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ESSEX OPEN LANDS STUDY

by

THE ESSEX OPEN LANDS COMMITTEE

with the assistance of

Humstone Squires Associates
Burlington, Vermont
and
New England Land Plan

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I. INTRODUCTION

This report summarizes the results of the Essex Open Lands planning process. The process has been overseen by the Open Lands Committee and the Essex Community Development Department staff. The Committee was appointed by the Essex Board of Selectmen in December, 1986. Its charge was to "prepare recommendations as to how the Town of Essex can encourage long-term maintenance and use of open lands."

The Committee developed information on land ownership and parcel size in the Town, and in February, 1987 it sponsored a roundtable discussion among experts in the field of open land planning. Notes on the proceedings of the roundtable were published in March, 1987. In April, 1988 the Committee sponsored a random sample, telephone survey of residents of both the Village and Town outside the Village to help define the open land resource, identify places of particular importance, and evaluate options for conservation and use of the Town's open lands.

Based in part on the survey results, the Committee proposed to the Town Meeting in 1988 that an Open Land Study be prepared. In September, the Town solicited proposals from consultants to assist the Committee in the preparation of the Study. The team of Humstone Squires Associates of Burlington and New England Land Plan of Chittenden was selected for the project, which began in mid-December, 1988.

The Open Lands Study process began with the establishment of the following Goals and Objectives, prepared by the Committee and the project team, based in part on the survey results:

Goal

To protect and conserve the diverse environmental resources of Essex, specifically the agricultural, forest, scenic, recreational and other significant natural areas for the enjoyment of future generations.

Objectives

1. To inventory areas of environmental diversity; prioritize the agricultural, forest, scenic resources and natural areas and to identify potential links between existing recreational resources.
2. To develop an open land plan that ensures the protection and conservation of the open land resources in Essex.

The term "open land" initially included all land in the Town, outside the Village of Essex Junction, that was not developed or built upon. It was therefore important to delineate more specifically the focus of the study. Open land categories were established, and included forestland, farmland, wetlands, critical wildlife habitat, recreation areas and trails, and scenic areas.

With the resource types determined, the next step was to inventory, evaluate and map each category. Through field work and contacts with a variety of resource people, the project team developed the inventory. A graduate class from the University of Vermont's School of Natural Resources had recently completed a preliminary cataloguing of the Town's open lands, which was verified and expanded. The lands identified in each category were then evaluated to determine priority areas worthy of consideration. The resulting lands were then mapped for review by the committee.

The Committee met weekly with the project team throughout the process. These meetings were also attended by various land owners

and others interested in recreation and conservation. As an outgrowth of discussions at these meetings, a range of strategies were developed for open lands protection and use. These strategies were assembled in draft form and, along with the open lands inventory, were presented at a public information meeting in April, 1989. The meeting was very well attended by landowners, and provided the Committee and the project team with valuable feedback.

In May, 1989, the Selectmen created a standing committee to be known as the Essex Conservation Committee, and appointed the members of the Open Lands Committee to fill five of the seven seats on the new body. The new Committee's responsibilities include the following:

- To inventory and study the natural resources of the municipality and to prepare and maintain an inventory of resource lands in which the public has an interest;

- To make recommendations to the legislative body regarding the purchase or receipt of lands;

- To prepare and distribute information regarding natural resources;

- To assist the Planning Commission and the Zoning Board of Adjustment by providing an evaluation for applications made to the Commission or the Board.

In the sections that follow, this report will describe the open land resource inventory, the criteria used in evaluation and the resulting maps, and will summarize the range of suggested

implementation strategies for open land conservation and use. A brief discussion of growth trends is included to help place the open lands issues in proper context. A conclusion section summarizes the report and sets out areas for further study and action. Detailed information on the Committee's survey, landowner lists and farmland evaluation data are contained in the report's appendices.

Familiarity with the resource map series prepared as a part of this process is key to a full understanding of this report. The resource maps reflect both the identification of resource areas and the setting of priority. A great deal of land was identified in selected resource categories. Only a portion of this land was placed within the open land inventory. The decisions to include or exclude properties, discussed in later sections, on the maps were arrived at after carefully considering a variety of factors, and then establishing priority.

To continue the process, it is strongly recommended that the open lands identified by this study be added to the Town's data base on the University of Vermont's Geographic Information System (GIS). This would permit a thorough and detailed evaluation of the relationship between the various resource lands in an efficient and cost effective way. To fully realize this benefit, the Town should also add its tax maps and other property data to the system. Such an integration of Town data would prove useful to all departments of Town government.

II. RESOURCE INVENTORY

This section of the report includes a description of the types of open space resources inventoried and the criteria by which these resources were selected for the study. The inventory techniques are also described.

A detailed resource map series has been prepared, showing the location by resource type. These maps are color acetate overlays on a land use base map (1:20,000). The base map was produced by the University of Vermont using the Geographic Information System (GIS) computer mapping program (ARC/INFO). Due to workload, the GIS Lab was not able to produce computer-based resource mapping for this study. However, the overlays are compatible with the GIS system and should be added to the Town's data base.

In the fall of 1988, the Natural Resource Planning graduate class at the School of Natural Resources, University of Vermont, assembled baseline natural resource information for the Town of Essex. The baseline included information on bedrock geology, slope, ground water, wetlands, forest potential, forest cover, recreation trails, wildlife habitat, natural areas and scenic features. The information was referred to during this study's inventory process. The information was referred to during this study's inventory process, and is compiled in a separate document entitled, Natural Resource Inventory for the Town of Essex.

Water Resources

Water resource (Map 1) information was derived from a variety of sources including the U.S. Geological Survey mapping for the Town, the Flood Hazard Area mapping from the Federal Emergency Management Agency and from the United States Fish and Wildlife Service's inventory of wetlands (from aerial photography of the Town). Together, these sources provide a picture of the Town's surface waters, including its rivers and brooks, its lakes and ponds, its areas subject to flooding and its "significant" wetlands The wetlands were derived from the National Wetlands Inventory. These are wetlands that meet the specifications of the Fish and Wildlife Service's classification system* and meet the minimum area requirements (1 acre) for the Inventory map series. In Vermont, wetland policy is under active review and evolution as this plan is being prepared. Therefore, the Town will delay final mapping and delineation of its wetland resources until this issue is resolved on the state level.

The water resource is important from a range of perspectives, including public health and safety, recreation, wildlife diversity, visual sensitivity and environmental quality. Water resources are distributed throughout the Town, and influence the distribution and conservation of many of the other open land types considered in this study. For example, the distribution of floodplain closely aligns with the availability of prime agricultural soils. These in turn represent the Town's most visually sensitive areas. The fact that development in the floodplain (C-2 Zoning District) is prohibited explains the continuing presence of this open land,

* Classification of Wetlands and Deepwater Habitats of the Unite States, US Department of the Interior, 1979.

particularly along the Browns River and Alder and Abby Brooks. Similarly, the pattern established by the Winooski River and stream and brook tributaries is reflected in the network of recreation areas and proposed trails. The Town's most significant public natural area, Indian Brook Reservoir, is centered on the water resource. The Committee's goal to, "protect and conserve the diverse environmental resources of Essex for the enjoyment of future generations" includes not only the protection of water resources but access to them as well.

Prime Farmland

Prime farmlands (Map 2) were determined by conducting a Land Evaluation and Site Assessment (LESA) process. The lands identified are either currently being farmed or are inactive farmland with productive soils . A detailed discussion of the selection and evaluation of the farmland resource in Essex follows.

The first layer of information used in the assessment of agricultural lands in Essex was developed from the Farm Parcel Map, generated for the study and report entitled An Assessment of the Secondary Impacts of the Chittenden County Circumferential Highway on Agricultural Land* in November 1987. This map was prepared in consultation with town listers, town planners, the County Agricultural Extension Agent, a Farmers Home Administration official and a representative of the Soil Conservation Service. It depicts the ownership and location of farmland parcels in Essex in 1987 where commercial agriculture

* Humstone Squires Associates, Nov. 1987

could be conducted. Such locations were 1.)of sufficient area to support or contribute to a commercial agricultural enterprise; 2.) were in single or affiliated ownership, and 3.) were undeveloped.

The Farm Parcel Map was presented to the Open Lands Committee for their comments on the locations identified as farmland. Committee members provided insight on the current use of the parcels on the map and also identified other locations in Essex which have agricultural potential. The result was that parcels that were involved in the development review process or approved for subdivision were deleted and others were added in light of Committee information or judgement..

A composite list of farm parcels was drafted (Appendix 1), and each parcel was evaluated using the LESA system. This system was developed by the U.S. Soil Conservation System, and uses a point score to rank farmland on the basis of the productivity of its soils and such attributes as its size, character, location and current use. The process involves a combination of visits to each parcel and an analysis of other locational factors with the aid of the GIS. A further description of the process and a breakdown of the results are available in Appendix 1 .

