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INVENTORY OF SCENIC RESOURCES
NORWICH, VERMONT
January 2000




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OF SCENIC RESOURCES
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**Scenic Resources Committee
of the
Norwich Conservation Commission**

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of Rosamond Orford
for lending photographs of the Connecticut River and Bradley Hill for this booklet
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for taking photographs of Wight Cemetery Road and the Hillside Cemetery for this inventory.**

This booklet was prepared and edited by Susan Milord, Jon Bouton, Lee Michaelides and Sarah Drew Reeves.



Introduction

Take a drive—or, better yet, a leisurely walk—through any part of Norwich, and you'll find abundant examples of scenic beauty. As you stroll down Main Street, you can journey back 150 years in time to a classic New England village. Take a hike up Bradley Hill Road for a breath-taking view of some of New Hampshire's magnificent peaks. Amble along back-country dirt roads for a glimpse of Vermont's agrarian past, or savor some peace and quiet as you follow the course of one of Norwich's meandering brooks. In every case, you'll enjoy one of Norwich's greatest treasures—its scenic resources—there for *all* to enjoy. These are resources that do much to make Norwich both the special place it is and quintessentially Vermont.

While many families have lived in Norwich for generations and helped shape its landscape (some have been here for a generation or two and also shaped its character), a growing number are newcomers, ranging from retirees to young families with school-aged children. They are often drawn to Norwich because it reminds them of the very places they came from, places that "used to be just like Norwich." Many were similar rural communities which grew too fast or too haphazardly, only to lose the very qualities—including scenic beauty—that made them attractive places to live in the first place.

Norwich is in danger of turning into such a place.

Growth is inevitable, of course, and identifying Norwich's scenic resources is not a call to end growth. Rather it is a reminder that those very parts of Norwich that residents treasure and that continue to draw so many here—the open spaces, hiking trails, clusters of historic buildings, and pockets of wilderness—need to be protected if Norwich hopes to maintain these qualities and characteristics.

The booklet you hold in your hands is an attempt to document the special places appreciated by established families and newcomers alike—Norwich's scenic resources.

A Bit of History

This Inventory of Scenic Resources concludes a series of inventories of natural resources which the Norwich Conservation Commission began ten years ago. It attempts to identify resources of scenic beauty in a comprehensive and systematic way.

The inventory draws on two previous studies. In February 1988, the Conservation Commission carried out and published a *Natural Resource Questionnaire*, which included the category "favorite scenic views." In August 1988, a group of concerned citizens proposed to the Selectboard that several roads be given "scenic road" status. (From 1989 to 1991 four roads were so designated: Bragg Hill Road, Tucker Hill Road, Goodrich Four Corners, and the portion of Jericho Street located in Norwich [recently renamed Joshua Road].) Both studies identified scenic resources that the current committee carefully checked.

How the Inventory Was Conducted

Sought out because of their knowledge of different parts of town, Scenic Resources Committee members traveled throughout Norwich, covering the nearly 80 miles of town-maintained roads, as well as the state highways, class IV roads and trails. Their task was to identify *public* scenic resources—that is, views from publicly-accessible locations. (Views from backyards and private land do not qualify.) Over several weeks, they took inventory data, evaluated and reviewed it, and re-evaluated it with additional, corroborative testing. The Committee divided its findings into five categories: 1) scenic views from maintained town roads and highways, 2) gateways, 3) class IV roads and trails, 4) cemeteries, and 5) rivers.

Views from town roads and highways were rated according to a system suggested by the Vermont Agency of Natural Resources in its publication entitled *Vermont's Scenic Landscapes: A Guide for Growth and Protection*. It was adapted into a matrix system, as suggested by Hanover, NH's Scenic Locales Committee Report, *Something for Everyone*, 1998. (More detail is included on pp. 3-4 below; see appendix A for Matrix)

The Committee also drew upon *Vermont's Scenic Landscapes* to interpret two other categories: gateways and rivers. For the latter, other invaluable resources were books on the Connecticut River's history, as well as publications regarding national and bi-state designations. Especially noteworthy is The Upper Valley Subcommittee Plan of the *Connecticut River Corridor Management Plan*, published by the Connecticut River Joint Commissions. (See appendix D for the summary of the subcommittee's plan.)

For class IV roads and trails, the Committee's interpretive resources included a policy statement on class IV roads and highways by Vermont's Department of Forests, Parks and Recreation; *Class 4 Highways and Trails-Ten Questions*, published by the Vermont Local Roads program; and a *Town Policy on Class 4 Roads and Trails, A Model for Vermont Towns*, published by a task force of the Vermont Trails and Greenways Council. (See appendix C.)

To understand the value and significance of Norwich's cemeteries, the committee turned to Bill Flynn, L.A. He researched the history and current use of cemeteries as part of the landscape assessment and design recommendations for the City of Lebanon, NH, as reported in the *Plan for the Enhancement of the Lebanon Cemeteries, Draft Copy*. His depiction of cemeteries, written for this inventory, is included.

The Findings

1) Along Public Roads and Highways

Areas along public roads and highways were rated by the following visual qualities or characteristics, suggested in *Vermont's Scenic Landscapes*, with two categories added from the Hanover study.

- *Frequency view is seen by the public (from vehicles and/or on foot)*

As the protection of scenic resources is for the public, the greater the number of people who regularly view a particular location, the higher the rating in this category.

- *Natural visual contrast*

Sharp contrast, e.g., between open meadows and woodlands, or a body of water rimmed by a steep hillside, makes for a dynamic and attractive landscape.

- *Order and harmony/Integrity*

Order and harmony/integrity is evident where there is balance between structures and open space, such as a farm complex within its surrounding landscape. Other examples can be found in nature, such as along a trail where woods have been undisturbed for a period of time.

- *Focal point*

Focal points add clarity, meaning, or drama to a landscape. A distinct mountain in the distance, a church spire marking a village cluster, or a waterfall in a wild place are examples of focal points.

- *Uniqueness*

Scenes were rated highly if unique for Norwich. While Vermont is dotted with classic farm complexes surrounded by expanses of open fields and woodlands, and even many which are the foreground of distant views, the Meeting House Farm is considered unique because there are few like it in Norwich.

- *Observation points*

Locales that offer vistas across valleys or to distant mountains are considered valuable scenic resources.

- *Foregrounds of distant views*

Open areas, such as agricultural fields or river valleys that are the foreground of distant mountains, a long river valley or a distant village are scenic.

- *Sensitivity to development*

Certain sites are particularly sensitive to being disturbed by development, including open fields, ridgelines (the tops of ridges), steep slopes viewed from public roads, and gateways to historic villages.

Scenic locations along maintained roads and highways were rated according to the above qualities using a 3-point system (3 being highest), with the exception of "uniqueness," which was given a 5-point range. Scores were then totaled. Places with scores of at least 20 (out of a possible 26) were determined to be of highest priority. Those scoring between 15 -19 were also considered scenic and of high priority. (See appendix A for matrix.)

