

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.