Through the LESA process, approximately 20 parcels were identified as important areas of farmland in Essex and approximately 2000 acres were identified as prime agricultural lands. These areas border Chapin Road, Browns River Road, and the south side of Weed Road to Route 15. They include two active dairy farms and one orchard. A third dairy farm in this area was lost recently to fire, while the owners of other farms have

participated in the dairy herd buy-out program. About 70% of the prime farmland is in the floodplain.

The study of the Circumferential Highway referenced above offered certain findings and conclusion about agriculture in Chittenden County and throughout the state and region. Among these were the following:

- Farming in the study area suffers from a shortage of labor, from adverse impacts of growth, and in some cases from economic pressures brought on by low product prices and high debt load.

- There has been a dramatic reduction in farm activity in Chittenden County in recent years, with the amount of land in agriculture declining by 12.7% and the number of milk cows declining by 7% between 1978 and 1982. The number of farms in the county declined by 17% between 1975 and 1987.

- Agriculture as an industry is in a process of change. While the most recent data provides mixed signals, considered judgement* is that that change, where successful, will take the form of consolidation and specialization. Investment in technology, plant and equipment will be necessary. The land base will be critical.

- It is neither affordable nor appropriate to attempt to conserve all of the existing farmland in the study area. The

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* Toward 2005, Northeast Agriculture-Food-Forestry, Issues and Opportunities, The Consolidated Report, Advance Copy, The Northeast Regional Council, June, 1987. p. iv

towns must designate agricultural areas and focus protection efforts in such areas.

These observations apply to Essex. The lands identified are potentially quite productive and will support commercial agriculture on a variety of scales. They constitute a finite natural resource that should be favored for conservation and retained for future productive use.

Prime Forestland

Prime forestland in Essex includes those contiguous tracts of wooded land that have the potential for commercial logging due to the productivity of the soils, the species mix , the size of the overall tract and the presence of large (+50 acre) properties and managed woodlots. They are also significant in the management of the watershed, wildlife, recreation or a specific forest pest.

The Chittenden County Forester and the State Lands Forester are the principal sources of information for this portion of the inventory. They are familiar with the forest resource throughout the town of Essex as they have close to 50 years of combined experience working with landowners marking stands for logging operations and developing forest management plans. Such plans address the multiple use of the timber tract, including its commercial, recreational and environmental benefits. A LESA-type process is under development for use in forestland evaluation, but the system is not yet ready for application.

The process used to delineate the prime forestlands in Essex (Map 3) involved a review of the property files and resource maps

of the town by the project team and the foresters. By combining information on development trends, vegetative cover, woodlot and timber stand management, patterns of ownership and resource availability in adjoining towns, a set of significant tracts were identified. In the opinion of the foresters, these tracts provide a critical mass, capable of sustaining the multiple uses desirable in a forest setting. Large areas of woodland were left out of the inventory, reflecting the priority consideration attached to the tracts selected. The areas identified in the forestland inventory are detailed in Table 1, and described as follows:

Upper Indian Brook valley and Brigham Hill: Within the upper Indian Brook valley and Brigham Hill (including Lost Nation Road and northern Old Stage Road) there exists a large (3,000 acre) contiguous area of woodland, which includes prime forest land of high productivity. The area is comprised of several forest types, including oak, which provides habitat for the wild turkey. Four hundred and fifty acres of this area is owned by the Town of Essex (Indian Brook area). Approximately one hundred acres of forest land, which is in private ownership, has been identified as a major "focal point" for the breeding of a forest insect, the Gypsy Moth. This is an indicator area, which can provide an early warning of the impending activities of the pest. This breeding location is of national significance to the scientific study of the Gypsy Moth, and resource management practices.

Osgood Hill area : Approximately 16 landowners within the northeast corner of Essex currently have their forest resources under a forest management plan which has been approved by the county forester. The management plans for the forest resources will help to insure that this 2, 660 acre forest tract will be

maintained for forest productivity, recreation and critical habitat for deer and black bear.

Bixby Hill area : Six of the major forest resource owners have current forest management plans in this 600 acre tract. Bixby Hill contains very ledgy land, providing for pockets of red and white pine that have commercial potential. Logging opportunities are limited by site conditions in Bixby Hill, however the area is very strong in recreation values. Further, its proximity to adjoining farmland in Essex, and to adjoining important timberland in Westford enhance its conservation significance.

The Saxon Hill area (1,100 acres) is considered a highly productive area with a stand of red, white and scotch pine. An extensive network of logging roads weave through the pine plantation, providing access and recreation opportunities. Ninety acres of this area is owned by the Essex School District. The remaining forest resource is in an area with special zoning (RPD - I) which provides for the conservation of 60 percent of the forest resource and the development of an industrial park in the remaining acreage. While the zoning states that a portion of the land must be conserved, it does not indicate specifically where the resources will be conserved and where the land will be developed. This ambiguity imperils the existing prime forest resource of the area. The area should be field checked to determine the portions most significant for preservation

The lower Alder Brook valley is comprised of deep ravines which create a sense of wilderness. Despite its difficult terrain, the County Forester feels the value of this 950 acre timber stand enables commercial harvesting in this area. There is an important stand of oak which is identified by the county forester

as a prime forest resource. The oak is not only considered a significant resource for harvesting but also provides habitat for wild turkey in the area. The access points and logging roads provide a unique trail network in the midst of one of the Town's most populated areas. The County Forester believes that part of the lower Alder Brook valley has been kept undeveloped by mandates in land use permits for residential developments in the area. Documentation of these conservation restrictions were not produced in the course of this study. This tract of forest land will be impacted by the construction of the Chittenden County Circumferential Highway, which is discussed in more detail in Part III of this report.

The total area in Essex identified as prime forestland is approximately 8,300 acres. These acres are primarily in private ownership except for 450 acres owned by the town at the Indian Brook reservoir and the 60 acres of school land at Saxon Hill. Much of the forestland resource in Essex is in forest management plans, affording a level of protection and use for forestry purposes. The most vulnerable forest resources exist in Saxon Hill and in the lower Alder Brook Valley, due to their proximity to development, utilities and highways.

While the commercial harvesting potential of each area was an important consideration in its selection and inclusion in the inventory, it should be understood that the timber stand has a multiplicity of environmental and recreational values. The financial return from commercial harvesting is principally valuable as a means of underwriting the cost of the stand's conservation and management. The forest resource in Essex feeds a forest products industry, providing employment for loggers and raw materials for area sawmills. However, Essex is not the sole

supplier of these benefits, but rather part of a regional resource base. Taken in isolation, loss of the Essex timber stand to commercial activity might not result in measurable impact on the forest industry, but would add to the incremental deterioration of the industry if matched in other towns in the region. The underlying logic for the timber stand's conservation is its context, both in a regional commercial sense and as a multiple use and multiple benefit land area.

TABLE 1
ESSEX FOREST LAND CHARACTERISTICS

AREA	NAME	ACREAGE	ZONES	FOREST TYPE	CHARACTERISTICS
1	BRIGHAM HILL	3000	C1, AR	SUGAR MAPLE HEMLOCK OAK WHITE PINE	• 450 A. PUBLICLY OWNED • PRIME PRODUCTIVITY • GYPSY MOTH "FOCAL POINT"
2	SAXON HILL	1100	RPD-I, O1	RED PINE WHITE PINE SCOTCH PINE	• 60 A. SCHOOL PROPERTY • 60% OPEN BY ZONING STANDARDS (no formal easement) • PRIME PRODUCTIVITY • HARVESTING REQUIRED FOR MGMT.
3	LOWER ALDER BRK	950	R2, O1	PRIME OAK	• SOME PUBLIC OWNERSHIP "ESSEX CENTER" • GULLIES &LOGGING ACCESS PROTECTED BY 250 PERMIT • RICH IN TRAILS • CRITICAL WILD TURKEY HABITAT • WILL BE AFFECTED BY CIRC HIGHWAY
4	OSGOOD HILL	2660	C1	HEMLOCK BIRCH/BEECH	• NO PUBLIC OWNERSHIP • CRITICAL DEER & BEAR HABITAT • CONTIGUOUS TO MAJOR TRACTs IN NEIGHBORING TOWNS • EXTENSIVE TRAIL NETWORK • MANY PROPERTIES WITH FOREST MANAGEMENT PLANS
5	BIXBY HILL	600	AR/R1/C2	RED PINE WHITE PINE PAPER BIRCH	• NO PUBLIC OWNERSHIP • LARGE LAND HOLDINGS • LEDGY- ONLY POCKETS OF PRIME PRODUCTIVITY • OLD TOWN RD TRAIL-SCENIC VIEWS • CHAPIN'S SUGARBUSH •.E. MATHEW'S FARM

Critical Wildlife Habitat

While a variety of wildlife can be found over a broad portion of Essex, the areas identified in this inventory are critical to the survival of particularly important species in the Town. Of specific concern in Essex are natural areas which provide production and feeding grounds for black bear and wintering yards for deer. These areas have been identified by the Vermont Department of Fish and Wildlife, based on hunting statistics and natural features. They are characterized by a lack of human development activity and the presence of plant species necessary for survival.