Of Highest Priority along Roads and Highways

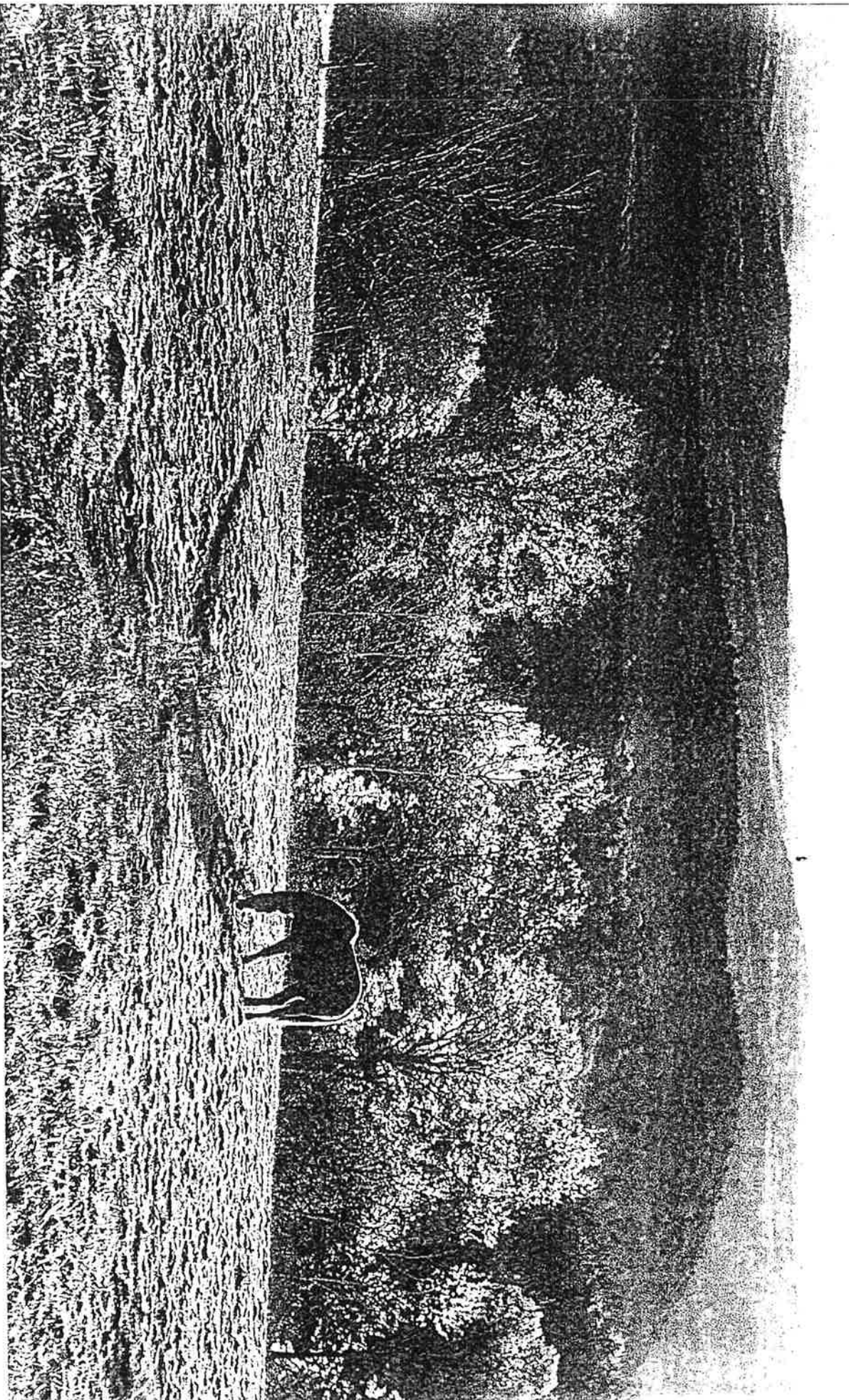
The following roads—or portions of roads—received the highest ratings in the Scenic Resources Inventory matrix.

Union Village Road

The road is scenic for most of its length as it rises from the village up to the Meeting House Hill Farm (Pierce/Van Arman) and beyond to Route 132. Open fields lead to wooded ridgelines which often give way to outstanding views. Above the Meeting House Hill Farm looking south and east, Smarts Mountain, Moose Mountain, and Moosilauke are visible. A few houses are tucked into the stretches of woods, leaving the overall sense of traditional agricultural patterns intact. The town-owned land by the Meeting House Hill Cemetery allows travelers to pull off the road and read the marker indicating the original settlement of "Norwich Center." From above the cemetery there are views to the historic Maple Hill (Zea) Farm and open fields and woods beyond.

Meeting House Hill Farm (Pierce/Van Arman) deserves recognition in its own right. The historic pattern of house, barns, and silo, set off by open fields, ridgeline, and distant mountains, is unique in Norwich.

Bradley Hill Road - Rosamond orford



Visible from other parts of town, including from Beaver Meadow Road, Hopson Road, Main Street, and Route 5, the farm helps define the scenic, rural quality of Norwich.

Bradley Hill Road

Beyond the wooded area of Bradley Hill Road, stretch sloping pastures and barns. The higher pastures yield to distant views of mountains to the east. The road continues with open fields, farms and wooded ridgelines to the east, and wooded and open hillsides to the west. Though one contemporary house at the top of a hill disturbs the sense of a rural landscape, generally it is intact. The road leads hikers to connecting loops with Ladeau Road and Kerwin Hill Road.

Patrell Road

The northern end of Patrell Road climbs up to a field where the terrain drops steeply to the east. This vantage point offers a spectacular long-range view well into New Hampshire.

Upper Turnpike and Needham Roads

The area is scenic because of the pastoral nature of the hillsides, orchard and farm. From Upper Turnpike, travelers have a near view of the open hillsides and wooded ridge west of Turnpike and the ridge between Turnpike and Upper Turnpike. The fields are bordered by tree-lined stone walls. Many people walk the three-mile loop created by Turnpike and these two roads.

River Road and Route 5 North

Views from River Road and Route 5 North look east towards a treasure—not only for Norwich, but for our nation—the endlessly changing, beautiful Connecticut River. There are few towns along its border which have such long and close-up vistas of the river and its shoreline, complete with fertile fields, rolling farmlands, woods, and marshes. Generally protected from development by the railroad track, the view would be much improved with some brush removal. On the west side of the road, a variety of older houses and Cook's gravel business add to the overall sense of a working rural landscape with farms, fields with farm animals, and steep, wooded hillsides.

The Loveland Trust is on the west side of the road where Butternut Road branches off. The historic brick house sits on a knoll, overlooking crop fields cultivated by Killdeer Farms. A small pond adds to the scenic quality.

Bragg Hill Road

The open fields and wooded ridgelines give way to splendid views to the northeast at the top of the hill. A double row of immense maple trees adds to the scenic beauty. Although the sense of intactness of the rural countryside is diminished by recent development, the condition of the road and the long-range views attract a number of appreciative joggers, hikers, bikers, and travelers by car.

Of High Priority along Roads and Highways

While the previously mentioned resources along roads and highways are considered the most scenic and of highest priority for protection, others received ratings on the matrix of 15-19 and therefore are ranked as scenic and of high priority for protection. These are:

Maple Hill Farm (Zea)—as seen from Union Village Road, with historic buildings and fields

Kerwin Hill Road—near its beginning at Union Village Road, as it rises steeply with open pastures on both sides of the road; on the left, the former Thorburn farm and views into New Hampshire

Route 132—Graybarns with its surrounding fields and the Ompompanoosuc

Goodrich Four Corners Road—the Weingarten Farm near the intersection with Town Farm Road

Campbell Flats Road—the flood plain of open fields along the Ompompanoosuc River, and the view at the top of the hill

Hogback Road—farms with open fields edged by woods, then an evergreen tunnel

Hopson Road—the Von Moltke's open fields edged by woods on the NE side

Warner Meadows—as seen from Elm Street and Hopson Road, open meadows, bordered by woods and Bloody Brook

Bloody Brook Falls—viewed by many from the Elm Street bridge, a dramatic focal point

Huntley Meadows—on Turnpike Road with the woodland edge and brook beyond

Route 5 South— despite existing commercial development, a sense of open space and agricultural heritage on parts of the route

Joshua Road—off Hartford's Jericho Street vistas of open hillsides and distant mountain peaks



Wight Cemetery Road - Tim Sturgeon

In identifying the above resources of highest and high priority along roads and highways, the committee is not suggesting protection be limited to them. Other roads, especially those scoring just below on the matrix, have many scenic qualities.

