwich Subdivision Regulations suggest (Section 3.3 (C 3), August 2002).*

Conservation of areas with unusual soils is recommended, because they have the potential to support rare natural communities.

Long-term protection for all viable rare species and significant natural communities in the state is a critical component of conserving biodiversity.

Taken together, these measures will help assure that Norwich's diverse native plants and wildlife will continue to thrive long into the future, as the town grows and develops.

For additional information, see the set of maps for Norwich, annotations for the maps by the UVM Ecologist, Elizabeth Thompson and the full *Report of Vermont Biodiversity*

Project, available in Phil Dechert's Office (Planning and Zoning). The maps are in Jpeg format.

The Open Space Committee wishes to express our thanks to the Thetford Conservation Commission and especially its chair, Jennifer Davey, for including Norwich in its project, for inviting us to join in their discussion, for bringing us copies of the maps, and helping us review them.

2. CRITERIA FOR RECOMMENDING USE OF THE NORWICH CONSERVATION TRUST FUND

(From the Norwich Conservation Trust Fund Policy and Procedures, proposed by the Conservation Commission and adopted by the Selectboard, November 11, 1996)

Criteria

Criteria for review

Each conservation project is unique. The criteria listed below are general, helping weigh the public benefit and significance of a project to the town. They will probably not all be relevant in the review of a particular project.

The public benefit of the natural resources of land or conservation easement and their significance to the town will be evaluated using the following criteria:

- The importance of the natural area in the community,
- Its relevance to the Town Plan and other conservation projects,
- Opportunities presented by the project to offer significant recreational or scenic benefits to Norwich citizens and others,
- The project's importance in maintaining a working landscape such as farming or forestry,
- Its value in an inventory, such as its score in the L.E.S.A. (Land Evaluation and Site Assessment) of agricultural and open lands or the Forest L.E.S.A., inclusion in the Norwich Conservation Commission's wetlands inventory, or a listing with the Vermont Natural Heritage Program,
- Its importance as a rare or unusual resource,
- Its significance as a habitat for plants or wildlife,
- Its proximity to other conserved lands or projected future projects, and
- Its value in protecting ground water resources or preventing floods.

In addition to these criteria the commission will look for evidence of public support for the project, both in written and financial form. Generally a request for funding could be for a portion of the total value of the land, conservation easement or other property interest. If an easement or other property interest is being donated, the same principle can be used to defray acquisition related costs. Thus, if a conservation easement worth \$100,000 is being donated, and related acquisition costs are \$4,000, a neighborhood might raise \$2500-\$3000, and the trust fund provide \$1000 to \$1500.

3. NORWICH SPECIAL PLACES CRITERIA FOR THE SELECTION OF PROJECTS

(From the Norwich Special Places Goals and Criteria for Acquisition of Land and Conservation Easements, reviewed by Jeanie McIntyre, Executive Director of the Upper Valley Land Trust, and adopted by the Board June 12, 1998.)

The goal of Norwich Special Places is to conserve places of high value to the Town of Norwich for their natural and/or social resources. These GOALS and CRITERIA will guide and prioritize decisions about acquisitions of land and the conservation easements.

LAND CONSERVATION GOALS

- To aid in the conservation of productive agricultural and forest land.
- To protect lands of vital importance to water supplies and water quality, which includes preventing floods and maintaining ground water resources.
- To preserve natural areas of rare and unusual importance with significance as habitat for plants or wildlife (natural areas of recognized ecological value).
- To protect lands of local and regional significance for recreational, scenic beauty or historic preservation.
- To conserve greenways—corridors of open space for wildlife and low impact recreation.

CRITERIA

Each conservation project is unique. The criteria listed below are all important and relevant in the review of a particular project. These are the criteria:

- Protection of one or more of the natural and social resources listed above.
 - Importance to Norwich and the region as indicated in such documents as the Norwich Town Plan (May 10, 1996), Guideline for the Conservation Trust Fund, Land Evaluation and Site Assessment (LESA), Forest Land Evaluation and Site Assessment (FLESA), Norwich Conservation Commission's wetlands inventory and the Vermont Natural Heritage Program.
 - Capacity to garner local financial support as indicated by the NSP Advisory Board (now Council).
 - Likely to be developed in the future to a use that does not preserve its special value to Norwich.

Background

To draw up the goals and criteria given above, the Norwich Special Places' Board reviewed in detail criteria for the use of Norwich's Conservation Trust Fund, UVLT's criteria, the Norwich Town Plan's natural resources section, and the Report from the Governor's Commission on Vermont's Future—Guidelines for Growth, 1988.