The critical habitat areas are located in the northeast corner of Essex, along Osgood Hill, and are depicted on the Forestland map, Map 3. The full extent of the critical habitat is difficult to pin down due to the mobility of some of the wildlife species. The black bear inhabit contiguous tracts of the land which contain plant species typically found in the beech-birch-maple forests. There are also two distinct deer yards in the Osgood Hill area which are critical wintering habitat for the deer. These areas consist of tracts of conifers (softwoods) and provide winter shelter from climatic elements, mobility out of the deep snow, and a source of winter food. These natural areas are held by several private landowners, some of whom have forest management plans established. The management plans, if followed, will help to promote the forest types important to the wildlife species. The forest management plans are designed for multiple use the timber stand, and particularly its habitat function.

As described in the Forestland section, above, wild turkey habitat areas have also been identified in the lower Alder Brook and Brigham Hill areas. These are associated with the oak stands present in those areas. Finally, the Gypsy moth focal point identified in the Brigham Hill area is of national significance. Other habitat areas in Essex have been identified by the State Heritage Program in the Vermont Department of Natural Resources but have not been mapped or field checked. The Heritage Program is concerned with specific sites where a rare plant, animal, or natural community exist. They are critical because any disturbance may jeopardize the existence of the rare or endangered species. If funding support can be obtained, more detailed work will be conducted in Chittenden County by the Heritage Program during the summers of 1989 and 1990.

Areas of Visual Sensitivity

Scenic or visual quality was one of the aspects of the environmental resource that the Open Lands Committee focused on. Because a very large proportion of the Town could be perceived as "scenic", this study addressed the most fragile or vulnerable areas of the overall resource from public rights-of-way* . This decision allowed the committee to accomplish two objectives;

1. To offer a more objective look at the issue of scenic resources.

* There may be visually sensitive areas from trails , private lands or future rights-of-way, such as the Circumferential Highway. These should be identified and evaluated in the future.

2. To narrow the range of concern to an area where use guidelines could be most beneficial in protecting the resource.

The identification of the visually sensitive areas focused on areas which exhibited the following qualities:

1. Fragility The lack of capacity of the landscape to visually absorb human changes.

2. Uniqueness Special landscape conditions from rare to sensational within the relative context of the Town's overall landscapes.

3. Character Visual integrity and diversity in terms of form, color, texture and scale.

4. Fitness The evidence of human care in the landscape.

Based on these measures, the following areas were documented on photo boards which depict the range of visually sensitive landscapes within the Town, visible from the automobile:

The Browns River Road, North
The Browns River Road, South
The Old Stage Road
The Weed Road
The River Road, West
The Towers Road

The fragility of the resource is dependent on the spatial components of the view; the foreground, the middle ground and the background. The foreground in these instances is composed of open

fields, pastures, wetlands, or water bodies which offer little or no vegetative or topographic relief or cover to mitigate the visual intrusion of potential development. This open foreground essentially allows the eye to enjoy the view of the mid and backgrounds without distraction and is an important element in the framing of the view. The middle ground elements of these landscapes are of natural areas with topographic and vegetative diversity and integrity to add visual interest to the viewer. These areas offer more mitigating elements to development and could accommodate carefully sited buildings. The background component to these landscapes is usually out of Town and therefore out of the jurisdiction of design controls. The key for preserving the background view is in the control of the management of the foreground and middle ground areas.

Within the Town's viewsheds, visually sensitive areas were mapped (map 4) showing the areas most vulnerable to development. These areas comprise approximately 4000 acres, involving primarily floodplain and agricultural lands identified earlier in this report, and displayed on Maps 1, Water Resources and 2, Prime Agricultural Land. The map also denotes the vantage point location for each of the view sheds depicted on the photo-boards. In combination, this graphic information defines the areas that should be managed if the Town is to retain its current scenic resource base. Again it must be emphasized that the areas displayed represent high priority locations for conservation, based on an analysis of the broad sweep of the Town. This is an important distinction; the Town's scenic areas involve far more than the 4,000 acres depicted on Map 4, but will be protected if this most vulnerable component, the visually sensitive area, is treated with care. The UVM natural resource baseline inventory should be consulted for a description of the overall scenic area and viewshed.

Recreational Resources

The recreational resources in Essex include areas in which several different types of outdoor activities take place, such as walking, hiking, horse back riding, cross-country skiing, and snowmobiling. These activities occur on both public and private open lands and are an opportunity for many residents to enjoy the natural environment of their community throughout the year.

In the recently completed Recreation and Park Needs Assessment study conducted for the Essex Community Services Department, the inventory of existing and proposed publicly owned recreation land was deemed adequate for a town with a population the size of Essex, but a need was cited for better access to these facilities. As a part of that study, a public survey was conducted concerning the current and future use of Essex recreational areas and it was determined that a strong community desire exists for a trail network linking recreation areas.

Information concerning the recreational and trail resources was gathered primarily through conversations with Essex residents who hike, ski, run or ride. First, "informal" trails were identified and field checked. Informal trails are not publicly owned or maintained, but are known by word-of-mouth and generally used only with the permission of the private landowner. Such trails are important recreational avenues through natural areas and farmland in Essex. For example, the Vermont Association of Snow Travelers (VAST) has a substantial network of trails that are used by many recreation enthusiasts. However, in recent years, development pressures have placed

this trail network of statewide significance in a vulnerable position.

The informal trails data was then mapped in conjunction with the existing, established recreational areas throughout Essex (Map 5). A complete list of the established recreational areas in Essex is included in Appendix 2. Below are the major areas, as identified on Map 5:

- Indian Brook Reservoir
- Meadows Edge Recreation Area
- Essex Elementary School
- Saxon Hill Forest
- Mathieu Town Forest
- Sand Hill Park
- Foster Road Park
- Lang Farm open space areas
- Essex Junction Education Center (in the Village)
- Sixty Eight Acre site
- Cascade Park (in the Village)

With this information mapped, potential connections from one recreational resource area to another were identified. Connections were also sought to neighboring towns and to the proposed regional bike path system. Discussions were held with representatives of a Colchester landowner regarding possible connections between Indian Brook and Colchester Pond. The Vermont Association of Snow Travelers (VAST) were also consulted to evaluate their present and future trail patterns.

An immediate and important consideration is the proposed Chittenden County Circumferential Highway. This four lane,

limited access road will enter the Town from Williston near the IBM facility on the Winooski River, travel north and then west around the Village of Essex Junction, across Rt. 15 below Butlers Corners, and continue west across Route 2A to Colchester. The effect of this road will be to enclose the Village and the southwest corner of the Town, limiting intra-town recreation and pedestrian travel to specific locations.

Identifying and securing trail connections across the highways path during the design process is imperative. The Committee consulted with Highway representatives, the Town Engineer and the snowmobile clubs in this regard, and arrived at five crossing opportunities:

Pedestrian cross walks at traffic intersections:

- Intersection of Route 15 and Circumferential Highway.
- Intersection of Circumferential Highway and continuation of Allen Martin Parkway.

Pedestrian/recreation crossings not located at traffic intersections:

- Pedestrian overpass bridge connecting Lang Farm open space land (which is slated to be given to the town at a later date) with the Town Forest to the north.
- Snowmobile/pedestrian trail through culvert near Lost Nation Road.

- Essex Way pedestrian overpass. Linking Essex Way (and surrounding neighborhoods) with the trail network.

The trail connection opportunities listed above will require additional review and evaluation. For example, the pedestrian crossings at traffic intersections require extensions along the Circumferential Highway right-of-way or across private lands to connect to existing trails. In addition, the snowmobile trail will need to be rerouted from its present location to run parallel on the north side of the Highway for a distance before crossing. Thus, it is recommended that the Conservation Committee spend time with landowners, Highway officials and other Town officials to arrive at a specific plan for maintaining recreation and off-road travel opportunities.