2) Gateway to the Village

Gateways have always been an important part of Vermont towns. Historically, villages were surrounded by open farm land. Today, even though the open space may no longer be used for agricultural purposes, it is essential for maintaining the pattern of compact village with open countryside. Simply put, a gateway sets the tone for the whole. Yet it is sensitive to development of various kinds.

Norwich is no different.

The gateway to town has been compromised by the close proximity of the highway, with its overpass, exit ramps, and the chain-link fence running along a section of the road. (Plans are underway to beautify that section of road.) Yet, despite the blight of the interstate, a traveler's heart lifts almost immediately upon entering the space which evokes the rural countryside seen in other parts of town. From the traffic light at the junction of Route 5 and Main Street, the beginnings of the village of Norwich are apparent beyond the gateway. On the right, stretching before a large New England home, are open fields punctuated by the evenly-spaced trees of an apple orchard. On the left, the mid-view of rolling open hills of the former Booth property leads to an open field along the road, separated from the village beyond by a row of tall spruce trees.

While perhaps not spectacular, the gentle, welcoming transition from open spaces to village cluster makes this scene worth preserving.

3) Class IV Roads and Trails

As towns grow, class IV roads and trails become increasingly valuable as opportunities for recreation. There walkers can amble alongside farm lands or in woodlands away from frequent car traffic.

Norwich has fifteen class IV roads, that is, town roads that are not maintained in all seasons. (See appendix C for list.) Some, like Cossingham Road and Bradley Hill Road (only part of which is class IV), have old farm buildings and open fields with vistas of distant mountains. Others, such as the Burton Woods Road and Olcott Lane, lead into ferny woods with remnants of Norwich's human past, including beautiful stone walls, old

cellar holes, and cemeteries. On these peaceful road and pathways hikers can hear the sounds of nature (birds, animals, water, wind, trees creaking, twigs snapping under foot.), and breathe in the fresh smells of pine, leaves, and earth. Some class IV roads are used frequently by hikers, bikers, and cross country skiers. Others, such as Wight Cemetery Road, remain waiting to be discovered.

Norwich's public trails, including the Appalachian Trail, Gile Mountain Trail, the Bill Ballard Trail, the Milton Frye Nature Area (Norwich Nature Center), and the Heyl Trail, draw many hikers in all seasons. The trail into the Schmidt bog leads to a display of showy lady slippers and other rare orchids in bloom in June. The proposed Ridge Trail, connecting Gile Mountain and the Bill Ballard Trail, will expand hiking options.

Class IV roads have recently received a great deal of attention in several Vermont towns and at the state level. Appendix C is the model town policy developed by a statewide task force representing diverse interests. One town, Westford, recently recommended retaining all class IV roads for recreational uses.

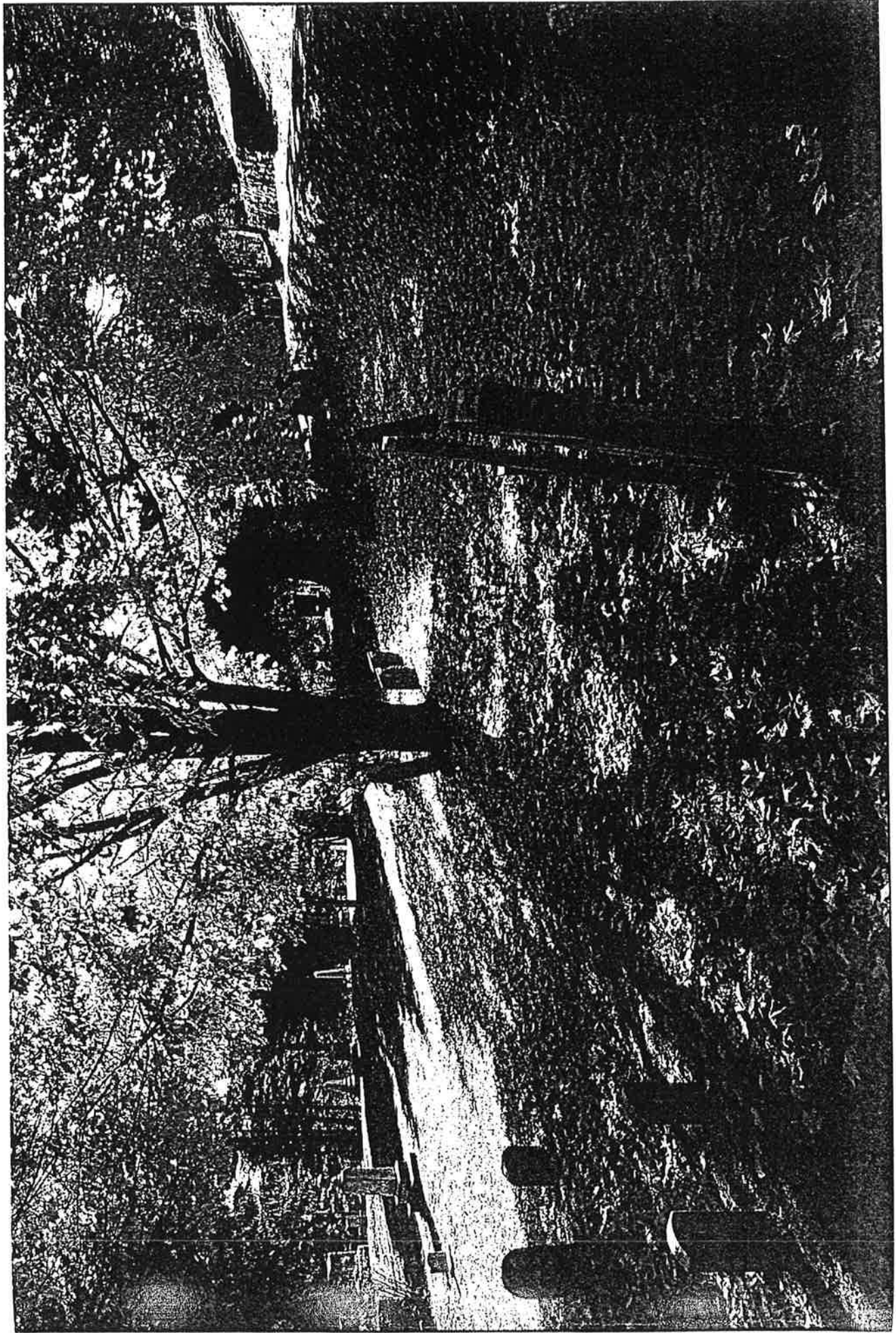
4) Cemeteries

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

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

. . . Cemeteries offer the solitude and serenity required for quiet contemplation *in our contemporary world*. Many communities promote not only the spiritual value of their cemeteries, but also the cultural, and even, the ecological significance. Cemeteries serve as a repository of the history and culture of the community. The names on the headstones trace the ethnic evolution of the community. The elaborately sculptured headstones and monuments reflect the skills of talented local artisans who down through the ages have carved beautiful designs in slate, marble and granite.

Cemeteries, if thoughtfully designed, not only accommodate the dead but also improve the quality of life for the living by enhancing local environmental conditions. Designers, naturalists, and government agencies are recognizing the importance of including cemeteries in



Hillside Cemetery - Tim Sturgeon

community open space plans. Cemeteries offer opportunities to improve wildlife habitat and wetlands.

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

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

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

5) Rivers

On page 5, the Connecticut and Ompompanoosuc Rivers were described as viewed from River Road and Route 5 North. Here they receive recognition from the perspective of the rivers themselves.