4. INVENTORY OF OPEN SPACE

Village Spaces

1. Town Green/School Playground
2. Peish Land/Milt Frye Nature Area
3. Warner Meadows on Hopson Road
4. Barrett Meadows on Beaver Meadow Road
5. The Ballard land at the corner of Beaver Meadow Road and Dutton Hill Road
6. Fire District Lands on both sides of Beaver Meadow Road
7. Hillside Cemetery off Hopson Road
8. Fairview Cemetery on Beaver Meadow Road
9. Booth/Stotland property on Elm Street – conserved with no public access
3. Kavash/Hall property on Main Street – Blood Brook frontage conserved with public access, but no way to get to it

Beyond the Village

1. Aquifer protection area off Rte. 5 N
2. Gile Mountain
3. Schmitt Bog
4. Patchem's Point
5. Inadequate (1/8 acre) car-top boating access on River Road
6. VT Fish and Wildlife boating access to the Ompompanoosuc
7. Appalachian Trail, Corridor and Buffer
8. Fire District Lands
9. Conserved private lands. See table below. All conservation easements are held by UVLT, except the Stone/Sands property, which UVLT helped establish, prior to its ability to hold easements. It is held by the Vermont Land Trust.

| Owner or Location | | | Acres | |
|--------------------|---------|----|--------|------|
| Tidman | Norwich | VT | Oct-99 | 46 |
| Russell | Norwich | VT | Dec-98 | 122 |
| Ames | Norwich | VT | Nov-87 | 42 |
| Areson | Norwich | VT | May-96 | 232 |
| Ballard | Norwich | VT | Oct-93 | 42 |
| Blood Brook | Norwich | VT | Jan-56 | 2 |
| Booth/Stotland | Norwich | VT | Jan-86 | 34.9 |
| Burton Woods | Norwich | VT | Aug-90 | 21 |
| Cutting Johnson | Norwich | VT | Aug-90 | 102 |
| Farrell Farm | Norwich | VT | Jun-85 | 118 |
| Farrell Farm South | Norwich | VT | Nov-88 | 10 |
| Farrell Farm SW | Norwich | VT | Nov-88 | 10 |

| | | | | |
|----------------------|---------|----|--------|---------------|
| Fisher/Cochran | Norwich | VT | Nov-92 | 118 |
| Goodrich | Norwich | VT | Jul-93 | 1 |
| Jacobson | Norwich | VT | Nov-90 | 50 |
| Kavasch/Hall | Norwich | VT | Nov-93 | 11 |
| Kerwin Hill | Norwich | VT | Nov-91 | 96 |
| McAllister | Norwich | VT | May-92 | 24 |
| McCampbell | Norwich | VT | Nov-91 | 3 |
| McLaughry | Norwich | VT | Nov-90 | 70.5 |
| Melendy | Norwich | VT | Mar-98 | 5 |
| Myers | Norwich | VT | Nov-92 | 13 |
| Norwich Nature Area | Norwich | VT | Feb-98 | 36 |
| Podunk Pasture | Norwich | VT | Nov-94 | 152.2 |
| Somerville | Norwich | VT | Nov-91 | 18 |
| Stone/Sands | Norwich | VT | | 420 |
| Swett | Norwich | VT | Apr-92 | 18.6 |
| Tinker | Norwich | VT | May-90 | 55.9 |
| Warner Meadow | Norwich | VT | Feb-87 | 21 |
| Williamson | Norwich | VT | Nov-89 | 68 |
| TOTAL ACREAGE | | | | 1963.1 |

MAPS

1. Base map of Norwich, showing a composite of water resources, Natural Heritage Inventory sites, roads and trails. Water resources include surface waters: lakes, rivers and streams, wetlands, and potential aquifers.
2. Conserved Lands and Agricultural Resources, showing publicly owned lands and conserved lands owned by federal agencies, the state, town, school district and fire district and individuals; Agricultural Resources, parcels scored in the (Land Evaluation and Site Assessment (LESA) program, open fields, and prime agricultural soils.
3. Current Use, showing farms and forest enrolled in the current use assessment program, as well as floodplains.
4. An Outline of the Blood Brook Watershed
5. Elevations and Hill Shading
6. Open Space Priorities, Informal Plan

In addition to the maps shown below, the committee used maps provided in conjunction with the *Vermont Biodiversity Project*. The subjects are: Deer Wintering Yards, Natural Heritage Sites, 100' Riparian Buffers, Wetlands, Land Classification, Surface Geology and Land Classification, Unique Soils, Core Habitat and 911 Sites. These are in Jpeg format and available in the Planning Office.