The proposed Public Trail System map (Map 6) illustrates "corridors" within which future trails could be established. They utilize existing, informal trail routes for the most part, with suggested connections to achieve a linkage of the Town's public recreation and open space lands. This will enhance access and use of the recreation areas and will provide a range of active recreation opportunities along the trail corridors themselves. Rights of way within the corridors should be secured to establish the trail network. Provision for maintenance and supervision of the trails must be developed prior to the implementation of the trails plan to avoid nuisance and expense to property owners and neighbors.

Map 6 also indicates two proposed public facilities, one a river front park on the Winooski, and a second, a trail shelter at

Bixby Hill. These are envisioned as complements to the trail network, serving as destination points and additional amenities.

The Town its development review process has utilized Section 530 of the Town of Essex Subdivision Regulations for the dedication of public open space and recreation land. The focus in the future should be to insure that such dedications contribute to and fit logically with the network of trails and open lands, providing connections with population centers.

III. DEVELOPMENT TRENDS

Due to its location in Vermont's fastest growing county, its employment opportunities and its excellent schools, Essex has experienced considerable land development and growth in its population. Between 1980 and 1987, according to Vermont Department of Health estimates, the population of the Town and Village grew by 11.4%, compared to a rate of 9.7% for Chittenden County and 7.1% for Vermont as a whole. During that same period, the housing stock grew by 926 units, for an increase of 19.2%. This rate, too, exceeds that of the County, 18.2% and the State 13.3%.

These growth trends were furthered by the addition of the municipal sewer system in the Town in 1984. The service area for that system, along with the delineation of the Town's zoning districts, has influenced the location and distribution of new growth. Of the 20 projects identified in a recent inventory of developments proposed or underway in the Town, 14 are in the sewered areas.

Areas around Essex Center (zoning districts R1/R2, B1 through B4) are zoned for business and residential uses at moderate to high density. The northern portion of the Town lacks central sewer, contains considerable floodplain and other difficult terrain. The zoning provides for somewhat lower density and less intensive uses to the north, as well as conservation and agricultural zones with low development densities and few permitted uses. Flood hazard areas are protected from development throughout the Town through a no-build policy in the flood conservation zones.

The inventory of open land resources developed by this study includes lands throughout the Town. Most of the farmland and

forestland is in the northern section of the Town, although two important forestland tracts are located in the sewer service area, at Forestdale and Saxon Hill. The lands of visual sensitivity also extend through the northern portion, but include significant areas within the sewer service area, at the so-called "golden triangle" (Center Rd-Towers Rd-Old Stage Rd) and along the floodplain of the Winooski River.

The Town has a substantial backlog of residential development that has been approved but is not yet built. According to the Town's Community Development Department, a total of roughly 1050 residential units have been reviewed by the Town Planning Commission and approved for construction during the period 1989-1999. These permits are for residential units in the Town of Essex only, and do not include the Village of Essex Junction. Recent population forecasts from the Vermont Office of Policy Research project a combined growth for the Town and Village of 2900 people between 1990-2000. In light of this, it would appear that the backlog of permitted units will satisfy the lion's share of new housing demand.

IV. STRATEGIES FOR IMPLEMENTATION

The Open Land Committee's second Objective for the study was, "to develop a plan that will ensure the protection and conservation of the open land resource". To achieve this, the Committee and the project team have assembled a range of strategies for further consideration and review. It is important to apply a variety of tools and techniques, as each property and property owner is unique. When used in combination, different techniques can be structured to fit a particular property or circumstance.

The strategies for implementation fall into three general categories; 1) organizational techniques, 2) compensation/incentive measures, and 3) regulatory changes. The following is a list and description of the implementation strategies:

Organizational Techniques

I. Adopt the Open Land Resource report and map series as an element of the Town Plan. This will bring consideration of the open lands into the mainstream of Town procedures, and will add emphasis to the Town's interest in the conservation and wise use of the resource. The Plan is consulted during the Act 250 process and, with the passage of Act 200, neighboring towns, the regional planning commission and state agencies must refer to the Plan in making their land use decisions. Finally, as the basis for the Town's land use regulations, the Plan should set forth the resources and policies to be addressed by zoning and other bylaws.

II. Establish an active Conservation Committee. The recent appointment of the Conservation Committee as a standing committee

by the Board of Selectmen is an important step. Implementation of an Open Lands Plan will require a great deal of time and effort. The Town will need to establish the capacity to carry out the job. By assigning responsibility for open land issues to a single group, and by limiting that group's agenda to open land issues, the potential for effectiveness will be enhanced. The Conservation Committee will serve in an advisory/coordinating manner, at the pleasure of the Town's elected officials and should be guided by the resources identified and policies set out in the Town Plan.

III. Enter the open land resource and other data onto the GIS. As stated earlier, workload did not permit the GIS Lab at the University of Vermont to enter the information developed by this Open Lands Study into the Town's computer data file. This should be done. In addition, the Town's Tax Map and other property tax data should be automated and integrated with the GIS data base to allow for a more thorough analysis of the open land resource. For example, by combining the open lands resource information with soils data, zoning and property ownership, the appropriate locations for hamlets, or residential concentrations in the rural parts of town, can be identified. The GIS can also provide precise acreage information and, with listers data entered on the computer, can assist in estimating the tax revenue implications of conserving a particular resource area. Information can be produced in both map and tabular form. The State of Vermont has committed to a substantial investment in computerizing land-based and socio-economic information. As this move toward GIS mapping progresses, the Town will gain considerable advantage from having a local perspective and command on this emerging technology.

IV Interview Open Lands owners. The single most important group in the Town on the question of open land protection is the owners of

that land. Each owner of property in the open land inventory should be consulted to understand his or her future plans and to gauge interest in land conservation. A preliminary listing of landowners is included in Appendix 3, and should be broadened as the Town's property information is integrated with this open lands inventory. A registry of land owners interested in conservation should be developed, and estate and land planning assistance should be offered. *Any attempt at open land conservation must respond to the rights and needs of the property owner.*

Compensation/Incentive Measures

V. Amend assessment practices and broaden tax stabilization provisions for owners of Open Lands. The pressure on land owners to subdivide and develop open land is intensified by the burden of high property taxes. The amount of taxes paid on a property is determined by the Town's assessment of the "market value" of the land. This is usually based on the land's worth if broken up and sold for development as house lots or commercial property. The presence of scenic views or water bodies on the land can further increase the assessment. The effect of a high assessment is high taxes; the effect of high taxes can be an inability to keep the land intact and open. The Town's tax policies and practices should be consistent with its conservation objectives.

Vermont law enables a town to alter its assessment or taxing rates on selected classes of property, *if authorized by the voters.* The result is a shift in tax burden, in this case, from open land to the rest of the community. In return, the community retains the value and enjoyment of the open land resource. The terms and conditions of such "tax stabilization" should be designed so that the Town's

conservation assurances are balanced against the property owners long term need for flexibility and return on the land.

Approximately 11,000 acres of farmland, forestland and sensitive scenic area, or 52% of the Town's 21,400 total acres, have been identified by this study as worthy of conservation. However,36% of the conservation land, or roughly 4,000 acres, are in floodplain. Based on a preliminary review of the assessments in Essex for various types of property, the Grand List value of the non-floodplain portion of the open land resource appears to be less than 10% of the real estate portion of the Grand List. In light of its proportionate share, *reduction in the Town's reliance on the resource land could be achieved with limited impact on other tax payers, but with substantial benefit to the property owners.* A more detailed evaluation should be conducted as the resource information is integrated with the Town's property tax data.

VI Acquire easements on selected Open Land for conservation and trail right-of-way purposes. The most effective way for the Town to insure the long term conservation of open land is to acquire it. However, acquisition does not need to involve outright purchase of all interest in the property; partial ownership, through purchase of an easement, can provide the desired level of protection, while leaving ownership in private hands. Just as an electric utility company might acquire a right-of-way easement to pass over the land with its power line, a trail right-of-way easement could be obtained to permit hikers or skiers to pass over the land. Just as a mineral company might acquire mining rights to enable extraction of ore from a property, development rights could be acquired, *and removed*, to insure that the land stays open. In each case, the property owner retains ownership of the land and the right to use it

in a manner compatible with the easement. In most cases, the property owner also receives payment for the easement.

The cost, particularly for a conservation easement, can be nearly equal to the market value of the property. Therefor, this technique should be used only where the open land resource is so sensitive and the threat of incompatible change is so great that other techniques alone are unworkable. Likely candidates for acquisition would include trail rights-of-way and buffers, visually sensitive properties outside of the flood hazard area, and the future riverside park and trail shelter sites. The Conservation Commission and Town staff should identify priority lands for acquisition and landowner contacts, based on this study and GIS mapping as additional data is built into that system.