The Connecticut River

Named by the Amerindians as the Quinatucquit, "the long tidal river," the Connecticut River was the main avenue of transportation for New England during the early colonial settlement. A center of agriculture because of its fertile flood plains, it became the source of power for the Industrial Revolution. It suffered from extreme pollution, until it was reclaimed after the Clean Water Act of 1972. It is now a viable habitat for salmon and trout, an important migration route for song birds and raptors, as well as home to rare species of plants and wildlife. It is also a major recreational resource for swimming, boating of various kinds, and fishing. In recognition of its

significance to the nation, the entire watershed became the Silvio Conte Fish and Wildlife Refuge in 1995, and in July 1998, the river was named an American Heritage River. In 1999, the states of Vermont and New Hampshire designated certain roads along or near the river as a Scenic By-way.

Heading north from the Ledyard Bridge, boaters see the Dartmouth swimming and boating facilities. Then steep, wooded banks dominate the New Hampshire side, giving way to fertile farmland and rolling hills beyond. There is a public boat dock in New Hampshire further upstream. On the Norwich side is the town's 0.2-acre unmarked boat access, just before the Cook's party boat landing. Then the shore rises steeply until it descends into a river bend, giving way to pastures, fertile fields, and marshes and Patchen's primitive canoe campsite at Loveland Point.

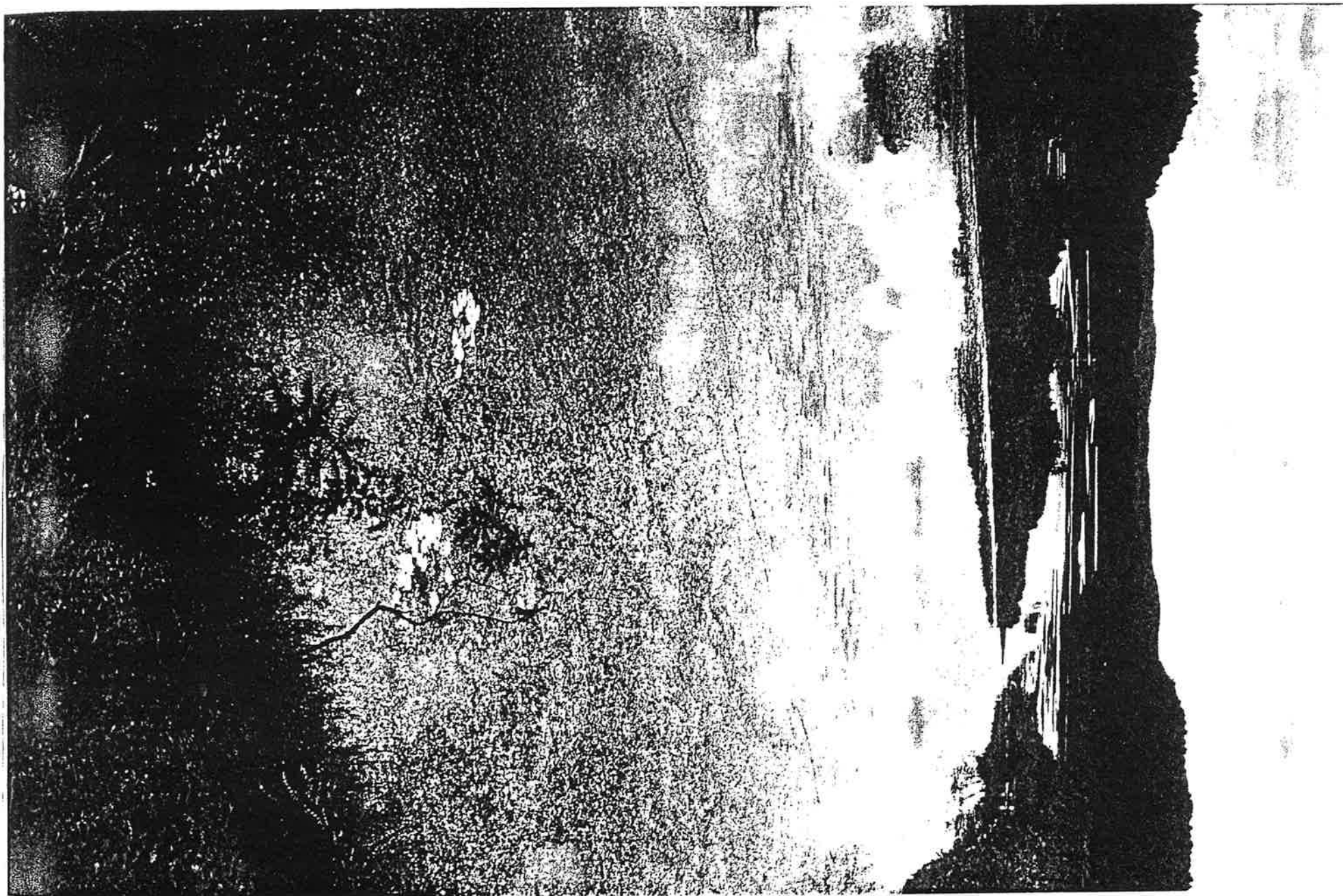
South of the Ledyard bridge paddlers can dip under the railroad bridge into the marshy inlet formed at the mouth of Bloody Brook, along the Montshire Museum's shoreline. This is a good place to spot wildlife. Further south, there are wooded shorelines on both sides. New trails to the river from the Montshire Museum offer access through a tunnel under the railroad tracks to marshes, the wooded shoreline and view.

In sum, the view from the Connecticut River is generally of unspoiled natural areas and farmlands, with a few points for public boat access. So far there is no access to the river for public swimming in Norwich.

The Connecticut River is a valuable scenic resource and a unique asset to Norwich. The goals of national and bi-state programs are, in part, designed to support community-based efforts to restore and protect the environmental, economic, cultural, and historic values of our rivers. What has been regained, can be lost. Current issues regarding the river's protection and recommendations can be found in The Upper Valley Subcommittee Plan of the *Connecticut River Corridor Management Plan* (See Appendix D for Summary).

The Ompompanoosuc River

Much of the Ompompanoosuc is inaccessible by boat, except when riding a springtime flow in a canoe or kayak. Naturally carved swimming holes in glacial eskers remain generally out of the public's view. Yet voyagers can travel for a mile or two from the Old Bridge Road Fish and Wildlife boat launch, viewing flood plains and the curving river. Or they can head in the direction of the Connecticut River, where the broad, marshy mouth of the Ompompanoosuc is a significant stopping place for migrating birds. The mines of Strafford still leach chemical compounds into the streambed, but are currently the subject of an ongoing restoration effort.



The Connecticut River - Rosamond Orford

What's Next?

Making an inventory of Norwich's scenic resources, and presenting it to the public, is only the beginning. Unless these special places are protected, they are at risk of disappearing forever. Norwich could become just like the towns many of its residents escaped when moving here. Protection requires that people take action. The next steps involve participation, persistence and alertness.

The Role of the Scenic Resources Inventory in the Public Domain

Once accepted by the Selectboard, the Scenic Resources Inventory becomes a public document. It immediately becomes a valuable tool the Planning Commission can use to create protective strategies. It can also be used to guide development projects, since it clearly indicates whether specific parcels have scenic resources.

The Conservation Commission can use the Scenic Resources Inventory to help evaluate requests for proposals for the town's Conservation Trust Fund. The Commission makes its recommendations to the Selectboard or the town as a whole.

Public Participation with the Conservation Commission

A series of mylar maps—mapping overlays showing such natural resources as farmland, aquifers (water supply), and conserved and public lands—has just been created by the Upper Valley/Lake Sunapee Council for the Conservation Commission and the town. A critical piece, this inventory of scenic resources, will be added. The complete map set will help Norwich prioritize which natural resources are worthy of protection. What areas, for example, are both scenic and good for growing crops? Is something both scenic and adjacent to land that is already conserved? Is it of such high quality in one of the categories, such as a potential water supply for future use, that it warrants protection in its own right?