Money for acquisition could be raised through sources such as recreation impact fees on new development, off-site mitigation for development on prime agricultural soils, and tax revenues authorized by Town voters. Incentives, such as accelerated phasing or increased sewer capacity allocation, could be provided to developers to acquire and donate conservation easements. Coordination of these approaches will be required with other Town and School District policies and programs. The Town should investigate such funding sources as the Nature Conservancy and the Vermont Housing and Conservation Trust Fund in support of open land protection efforts. Assistance should also be sought from an experienced land trust and/or parklands management entity.

It should be noted that the recently completed recreation needs study indicated that the Town is very well supplied with publicly owned park and recreation land. Further, this study found that the Town's ability to maintain its current inventory of public land is

very limited. Therefore, the study cautioned *against* any substantial additions to the Town's public land inventory beyond development set-asides already negotiated and additional "mini-parks". The study did recommend the development of a trail network to link the existing public lands inventory. In light of these findings, the use of outright public ownership, or acquisition in fee, for conservation purposes should be minimized.

Regulatory Changes

VII. Amend the Subdivision Regulations and the Zoning Ordinance to insure consideration of the Open Land Resource: While the compensatory and incentive approaches described above are essential, land subdivision and development are inevitable, and must be addressed if the Town is to meet its conservation objectives. After discussion with land owners and careful consideration, *the Committee concluded that it would not recommend any change in the existing zoning district delineations or development densities (minimum lot sizes). Rather, the regulatory changes proposed are meant to encourage development that is compatible with or minimizes the impact on the Open Land Resource.*

The principal regulatory tools used by the Town are its subdivision regulations, which control the division of a parcel of land into building lots, and its zoning ordinance, which governs the use and density of development on a lot. Each tool provides an opportunity to guide development in a manner consistent with open land protection. The following are strategies that might be considered:

A. The Conservation Committee will review and comment on any proposed subdivision that include or affect the Open Land Resource described in the Town Plan. The Planning Commission should then

establish conditions for lot configuration, for the siting of buildings and improvements, for the reservation and management of open space and for the dedication of trail right-of-way and conservation easements.

B. The maps of the Open Land Resource prepared for this study should be adopted as a "Significant Features Overlay" to the existing zoning. Development proposed within an area designated on the Overlay should be treated as a conditional use, with standards designed for each category of Open Land (farmland, forestland, habitat, wetlands, trail corridors and scenic areas) to guide the review process. The Conservation Committee should review and comment on all such proposals. The Board of Adjustment should set conditions that insure compatibility with or minimize the impact on the Open Land Resource. *Developments arising from a subdivision that has been approved as set forth in A., above, should be exempted from the conditional use review under zoning.* The most effective point in the development process to design for resource conservation is at the subdivision stage. If this is done, and done well, then the actual development of the resulting lots should be compatible with the open lands objectives. Property owners and developers should not be subjected to the "double jeopardy" that could arise from a two stage review of the same issues. Such a policy also avoids the risk of conflicting or contradictory rulings at the subdivision and the site planning or zoning permit stage.

C. The time requirements in the bylaws should be amended, as necessary, to allow adequate time for Conservation Committee review and comment, and for full evaluation of the relationship between the development pattern and land conservation. While

this may add weeks to the process, changes to the land are measured in lifetimes. The subdivision review process, as set forth in Vermont statute, is ideally suited to the incorporation of conservation matters, with its staged process and generous time lines. The key to efficiency will be to initiate consideration of the open lands objectives at the very outset of the review process, and to pursue those objectives under clearly written standards in the Subdivision Regulations and the Zoning Ordinance.

D. *Do not amend the current provisions governing the flood plains in Essex.* Close to 70% of the scenic and prime farmland resource identified in this study is now protected from development by the no-build provisions of the flood hazard bylaws. This is vitally important to the Town's ability to maintain its land resource.

VIII. Encourage transfer of density. Where a property cannot be developed without an unacceptable degree of damage to the open land resource, the development rights should be removed from the open land, either through transfer or acquisition. As described above, the Town may wish to acquire a conservation easement on selected properties to insure long term protection. Acquisition may come either through purchase or dedication. It is also possible to transfer the development potential from the open land resource, both within a land parcel as a cluster development, and between parcels, through a transferable development rights (TDR) system.

Clustering within a parcel can be accomplished under the existing Planned Residential or Planned Unit Development provisions of the Town's Zoning Ordinance, although lot size and setback requirements could be revised to enhance flexibility. By configuring development in a cluster pattern, road and utility line lengths can be reduced,

curb cuts minimized and buildings and improvements sited to complement the open land resource. A variety of ownership formats can be used to achieve clustering, with lot owners holding the open land in common, or with each lot comprising a portion of open land, but with common use and maintenance assured through deed covenants. A conservation easement should be enacted for the open land regardless of form of ownership. The easement should be recorded in the Town land records, and may be held by the property owners, the Town or a third party. Whenever possible, future use of the open land should be provided for, consistent with the agricultural, forest, scenic or natural character and value of the open land.

The transfer of density between land parcels would occur by shifting densities from the open land resource, the "sending area", to other locations in the Town, which would constitute "receiving areas". The affect is that landowners in a receiving area are permitted to develop their property at a higher density than permitted normally in the zoning district if they acquire development rights from a property owner in a sending area. *Establishing such a system will require amendments to the Town's zoning bylaws.*

Residential development in the sewered portions of Essex (R2 zone) are allowed at about 2 units per acre. As pointed out in part III of this report, Development Trends, many hundreds of units have been built at this density, and many hundreds more have been approved for development. There is obviously a market for residential units at this density, and a profit to be made by satisfying that market. The Town, in its planning policy to date, has shown little inclination toward higher density. As is further pointed out in part III, the approved units will likely satisfy the level of population growth anticipated in the Town. These factors suggest that there would be

little incentive to developers, and hence, little demand for development rights. In light of these considerations, the transfer of densities on a large scale to a high density residential receiving area does not appear to be a viable strategy for Essex.

There are two alternatives that might be considered. The first involves transfers locations in the non-sewered parts of the Town, where soils are found that can accommodate densities greater than those now permitted by the zoning. This would include the R-1, AR and C-2 zones, which have minimum lot sizes of 1, 3 and 10 acres respectively. Known as "hamlets", such locations should have good access and be compatible with the open lands resource. When the Town's open lands data are added to the GIS, it should be cross-tabulated with soils and zoning information to identify and map prospective hamlet locations.

The second TDR option would involve prospective commercial areas. Two such areas exist, near Butler's Corners in the Light Business District (B-4). The minimum lot size in this zone is 1 acre, and uses are limited, excluding retail stores and restaurants. The area will be served by an interchange from the Circumferential Highway. Should the Town conclude that more intensive commercial or mixed use development is appropriate at this location, demand may be sufficient to support a TDR program. It is important that the wisdom of such rezoning be determined first, before any restructuring of the zoning is made solely to accommodate development rights transfer.

The ratio of land conserved to density increased would be based on a range of considerations, including the character and carrying capacity of the receiving areas, the economics of the transfer, and

the expectations for conservation placed on this strategy. This must also be determined in advance, and included in the zoning provisions.

IX. Town site development policy should be reviewed for its indirect effects on Open Land protection. For example, town policy regarding private road standards, lot frontage and community sewer or water systems may serve as impediments to cluster development patterns, a valuable tool in the management of growth for land conservation. The purpose of each policy should be evaluated, and alternatives explored that may be more compatible with the open space protection objectives.

X. Review, clarify and fully implement the development agreements governing open space dedication in the Forestdale/Saxon Hill projects Through negotiations between the Town and the developer/property owners, open land conservation has been provided for in these developments. The prime forest tracts identified at these locations are very susceptible to conversion, due to location and the availability of sewer service. Formal conservation easements should be completed for these properties, clarifying the boundaries of the protected lands, ownership and maintenance responsibilities, access and the desirability and opportunities for forest management activities on the open lands.

XI. All strategies should be designed to minimize housing cost impacts and, where possible, enhance the production of affordable housing. Examples can be found where land conservation efforts have led to higher costs for housing and have had an exclusionary effect on low and moderate income people. This generally arises where *large lot* zoning techniques are employed as the principle strategy for conservation. As stated above, the Committee has rejected such an approach and, in fact, suggests *smaller lot, cluster*

patterns as an alternative. In some cases, this can lead to lower land costs per housing unit.

It should be acknowledged that new development situated along side conservation land is highly desirable and can therefor be more expensive. Further, clustering can have central utility costs that must be built into the lot price, thereby limiting the savings from reduced land requirements. These costs, for access roads, common sewer or drainage systems, would ultimately be required of the prospective homeowner, but would be absent from the original raw land cost in a traditional subdivision. The Committee's charge did not include an assessment of the Town's housing needs. Such an assessment should be undertaken, with attention given to the full range of affordable housing options.

Other approaches suggested to the Committee have included direct action to bolster farming and forestry. The current economic plight of these traditional Vermont enterprises has played a central role in the conversion of open land, and a strong farm and forestry economy would go a long way toward maintaining the open land base.

A second course of action is education, at all levels, but particularly in the school system. Programs are evolving in Vermont and throughout the Northeast to introduce children to the broad policy issues and the hard environmental and economic facts that surround the question of land use and conservation. An educated citizenry will be better equipped to manage the future.

Finally, the relationship of historic structures in Essex Center within the context of the open land resource should be considered. Recent trends in historic preservation are incorporating the surrounding landscape as part of the rich resource and cultural value

of an historic town center. A study of the Essex Center area should be undertaken to determine the effects of current zoning and subdivision practices on the historic structures and surrounding open land resources.

V. CONCLUSIONS

Based on the foregoing analysis, the Committee and project team have concluded that the Town of Essex has a wealth of important, productive open land that should be protected and conserved. This includes lands of scientific, economic, environmental and aesthetic value. Through survey responses and participation in public meetings, Town residents have expressed strong support for open lands conservation.

While the open land resource is extensive, including approximately 11,000 acres or 52% of the Town's land area, its protection will not impair the Town's ability to accommodate anticipated population growth or land development. Within the sewered portion of the Town, residential developments already approved appear to exceed the levels of growth forecasted for the Town *and* Village. Nor will open land protection be achieved at the expense of property owners. The Committee has *not* recommended any changes to the Town's zoning districts or minimum lot size requirements as a means of conserving open land. Much of the open land resource (36%) is in the floodplain, and is presently restricted by that physical feature. Other substantial portions (Indian Brook Reservoir, Saxon Hill RPD-I) are currently under public ownership or conservation agreement. To a large extent, the remaining open land can be protected through development clustering and site planning. In some cases, acquisition in fee, or purchase of an easement will be necessitated by development conflicts or the need for public access. This will include the rights-of-way for trails and selected, visually sensitive farmland outside of the floodplain. In all cases, tax assessment practices should be reviewed to provide an incentive to the owners of open land to keep such land open.

The Town can begin now to implement many of the strategies recommended in the preceding section. Most important is that the dialogue initiated by this study between land owners, town officials, recreationists and conservationists should continue. A diverse group of people should be involved in future open land planning efforts. The Town can begin now to review its site development policies and its subdivision/zoning standards to aid in land conservation. Finally, the possible TDR receiving areas (rural hamlets and new commercial/mixed-use areas) should be delineated and evaluated from a broad perspective to determine their ability to absorb added density.

Achieving the objectives set out in this report will require further study and analysis. Key among these is the integration of the open land resource inventory and Town property/tax information with other Town data on the GIS. This will greatly enhance the Conservation Committee's ability to identify key land owners and pinpoint high priority parcels for conservation. The addition of this data on the computer will also allow for a more accurate assessment of the Grand List value of the open lands and, therefore, the fiscal implications of changes to the Town's property tax assessment practices.

This study has documented a valuable and irreplaceable asset in the Town of Essex; its open lands. By making decisions with that asset in mind, the Town will see its value appreciate.

Appendix 1

Essex Open Space Study: Application of Land Evaluation and Site Assessment Process (LESA)

During the course of the Essex Open Space Study an analysis was undertaken of the farmland in the town of Essex using a scoring system devised by the Chittenden County Regional Planning Commission: Chittenden County Farmland Evaluation Process . Other towns have implemented the Chittenden County Farmland Evaluation Process and thus it was employed in hopes to maintain continuity among towns in their farmland evaluation endeavors. This process was tested on six selected parcels in Essex to insure that the scoring system reflected local concerns. The results from the test run determined that the scoring system would be an effective tool for comparing the relative value of the farm land in the town of Essex.

The Chittenden County Farmland Evaluation Process is based on the Soil Conservation Service's Land Evaluation and Site Assessment system and is referred to as **LESA**. This system has been designed to enable a comparison of the relative value of farmland throughout the county. A LESA review combines a value for the productive potential of the farm's soils with a range of values for site-related attributes of the farm, including its size, location, proximity to highways, utilities and employment centers, and the quality of views afforded of and over the property. The value for the productive potential of the farm's soils (Land Evaluation) totals 100 points and the values for site-related attributes of the farm (Site Assessment) total 200 points, giving the scoring for each farm site reviewed a potential total of 300 points.

The farm parcels evaluated were derived in part from a 1987 Farm Parcel Map generated by the Geographic Information System (GIS) and from parcels of significant agricultural value identified by the

members of the Open Lands Committee and staff. Fifty-three farm parcels in total were evaluated by the LESA system (Appendix 1A).

Gathering information to complete the LESA came from several sources. Information concerning the productive potential of the soils of each parcel was derived from soils information for the town of Essex in the Geographic Information System (GIS). Visual and capital investment attributes of the farm parcels were evaluated in the field by three teams consisting of members of the Open Lands Committee, staff and the consultants. Other factors such as locational, development pressure, farm viability, and public policy were determined using maps at the Chittenden County Regional Planning Commission and by gathering information about tax programs and land use from the Essex town Assessor.

The final LESA scores for the Essex farm parcels evaluated ranged from a low of 60 points to a high of 225.75 points out of the potential 300 points. The results were grouped into three categories, as illustrated below, and were mapped on the GIS, indicating the location and score of the farm parcels in Essex.

Distribution of LESA Scores for Fifty-three Farm Parcels in Essex, Vermont

	Final LESA Scores	
Range of Points	Number of Farm Parcels	% of Farm Parcels
1 - 99.9	6	9%
100 - 155.9	34	64%
156 - 300	13	26%

APPENDIX 1A

ESSEX FARM PARCELS : LESA SCORES

Ownership	LESA Score
R. Parizo	86
R. Beshaw	86
K. Thompson	86.25
R. Tveraas	92.6
Jonathon Lang	120.46
J. Thibault	104.16
D. Whitten	123.16
W. Arms	116
John Lang	80
E. Blake	101.6
E. Bigelow	106
A. Silverman	139
B. White - Old Stage Road	121
A. Lussier	150.75
Murray	120.5
H. and D. Mack	114
N. Desso	121.25
E. Bigelow - Brigham Hill	130.75
B. White - Brigham Hill	124.75
L. Kenney	127
Page	119
W. Corley	117
D. Mathews	115
J. Chapin - Col. Page Road	59.5
J. Chapin - Chapin Road	170.5
N. Meyers	182.75
E. and G. Mathews	213
J. Bohan	119
C. St. Hilaire	110
R. Lemire - South on Rt. 128	160.5
Blow	146.5
J. P. Lemire	189
Lehoullier	175.75
G. Fletcher	138.75
R. Lemire - North on Rt. 128	188.75

T. Hallet	117.25
J. Cross Jr.	119.25
G. Cunningham	128
L. Holmes	225.75
A. Packard II	129.75
D. Boucher	145
H. and L. Whitcomb	166.75
J. Thompson	136.5
W. Senn	146.75
J. and J. Whitcomb	202.25
P. Allen	128
Bushey	124
Regina Operations	182.75
H. Powell	184.4
R. Wilson - South corner of Col. Page/Chapin Roads	128.45
R. Chase	132.9
J. Wright	110.85
J. White	189.5

APPENDIX 2

PARKS AND RECREATION INVENTORY

TOWN OF ESSEX

Public Sites	Size
1. Center Road - R.O.W. Trail	2.00 acres
2. Essex Elementary School	18.20 acres
3. Essex Free Library	.13 acres
4. Essex Middle School	10.00 acres
5. Essex Teen Center	2000 sq. ft. (est.
6. Forestdale	29.00 acres
7. Foster Road Park	10.00 acres
8. Foster Road and Sand Hill Rd. Corner	.50 acres
9. Founders Memorial School	2.00 acres
10. Indian Brook Conservation Area	574.00 acres
11. Lang Farm - Proposed	7.50 acres
12. Lang Farm - Proposed	21.00 acres
13. Lang Farm - Proposed	44.00 acres
14. Mathieu Town Forest	76.00 acres
15. Meadows Edge - Proposed	37.00 acres
16. Memorial Hall	1.00 acre
17. Painesville Manor Park	5.50 acres
18. Pearl Street Park	14.00 acres
19. Petrie Park	6.20 acres
20. Pioneer St.	.18 acres
21. Pine Grove Easement	15' wide easement
22. Sand Hill Park	9.00 acres
23. Saxon Hill Forest	774.00 acres
24. Saxon Hill Parcel	5.09 acres
25. Saxon Hollow	.50 acres
26. Shillingford Crossing Trail	12.00 acres
27. Sixty-eight Acres	58.00 acres
28. Skyline Drive	6.70 acres
29. Valley View - in progress	7.42 acres
30. Winooski Valley Park District	4.30 acres

Private	
1. Bonnie Brae Golf Course	193.95 acres
2. Essex Bowling Center	Not Known
3. Essex Country Club	130.00 acres
4. Pinewood Manor	1.50 acres est.
5. Riversedge	2.50 acres est.
6. Saybrook Condominiums	1.00 acres est.