The Conservation Commission is planning a public forum this spring to develop priorities for protection. Copies of the natural resources maps, as well as written descriptions, will be published ahead of time, so that as many people as possible can participate. The public can help decide.

Public Participation with the Planning Commission

Developing protective strategies is the task of the Norwich Planning Commission. It has been diligent, working to translate the general principles of the Town Plan into policies and zoning regulations it can present to the public. The Commission plans public hearings on drafts of its proposals in the near future. It urges the public to attend, consider the proposals carefully, and express its views, so that the final documents reflect the will of the people. Do the proposals protect high priority resources, including scenic resources? The Planning Commission ask that the public help determine this.

This Inventory offers the town of Norwich a valuable tool. The Scenic Resources Committee of the Conservation Commission looks forward to seeing its work used in combination with that of many others.

APPENDICES

A: The Matrix

B: List of Class IV Roads in Norwich

C: *Town Policy on Class 4 Roads and Trails, A Model For Vermont Towns*

D: "Summary of the Upper Valley River Subcommittee Plan," *Connecticut River Corridor Management Plan*, Vol. I, Prepared & edited by Sharon F. Francis & Adair D. Mulligan, (Connecticut River Joint Commissions, Charlestown, New Hampshire, 1977), pp. 73-81

E: References

Appendix A

**THE MATRIX FOR EVALUATING SCENIC RESOURCES
ALONG ROADS AND HIGHWAYS**

NORWICH SCENIC RESOURCES INVENTORY

LOCALE	Frequency view is seen by public/ driving or at recreation	Natural visual contrast	Order & harmony	Focal points	Uniqueness	Observation point (to look from)	Foreground of distant views	Sensitive to development	TOTAL	
SCORING:	0-3	0-3	0-3	0-3	0-5	0-3	0-3	0-3		
From:										
UNION VILLAGE RD.	3	3	2	3	3	2	2	3	21	A
Van Arman Farm (Meeting Hse. Hill Farm)	3	3	3	3	5	3	2	3	25	A
Meeting Hill Cemetery	1	2	2	3	3*	3	3	0	17	B
Maple Hill Farm (Zea)	1.5	2.5	3	3	4	0	0	2	16	B
BRADLEY HILL RD.										
C. Smith Farm	}	3	3	1	2.5	3	3	3	21.5	A
Ladd Farm										
Upper Section of Rd. (see also under cl. IV rds.)	2	3	3	1	3	3	3	3	21	A
OLD COACH RD.	1	2	1	2	1	1	3	1	12	
MAPLE HILL RD.										
HAWK PINE RD.	<i>Nice country road. with houses not outstanding views</i>									
UPPER PASTURE RD.										
Bow House	0	2	1	0	1	1	2	0	7	

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LOCALE	Frequency	Natural	Order	Focal points	Uniqueness	Observation	Foreground	Sensitive to	TOTAL	
	view is seen by	visual	& harmony			point	of distant	development		
	public/ driving	contrast				(to look from	views			
	or at recreation		Integrity (natural and/or historic)							
SCORING:	0-3	0-3	0-3	0-3	0-5	0-3	0-3	0-3		
PATRELL RD.										
Upper	2	3	3	2	5	3	3	3	24	A
KERWIN HILL RD.										
(lower-by gravel pit)	3	0	0	0	0	1	1	1	6	
By Thorburns'	1	3	3	2	0	3	3	2	17	B
RTE. 132										
Graybarns	3	2	2	2	2	2	2	2	17	B
Ompompanoosuc River	3	2	2	2	2	2	1	2	16	B
HOGBACK RD.	1	3	3	1	3	1	0	3	15	B

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LOCALE	Frequency	Natural	Order	Focal points	Uniqueness	Observation	Foreground	Sensitive to	TOTAL	
	view is seen by	visual	& harmony			point	of distant	development		
	public/ driving	contrast				(to look from	views			
	or at recreation		Integrity (natural							
			and/or historic)							
SCORING:	0-3	0-3	0-3	0-3	0-5	0-3	0-3	0-3		
RIVER RD, RTE 5 N.										
Connecticut River	3	3	3	3	5	3	3	3	26	A
Loveland Trust Hse & fields (by Bullock Rd. turnoff)	3	3	3	3	3	3	3	3	24	A
Ompompanoosuc River	3	3	3	3	3	3	3	3	24	A
Connecticut River from river										
GOODRICH FOUR CORNERS RD.	2	2	2	2	1	1	2	2	14	
Weingarten Hse & farm	2	2	2	2	2	2	2	3	17	B
CAMPBELL FLATS RD.										
Open Fields by Ompompanoosuc River.	1	2	3	2	2	2	2	3	17	B
View at top of hill	1	2	3	2	2	3	3	3	19	B

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LOCALE	Frequency view is seen by public/ driving or at recreation	Natural visual contrast	Order & harmony Integrity (natural and/or historic)	Focal points	Uniqueness	Observation point (to look from	Foreground of distant views	Sensitive to development	TOTAL	
SCORING:	0-3	0-3	0-3	0-3	0-5	0-3	0-3	0-3		
HOPSON RD.										
Open Fields -von Moltke	W	2	2	0	3	0	2	3	15	B
Warner Meadow	W	2	2	0	4	2	1.5	1	15.5	B
Bloody Brook	W	1	2	3	W	1	0	1	14	B
Pine Hill Cemetary	1	0	3	3	W*	3	W	0	16	B
ELM STREET										
Bloody Brook	3	2	3	3	3	3	0	2	19	B
BRAGG HILL										
Open Fields	W	W	W	W	W	W	W	W	24	A
Jacobson Farm Brook	W	W	W	W	4	W	W	W	25	A
DUTTON HILL RD.										
	1	2	2	0	1.5	2	2	3	13.5	
GODDARD RD.										
	0	1	1.5	0	0	0	0	3	5.5	
BROWN SCHOOL HSE. RD.										
	3	3	3+	0	3	0	0	3	15	B

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LOCALE	Frequency view is seen by public/ driving or at recreation	Natural visual contrast	Order & harmony	Focal points	Uniqueness	Observation point (to look from	Foreground of distant views	Sensitive to development	TOTAL
SCORING:	0-3	0-3	0-3	0-3	0-5	0-3	0-3	0-3	
CHAPEL HILL RD.	1	1	1	1	1	1	1		1
BEAVER MEADOW RD.									
Charles Brown Brook									
Fields behind St. Francis Ch.	3	2	0	0	2	0	2	2	12
B.M. Chapel & cemetery	2	0	2	0	1*	0	0	0	8
MAIN STREET									
Gateway (I-91 to edge of of village, i.e. houses)	3	3	2	2	5(*+10)	0	0	3	28*
Orchards	1								
Norwich Green	3	1	0	1	1*	2	0	0	8
Connecticut River, S from Ledyard Bridge									
TURNPIKE RD./									
Huntley Meadows	3	2	2	0	4	2	2	0	15
Norwich Farm: Dream & Do	2	1	1	1	3	0	0	3	11
Fields before " " "	2	3	2	1	1	1	0	3	13
UPPER T/ NEEDHAM	1	3	2	1	4	3	3	3	20

A

B

A

**NORWICH
SCENIC RESOURCES
INVENTORY**

LOCALE	Frequency	Natural	Order	Focal points	Uniqueness	Observation	Foreground	Sensitive to	TOTAL	
	view is seen by	visual	& harmony			point	of distant	development		
	public/ driving	contrast				(to look from	views			
	or at recreation		Integrity (natural							
			and/or historic)							
SCORING:	0-3	0-3	0-3	0-3	0-5	0-3	0-3	0-3		
RTE 5 S., - Gateway Open Fields	3	2.5	1.5	1	3 ^(*+1)	0	0	3	24	A
NEWTON LANE & JERICO ST.										
Jericho St.	1	3	3	2	3	1	3	2	18	B
Joshua Rd.	1	3	3	2	4	1	3	0	17	B
NEW BOSTON RD.										
New Boston Brook										
Wetlands & Open Fields	2	2	3	0	3	1	0	3	14	
Sellman's farm & beyond	1	3	2.5	3	2	1	3	3	18.5	B
NORFORD LAKE RD	1	1	2	0	2	1	2	1	10	

Appendix B

CLASS IV ROADS IN NORWICH

Burton Woods Road

Powers Road,

Kate Wallace Road

Ladeau Road

Bradley Hill Road

Wight Cemetery Road

Olcott Lane/Pierce Lane

Middle Road

Cossingham Road

Town Farm Road

Spaulding Road

Tilden Hill Road

Illsley Road

Sugar House Road

Blood Hill Road

Brown School House Road

Joshua Road



VERMONT TRAILS AND GREENWAYS COUNCIL

103 South Main Street, 8 South
Waterbury, Vermont 05676
(802) 244-8713

TDD 1-800-253-0191
February 19, 1993

Dear Town Official:

Class 4 Highways and Trails are one of the many complex issues with which you must deal. We hope that the enclosed Model Town Policy will help make that part of your work easier.

The Policy is the result of two years of careful analysis by a task group of the Vermont Trails and Greenways Council. Represented on the task group were a wide variety of interest groups related to Class 4 Highways and Trails. We believe that adopting this, or a similar policy, will help to protect the town's interest and assure that these valuable resources remain available to the public.

If you adopt a policy, we would appreciate receiving a copy. If you have any suggestions on how our model could be improved, they would be most welcome.

Sincerely,

Anne Lusk
Chair

Members

Appalachian Trail Conference • Catamount Trail Association • Central Vermont All Terrain Vehicle Club • Connecticut River Valley Resource Commission • Green Mountain Club • Green Mountain Dog Sled Association • Green Mountain Horse Association • Green Mountain Wheelers All Terrain Vehicle Association • Stowe Recreation Path • Vermont Association of Snow Travelers • Vermont Horse Council • Vermont Off-Road Cycling Association

Agencies

Northern Vermont Resource • Conservation & Development Area •



VERMONT TRAILS AND GREENWAYS COUNCIL

Town Policy on Class 4 Roads and Trails A Model for Vermont Towns

The following model policy is similar to one adopted by the Town of Barre in April, 1991. The text of the policy is in the column on the left. The comments on the right are merely explanatory. Each municipality must determine what its own policy should be. This model may not reflect the desires of other towns nor does it address every issue pertaining to class 4 roads and trails.

Why Is It Important To Keep Class 4 Highways and Trails?

There are approximately 1,700 miles of class 4 highways and trails in Vermont. Almost every town has at least a couple of miles of them, usually in the more remote section of town. With the population growing and the interest in outdoor recreation also increasing, it is important to keep class 4 highways and trails as public resources. As private land is further developed, there will be less access for snowmobiling, cross-country skiing, walking, bicycling, horseback riding, fishing, hunting and other outdoor recreation. Town-controlled corridors will help to ensure that there will continue to be a place to enjoy these activities. They also often serve as important links to more extensive trail systems that are on private lands.

Class 4 highways and trails provide important transportation access for forest and agriculture management.

Finally, as communities grow, these rights-of-way may be needed to provide for development, and may be upgraded accordingly. It would be costly to the town to pay landowners for a right-of-way. If the town retains the right-of-way, reclassification to class 3 for instance would involve virtually no cost beyond the cost of the survey and notice.

Text

1. Definition:

Class 4 highways are all other highways not falling under definitions of class 1, 2, and 3 highways. Class 1, 2, and 3 are defined for the purpose of receiving state aid and are passable with a pleasure vehicle on a year-round basis.

Trail means a public right-of-way which is not a highway and which: (A) previously was a designated highway having the same width as the designated town highway, or a lesser width if so designated, or (B) a new public right-of-way laid out as a trail by the Selectmen for the purpose of providing access to abutting properties or for recreational use.

2. Existing Use:

Existing rights-of-way of class 4 highways and trails as of the date of adoption of this policy shall be retained by the Town for purposes of recreational multi-use activities, access to private property, and agricultural and forest management.

3. Maintenance:

The Town shall not provide any maintenance or upkeep on trails.

Permission for repair, maintenance, improvement, or restoration shall not be unreasonably withheld by the Board of Selectmen. The road shall be left in as good or better condition as when permission is granted.

Commentary

This reflects Vermont Statutes Annotated Title 19, Section 302.

See VSA Title 19, Section 301.

The town is saying it will keep all rights-of-way under its jurisdiction and for the purposes described. It's a good idea for a town to retain rights-of-way. A municipality has authority to abandon or "throw up" a road. But once a road is gone, it will be difficult and costly to get the right-of-way back at a later date.

This reflects T.19, VSA, 302 (a) (5) and T.19, VSA, Sec. 310 (c) which assert that towns have no obligation to maintain trails.

This addresses the situation where a farmer or logger wants to upgrade and maintain a class 4 road in order to extract agricultural or forest products from his land.

A reasonable response by Selectmen is to allow for this work to take place. It's a good idea first to define maintenance standards such as ditches, culvert size, bridges and snow plowing to avoid excess upgrading of the road.

Text

The Town shall not provide any summer maintenance of class 4 highways except as required by necessity, and the public good and convenience of the inhabitants, such as bridges, culverts and ditches to control erosion of highways or runoff to adjacent property, and removal of obstructions.

The Town shall not provide any winter maintenance on class 4 highways and trails. Plowing by private parties shall be only with the permission of the Selectmen.

Commentary

The standards should protect the integrity of the road but should be of sufficient scale to allow for the use of modern farm and forest machinery.

By this language the Town has decided to provide a minimal level of summer maintenance and no winter maintenance on class 4 roads. Title 19, VSA, Sec. 310 (b) states "Class 4 highways may be maintained to the extent required by the necessity of the town, the public good and the convenience of the inhabitants of the town...." This broad language has caused considerable confusion for Vermont town officials over their duty to maintain class 4 roads.

Two Vermont Supreme Court cases provide some direction. Gilbert v. Town of Brookfield 1976 and Catlin v. Town of Hartland 1979 make the point: towns ought to use equal treatment in deciding which class 4 roads will receive year round maintenance. It's important to apply maintenance policies and practices fairly among all class 4 roads in town. If a town plows a class 4 road it should be aware that people on other class 4 roads might demand the same level of services.

Some people have argued that T.19, VSA, Sec. 304 (a) (1) requires a more vigorous level of maintenance. Paul Gillies, an attorney in the Secretary of State's office, maintains that the statutes calling for uniform maintenance standards do not mean 'no maintenance'. He wrote in January, 1992: "There's nothing wrong with (class 4 highway maintenance standards) being flexible, and a whole lot wrong with being categorical.... Let the needs of the highway itself define the (level of) maintenance." Some, however, interpret the court cases cited above as limiting a town's flexibility to provide winter maintenance of class four roads.

Text

Any winter plowing of a class 4 road allowed by Selectmen to parties other than a municipality shall not nullify the privileges under 23 VSA 3206 (b) (2).