PARKS AND RECREATION INVENTORY

VILLAGE OF ESSEX JUNCTION

Public Sites	Size
31. Albert D. Lawton School	33.50 acres
32. Cascade Park	10.00 acres
33. Essex Jct. Educ. Center	70.00 acres
34. Essex Jct. School District	89.61 acres
35. Essex Jct. Skating Facility	Not Known
36. Fleming School	4.22 acres
37. Hiawatha School	15.65 acres
38. Maple Street Park	38.00 acres
39. Park School	2.00 acres
40. Senior Citizen Center	Not Known
41. Senior Citizen Club	Not Known
42. Stevens Park	8.20 acres

Private	
1. Fitness Advantage	Not Known
2. IBM	239.00 acres
3. Racquet's Edge	Not Known

APPENDIX 3

Status of Agricultural Land Resource in Essex by Owner

The following information was compiled from conversations with members of the Open Land Committee and the town assessor.

Old Stage Road, Col. Page Road, and Chapin Road Area

Name	Acreage	Description
J. Wright	57.86 ac.	hayed in the past 3 years
H. Powell	84.47 ac.	currently leased to a farmer for hay; in the Current Use Agricultural Program
R. Wilson	53.86 ac.	
J. Chapin	307 ac.	'87 Current Use Agricultural Program and '84-'85 Town Tax Stabilization Program
N. Meyer	96 ac.	apple orchard; Town Tax Stabilization Program and Current Use Agricultural Program
E. & G. Mathews	527 ac.	dairy; '84-'85 Town Tax Stabilization Program and Current Use Farmland Program
Brown's River Road Area		
R. Lemire (north end of town)	320.88 ac.	hayed for commercial use; has been in the Town Tax Stabilization Program and Current Use Agricultural Program in the past 3 years
R. Lemire (south end of Rt. 128)	144.9 ac.	has been growing corn for silage; Town Tax Stabilization Program and Current Use Program
J. P. Lemire	371.77 ac.	lost herd about 2 years ago; hayed; '84 -'85 Town Tax Stabilization Program
G. Fletcher	194 ac.	subdivision approval
P. Lehouiller	265.9 ac.	barn burnt in 1988; rumor has it that they may reconstruct the barn and continue farming
E. Blow	37.57 ac.	potential residential
Weed Road Area		
L. Holmes	131 ac.	dairy; 126 ac. in Current Use Farmland Program; Town Tax Stabilization Program '84 - '85
D. Boucher	50 ac.	small part of land hayed for private use
H. Whitcomb	190.6 ac.	some of the land is hayed by another farmer

Route 15 (Jericho Road Area)

J. Whitcomb	378.77 ac.	active farm; Town Tax Stabilization Program and Current Use Farmland Program
P. Allen	115.9 ac.	part slated for 29 unit development; overgrown Christmas trees
J. White	35.5 ac.	active hay land which is part of farm operation in Jericho; Current Use Farmland Program

Status of Forestland Resource in Essex by Owner

The following names were provided by the county forester and each property is currently under a forest management plan unless otherwise indicated.

Owner	Acreage	Description
AREA # 1:		
Indian Brook Area		
A. Johnson Co.	128 ac.	forest management plan
Town of Essex	450 ac.	
D. De wees	55 ac.	forest management plan; 62 ac. total; tower
Brigham Hill Road / Lane and North Old Stage Road Area		
Kenney	140 ac.	
B. White	185 ac.	
J. Monaham	424 ac.	pest focal point
L. Knight	40 ac.	
Goedkoop	108 ac.	
Murray	46 ac.	
R. Houghton	8 ac. woods	10 ac. total
W. Corey	11 ac. woods	16 ac. total
D. Mathews	10 ac.	
Parizo	? ac.	golf course
D. Marcotte borders	57 ac.	forest management plan: 115 ac. total; Westford
M. Bent	94 ac.	forest management plan; 191 ac. total
Lost Nation Road		
Daggett	32 ac.	forest management plan; 40 ac. total
Richbourg	58 ac.	
AREA #2:		
Saxon Hill Area		
Forestdale Heights Inc	approx. 800 ac.	
Essex Junction School District	89.61 ac.	
AREA #3:		
Alder Brook Drainage : Sandhill Road, Route 15, and Forestdale Area		
Village of Essex Center Water Department	30 ac.	adj. and n. of Forestdale - w. side of Sand Hill Road
Town of Essex Municipal Forest	76.3 ac	Alder Brook Drainage - behind Sand Hill Rec. Area
Forestdale	approx. 68 ac.	Alder Brook Drainage - steep slopes,etc.

AREA #4:

Osgood Hill Area

E. Rawson	46 ac.	hardwoods
E. Rawson	53 ac.	mixed
J. Kunkel	130 ac.	forest management plan; mixed
H. Dietsch	70 ac.	forest management plan: mixed
C. Reeves	60 ac.	forest management plan; hardwood
W. Gray	130 ac.	
Minadeo	75 ac.	
Page	250 ac.	
C. King	24 ac.	
J. Cross	210 ac.	
Pizzagalli	12 ac.	154 ac. in Westford
A. Johnson	87 ac.	forest management plan; 103.5 ac. total
M. Hendrick	46 ac.	forest management plan

Weed Road Area

A. Packard II	82 ac. woods	forest management plan: 106 ac. total
D. Boucher	50 ac.	
A. Duvall	36 ac. Homeplace and 30 ac. N. of Sleepy Hollow Road	
W. Senn	63 ac.	forest management plan

AREA#5:

Bixby Hill Road

W. Liebman	35 ac. woods	forest management plan: 70 ac. total
G. Corson	30 ac.	possibly sold (next to Liebman and Mathew
P. Hyde	50 ac.	
Emerson	200 ac. in Westford adj. to P. Hyde	
Kamerling	40 ac.	Pettinghill Road (north of R. Lemire)

Chapin Road

Chapin	112 ac.	forest management plan
Mathews	580 ac.	

ESSEX PARCELS LESA SCORES

OWNERSHIP	LESA SCORE		OWNERSHIP	LESA SCORE
R. PARIZO	86		J. BOHAN	119
R. BESHAW	86		C. ST. HILAIRE	110
K. THOMPSON	86.25		R. LEMIRE - South on Rt. 128	160.5
R. TYERAAS	92.6		BLOW	146.5
JONATHON LANG	120.46		JP LEMIRE	189
J. THIBAULT	104.16		LEHOULLIER	175.75
D. WHITTEN	123.16		G. FLETCHER	138.75
W. ARMS	116		R. LEMIRE - North on Rt. 128	188.75
JOHN LANG	80		T. HALLETT	117.25
E. BLAKE	101.6		J. CROSS JR.	119.25
E. BIGELOW	106		G. CUNNINGHAM	128
A. SILVERMAN	139		L. HOLMES	225.75 ✓
B. WHITE - Old Stage Road	121		A. PACKARD II	129.75
A. LUSSIER	150.75 ✓		D. BOUCHER	145
MURRAY	120.5		H&L WHITCOMB	166.75
H&D MACK	114		J. THOMPSON	136.5
N. DESSO	121.25		W. SENN	146.75
E. BIGELOW - Brigham Hill	130.75		J&J WHITCOMB	202.25 ✓
B. WHITE - Brigham Hill	124.75		P. ALLEN	128
L. KENNEY	127		BUSHEY	124
PAGE	119		REGINA OPERATIONS	182.75
W. CORLEY	117		H. POWELL	184.4
D. MATHEWS	115		R. WILSON-S. corner Col. Page/Chapin Road	128.45
J. CHAPIN (A) - Col. Page Road	159.5		R. CHASE	132.9
J. CHAPIN (B) - Chapin Road	170.5		J. WRIGHT	110.85
N. MEYERS	182.75		J. WHITE	189.5
E&G MATHEWS	213 ✓			