4. Control:

The Selectmen shall exercise control of class 4 highways and trails to ensure their integrity as a public right-of-way by means which may include, but are not limited to, the following:

- a) establishment of vehicle weight limits;
- b) prohibition or restriction of wheeled vehicle use during mud and snow season; signs and barriers may be utilized to accomplish this purpose;
- c) requirements for temporary permits for heavy equipment access may be imposed and the stipulation included that any highway

Commentary

At issue in many communities is the desire to control or discourage development on class 4 roads. Consequently class 4 maintenance policies become substitutes for good planning and zoning, a practice that might not be a sound municipal practice.

Towns should research this point carefully before deciding what level of maintenance they will provide on class 4 roads, taking into consideration the town plan, growth patterns, terrain, connecting roads from neighboring towns, whether there are existing residences or potential development, forestry interests, recreational uses and other matters.

This section of the statute pertains to snowmobile use. "A snowmobile may not be operated---along a public highway unless it is not being maintained during the snow season or unless the operator is not closer than five feet from the plowed portion or unless the highway has been opened to snowmobile travel by the selectmen or trustees or local governing body and is so posted by the municipality".

By this language the selectmen are stating that the town takes seriously its responsibility to insure that class 4 roads and trails are not unnecessarily or irresponsibly damaged. Selectmen have this authority under State law and by Department of Motor Vehicle regulations.

Text

damaged will be repaired by or at the expense of the user; posting of bond or other security to guarantee that repairs are made may be required as a condition of any permits;

d) speed limits may be established.

5. Change In Classification:

Class 4 highways may be reclassified to trail status, discontinued, or upgraded to class 3 or higher status. Trails may be discontinued or upgraded to class 4 or higher status. Reclassification will be done in accordance with Title 19, VSA, Sections 708-716 and upon findings by the Selectmen that the public interests will be substantially advanced by such change in status and that reasonable measures are taken to replace, substitute, or avoid the loss of public and commercial travel, intrinsic, aesthetic and recreational value, or other public interests afforded by the existing class 4 highway or trail.

At a minimum, no class 4 highway or trail may be upgraded in status or discontinued without the permission of the selectmen. Selectmen may provide for an alternative travel easement or right-of-way replacing the travel route upgraded or discontinued to insure that users and landowners have uninterrupted access.

The Selectmen may require that the cost of upgrading a trail to a class 4 highway or a class 4 highway to a class 3 highway be assigned to the petitioner(s).

6. New Structures:

New structures on lots fronting on a class 4 highway are subject to the requirements of applicable town ordinances.

Commentary

This language seeks to insure no net loss of right-of-way for public and commercial uses. If class 4 roads and trails are reclassified the town wants to insure reasonable access for the existing landowner and user of the class 4 road.

The Vermont General Assembly in 1991 added Subsection (b) to Title 19, VSA, Section 711 to allow selectmen to order the petitioner to bear the cost of upgrading a class 4 town highway to class 3. The statute does not address the issue of costs for upgrading a trail to a class 4 highway.

No structures can be built without also complying with town ordinances and bylaws.

Text

7. Right-of-Way Access:

Selectmen shall control access into the road right-of-way for the installation or repair of utilities and for access of driveways, entrances, and approaches.

Notwithstanding the above, nothing herein shall be deemed to negate or repeal the effect of Chapter _____ of the _____ Town Code, Articles _____ relating to permit requirements for working in or adjacent to highway rights-of-way.

8. Overweight Vehicles:

Pursuant to 23 VSA, Chapter 13, Subchapter 15, vehicular use of highways and bridges is subject to limitation and regulation regarding gross vehicle weights, tire and axle weights, and overall length and width.

Written approval of the Selectmen, or their authorized agent, may be granted for use or travel over highways and by and between the Selectmen and applicant for compensation for wear and tear on highways anticipated or caused by use of highways in excess of the legal weight and size limitations. Vehicles used for agricultural or forest management shall not be held to a higher standard than other vehicles.

9. Posting:

No highway of any class may be intentionally closed by a gate or other obstruction except upon approval of the Selectmen (19 VSA, Section 1105). The Selectmen may post a road in accordance with 19, VSA, Section 1110. The Selectmen may post a highway for the

Commentary

This restates the authority selectmen have under Title 19, VSA, Sections 303, 304 (a) (21) and (22) and Sections 1105, 1108, and 1111.

Town permit procedures must be followed for work in or near the town right-of-way.

Subchapter 15 of Title 23, VSA, Chapter 13 is comprised of Sections 1391-1399 and Sections 1401-1492. They, with regulations issued by the Motor Vehicle Department, describe vehicle weights and procedures.

Permits for use of town highways by overweight vehicles are issued by the State commissioner of motor vehicles. Before signing the permit, the commissioner takes into consideration the comments and stipulations written on the form by the selectmen. Before signing the form and sending it to the state commissioner, selectmen can negotiate with the vehicle owner and then stipulate on the form various conditions for use of the highway (payment for road damage, fees per load, promise to repair damaged road, use during certain hours, etc.). The \$5.00 fee is to help cover town administrative costs.

Text

purposes of preserving the integrity of the road (19 VSA #304).

10. Compliance With Other Regulations:

This policy is written to establish and clarify standards of construction and the authority of the Selectmen and their agents.

All other ordinances and regulations adopted by the Town of _____ shall remain in full force and effect, including without limitation:

Note: This model ordinance is based on one adopted by the Town of Barre in April 1991.

Commentary

This fact sheet was developed by the Class 4 Highways Task Group represented by:

- * VT Agency of Transportation***
- * VT Trails & Greenways Council***
- * VT Timber Truckers & Producers Association***
- * Associated Industries of Vermont***
- * VT Department of Forests, Parks & Recreation***
- * VT Local Roads Program***
- * VT Association of Snow Travelers***

March, 1993

State of Vermont

Department of Fish and Wildlife
Department of Forests, Parks and Recreation
Department of Environmental Conservation
State Geologist
Natural Resources Conservation Council



AGENCY OF NATURAL RESOURCES
103 South Main St., 10 South
Waterbury, Vermont 05671-0601

DEPT. OF FORESTS, PARKS AND RECREATION

FAX: (802) 244-1481

TDD 1-800-253-0191

February, 1993

Dear Town Official:

For your information, the Department of Forests, Parks and Recreation has adopted its own policy relative to Class 4 Highways and Trails which is attached.

You will note that according to 19 VSA §735, if a highway is proposed for discontinuance, then this Department needs to be notified. We will respond according to the policy and the specifics of the situation involved.

You should also know that funds are available from the National Recreational Trails Fund to help communities develop and maintain trails. Please contact 244-8713 for more details.

Sincerely,


Conrad M. Motyka
Commissioner

gp

enc.

FPR POLICY #14

DISCONTINUANCE OF CLASS 4 HIGHWAYS AND TRAILS

Philosophy:

Class 4 town highways often provide some of the best opportunities in Vermont for public right-of-way uses, including recreation opportunities, access for forest management activities and firefighting, and access to agricultural lands. They often serve as important links to more developed trail systems, such as snowmobile corridor trails and long-distance horseback riding trails. They may also provide important access to public lands, such as state forests. Finally, they could lay the foundation for multi-purpose "greenways" for towns and regions.

As the state becomes more developed these rights-of-way will become ever more valuable as multi-use public corridors.

Policy:

It is the policy of the department to encourage municipalities, where appropriate, to continue class 4 town roads as public rights-of-way, serving a variety of important public uses such as recreation, access for forest management, access to agricultural lands, and travel-ways for private property protection.

Procedure for Implementation:

Pursuant to 19 VSA §535, town selectmen must notify the department when they have filed a petition to discontinue a highway.

When the department receives notice this way or otherwise, the Commissioner will coordinate a response with the appropriate central office and District/Regional staffs. If necessary, District/Regional staff may be requested to attend the public hearing.