Lowest score = 80
highest score = 225.75

Grouping

1 - 99.9 (5) 9%
100 - 155.9 (34)
156 - 300 (14)
/53

ESSEX LESA SCORES

		R. PARIZO	R. BESHAW	K. THOMPSON	R. TYERAAS	JONATHON LANG	J. THIBAULT	D. WHITTEN	W. ARMS
SITE ASSESSMENT									
Ia. Local Roads	(0-10)	0	0	0	0	0	0	10	10
Ib. Proximal Farms	(0-23)	7	7	7	7	7	7	7	7
IIa. Growth Rate	(0-12)	0	0	0	0	0	0	0	0
IIb. Distance to Jobs	(0-15)	6	6	0	0	0	0	6	6
IIc. Utilities	(0-20)	0	0	4	4	4	4	20	20
IId. Distance to Interchange	(0-8)	2	2	6	8	8	8	8	8
IIIa. Farm Size	(0-48)	0	0	0	0	0	0	0	0
IIIb. Capital Investment	(0-15)	0	0	0	3.3	10.66	4.3	3.3	0
IIIc. Farming Status	(0-22)	0	0	0	0	15	7	0	0
IV. Views	(0-17)	0	0	4.25	6.3	12.8	9.86	9.86	8
V. Tax Program	(0-10)	0	0	0	0	0	0	0	0
TOTAL SA SCORE	**(0-200)**	15	15	21.25	28.6	57.46	40.16	64.16	59
TOTAL LE SCORE	**(0-100)**	71	71	65	64	63	64	59	57
TOTAL LESA SCORE	**(0-300)**	86	86	86.25	92.6	120.46	104.16	123.16	116

ESSEX LESA SCORES

	JOHN LANG	E. BLAKE	E. BIGELOW	A. SILVERMAN	B. WHITE Old Stage Rd	A. LUSSIER	MURRAY	H&D MACK	N. DESSO
SITE ASSESSMENT									
Ia. Local Roads	0	7	7	7	7	10	10	10	10
Ib. Proximal Farms	7	7	7	7	13	13	13	13	13
IIa. Growth Rate	0	0	0	0	0	0	0	0	0
IIb. Distance to Jobs	0	0	0	6	6	6	6	10	10
IIc. Utilities	0	9	9	4	20	20	20	20	20
IId. Distance to Interchange	8	8	8	8	8	8	8	8	8
IIIa. Farm Size	0	0	0	18	0	5	5	0	0
IIIb. Capital Investment	0	2.6	12	12	4	4	0	0	1.5
IIIc. Farming Status	0	0	0	7	0	7	0	0	0
IV. Views	0	9	8	9	3	15.75	5.5	0	5.75
V. Tax Program	3	0	0	0	0	3	0	0	0
TOTAL SA SCORE	18	42.6	51	78	61	91.75	67.5	61	68.25
TOTAL LE SCORE	62	59	55	61	60	59	53	53	53
TOTAL LESA SCORE	80	101.6	106	139	121	150.75	120.5	114	121.25

ESSEX LESA SCORES

	E. BIGELOW	B. WHITE	L. KENNEY	PAGE	W. CORLEY	D. MATHEWS	J. CHAPIN (A)	J. CHAPIN (B)	N. MEYERS
	Brigham Hill	Brigham Hill					Col. Page Rd.	Chapin Rd	
SITE ASSESSMENT									
Ia. Local Roads	10	10	10	7	7	7	10	10	10
Ib. Proximal Farms	18	13	13	13	13	13	13	13	13
IIa. Growth Rate	0	0	0	0	0	0	0	0	0
IIb. Distance to Jobs	10	10	10	6	6	6	6	6	6
IIc. Utilities	20	20	20	20	20	20	20	20	20
IId. Distance to Interchange	8	8	8	8	8	8	8	8	8
IIIa. Farm Size	0	0	5	0	0	0	10	18	10
IIIb. Capital Investment	0	0	0	3	0	0	0	2	10
IIIc. Farming Status	0	0	0	0	0	0	15	15	22
IV. Views	9.75	6.75	6	7	0	0	5.5	9.5	13.75
V. Tax Program	0	0	0	0	0	0	10	10	10
TOTAL SA SCORE	75.75	67.75	72	64	54	54	97.5	111.5	122.75
TOTAL LE SCORE	55	57	55	55	63	61	62	59	60
TOTAL LESA SCORE	130.75	124.75	127	119	117	115	159.5	170.5	182.75

ESSEX LESA SCORES

	E&G MATHEWS	J. BOHAN	C. ST. HILAIRE	R. LEMIRE S. Rt. 128	BLOW	JP LEMIRE	LEHOULLIER	G. FLETCHER
SITE ASSESSMENT								
a. Local Roads	10	10	10	0	0	0	0	0
b. Proximal Farms	13	13	13	13	13	13	13	13
Ia. Growth Rate	0	0	0	0	0	0	0	0
Ib. Distance to Jobs	10	10	6	6	10	10	10	10
Ic. Utilities	20	20	9	4	20	20	20	20
Id. Distance to Interchange	8	8	8	8	8	8	8	8
IIa. Farm Size	42	0	0	10	10	26	26	10
IIb. Capital Investment	7	0	0	0	0	7.5	5	3
IIc. Farming Status.	22	0	0	15	0	15	7	0
V. Views	15	6	5	10.5	7.5	13.5	10.75	8.75
. Tax Program	10	0	0	10	0	3	3	0
OTAL SA SCORE	157	67	51	76.5	68.5	116	102.75	72.75
OTAL LE SCORE	56	52	59	84	78	73	73	66
OTAL LESA SCORE	213	119	110	160.5	146.5	189	175.75	138.75

175 81 57 [illegible] [illegible] 151 [illegible] [illegible]

ESSEX LESA SCORES

	R. LEMIRE	T. HALLETT	J. CROSS JR.	G. CUNNINGHAM	L. HOLMES	A. PACKARD II	D. BOUCHER	H&L WHITCOMB
	N. Rt. 128							
SITE ASSESSMENT								
Ia. Local Roads	0	10	10	10	10	10	10	10
Ib. Proximal Farms	13	13	13	13	13	13	13	13
IIa. Growth Rate	0	0	0	0	0	0	0	0
IIb. Distance to Jobs	10	10	10	6	10	10	10	10
IIc. Utilities	20	20	20	9	20	20	20	20
IId. Distance to Interchange	8	8	8	8	8	8	8	8
IIIa. Farm Size	26	0	0	0	18	0	0	10
IIIb. Capital Investment	7	0	1	4	8.5	1	3	4
IIIc. Farming Status	15	0	0	0	22	0	7	15
IV. Views	14.75	5.25	5.25	13	13.25	5.75	7	12.75
V. Tax Program	10	0	0	0	10	3	0	0
TOTAL SA SCORE	123.75	66.25	67.25	63	132.75	70.75	78	102.75
TOTAL LE SCORE	65	51	52	65	93	59	67	64
TOTAL LESA SCORE	188.75	117.25	119.25	128	225.75	129.75	145	166.75

150.75 79.25 81.25 101 150.75 91.75 107 125.75

ESSEX LESA SCORES

	J. THOMPSON	W. SENN	J&J WHITCOMB	P. ALLEN	BUSHEY	REGINA OPERATIONS	H. POWELL	R. WILSON SE Col. Page
SITE ASSESSMENT								
Ia. Local Roads	10	0	0	10	0	0	7	10
Ib. Proximal Farms	13	13	18	18	18	18	13	13
IIa. Growth Rate	0	0	0	0	0	0	0	0
IIb. Distance to Jobs	10	10	6	6	6	6	6	6
IIc. Utilities	20	20	4	9	20	20	20	20
IId. Distance to Interchange	8	8	8	8	8	8	8	8
IIIa. Farm Size	0	5	36	5	10	10	10	5
IIIb. Capital Investment	5	1.5	12	8	0	0	4	0
IIIc. Farming Status	0	7	22	7	0	15	7	0
IV. Views	5.5	7.25	16.25	0	6	13.75	15.5	9.5
V. Tax Program	0	0	10	0	0	0	10	0
TOTAL SA SCORE	71.5	71.75	132.25	71	68	90.75	100.5	71.5
TOTAL LE SCORE	65	75	70	57	56	92	83.9	56.95
TOTAL LESA SCORE	136.5	146.75	202.25	128	124	182.75	184.4	128.45

98.5 108.75 154.25

ESSEX LESA SCORES

	R. CHASE	J. WRIGHT	J. WHITE
SITE ASSESSMENT			
Ia. Local Roads	0	7	0
Ib. Proximal Farms	7	13	18
IIa. Growth Rate	0	0	0
IIb. Distance to Jobs	6	6	10
IIc. Utilities	0	20	20
IId. Distance to Interchange	8	8	8
IIIa. Farm Size	0	5	5
IIIb. Capital Investment	8	0	4
IIIc. Farming Status	22	7	15
IV. Views	9	13.5	12.5
V. Tax Program	3	0	3
TOTAL SA SCORE	63	79.5	95.5
TOTAL LE SCORE	69.9	31.35	94
TOTAL LESA SCORE	132.9	110.85	189.5

118.9 76.85 [illegible]