Depending on the highway's relationship to state lands, the procedure will then take one of two courses:

- (1) Class 4 highways directly connecting to or travelling through state-owned lands. The department will work actively with the towns to encourage and support them in retaining Class 4 highway status or, where such roads are discontinued, in reclassifying them to "trails", thereby maintaining the right-of-way for public use.

(2) Class 4 highways not directly connecting to or travelling through state lands. The department will work with appropriate groups to encourage retention of these rights-of-way; the groups, in turn, can work with the towns (for example, where there is a recreation trail issue, the Vermont Trails and Greenways Council might be involved). In such cases, the Commissioner will task the staff to notify the appropriate interest group(s), for further action on their part.

The Department will encourage towns to notify and involve interested parties in the process, including adjacent landowners.



Conrad M. Motyka, Commissioner

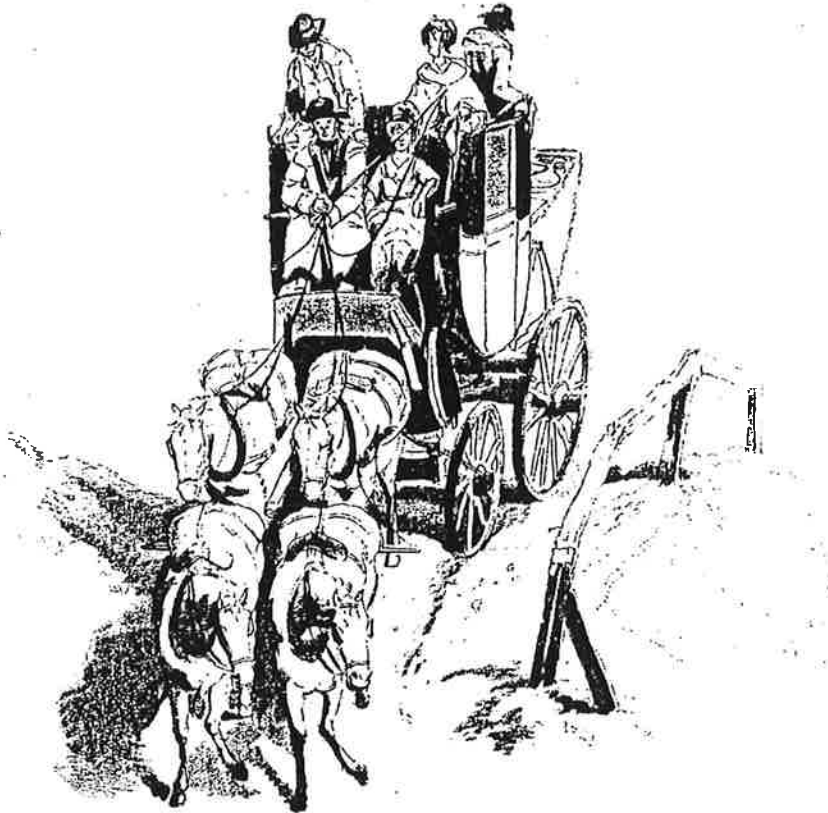


Effective Date of First Revision

Original Effective Date - May 15, 1991

Town Policy on Class 4 Roads and Trails

A Model for Vermont Towns



This fact sheet was developed by the
Class 4 Highways Task Group represented by:

- * VT Department of Forests, Parks & Recreation
- * VT Timber Trucker & Producers Association
- * VT Association of Snow Travelers
- * Associated Industries of Vermont
- * VT Trails & Greenways Council
- * VT Agency of Transportation
- * VT Local Roads Program

March, 1993



UPPER VALLEY REGION

Summary of the Upper Valley River Subcommittee Plan

INTRODUCTION

The Upper Valley Subcommittee represents the communities of Piermont, Orford, Lyme, Hanover, and Lebanon in New Hampshire and Bradford, Fairlee, Thetford, Norwich, and Hartford in Vermont. The segment of the river covered in this plan is 39 miles long. Under the New Hampshire Rivers Management and Protection law, it was designated primarily as a Rural river with sections of Rural-Community and Community in the Hanover/Norwich and Lebanon/Hartford area. The river corridor is defined as the river and the land area located within a distance of 1,320 feet of the normal high water mark.

Since the inception of work on the management plan, the Upper Valley River Subcommittee has invited and welcomed input and participation from member towns' officials and the public. The Subcommittee has met with a number of experts from a variety of fields at its monthly meetings. These included engineers, wildlife biologists, boaters, and water quality experts. With the assistance of the Upper Valley/Lake Sunapee Regional Planning Commission, a questionnaire was sent to five percent of the member towns' voter checklists. The responses from these were used in formulating the recommendations. A number of publications and maps, some written expressly for the Connecticut River Joint Commissions and this project, were utilized in the research.



Present Conditions of the River and River Corridor

Water Quality: The section of the river in this segment above the Wilder Dam functions differently, ecologically, from the section below the dam because it is impounded. Both sections are, however, affected by the dam. In 1994, both the states of New Hampshire and Vermont as well as a private non-profit organization were monitoring the water quality in the Connecticut River and its tributaries at 38 different sites. At the present time, however, there is no regular, ongoing monitoring of the water quality in this segment of the river due to lack of funds.

The 1994 Connecticut River Water Quality Assessment Report, prepared cooperatively for the Connecticut River Joint Commissions by the New Hampshire Department of Environmental Services and the Vermont Department of Environmental Conservation, presented findings through a number of questions. Researchers found that additional testing was needed to ascertain whether the fish in this segment could be eaten. At the time of the study, the water quality in the impoundment was not impaired by the existing dam although upstream flow regulation and upstream impoundments presented a threat. The report identified the operation of the hydroelectric facility as a contributing factor to the riverbank erosion, turbidity, and sedimentation found in the segment.

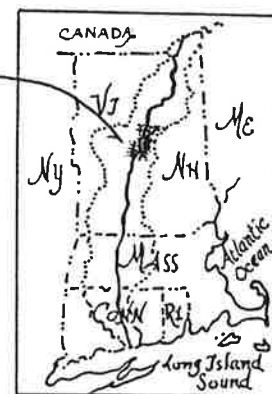
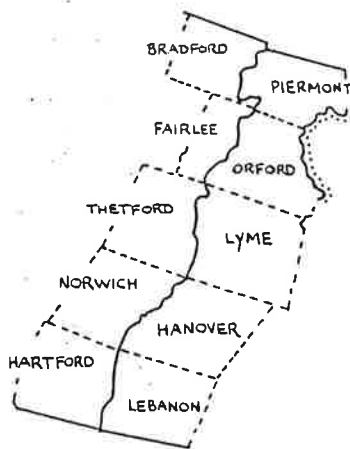
Although some bacterial violations were noted in 1993 in the Lebanon/Hanover area of the mainstem and higher concentrations of *E. coli* were noted during periods of

high river flow, the report stated that swimming need not be restricted. It also stated that there were no known limitations to additional water withdrawals. The report questioned whether the Connecticut River in this segment could assimilate additional treated wastes.

River Attributes: Running adjacent to the river on both its east and west sides are highways as well as a railroad on the Vermont side. There are spectacular scenic views not only of the river but also of the mountains, farms, and villages that form its background. The one hydroelectric facility, Wilder Dam, has an impoundment surface area of 3,100 acres which extends upstream for 45 miles. There are six bridges over the river in this segment, 22 water withdrawal sites, and 24 wastewater discharge sites.

Natural Resource Attributes: Prime warmwater fish habitat is found in the backwaters of the mainstem with the primary species being northern pike, walleye, and smallmouth bass. Wildlife in the segment is typical for northern hardwood-mixed softwood forest habitat and associated streams and reservoirs. Various species are hunted and trapped. The segment is also rich with numerous species of songbirds, amphibians and other nongame animals. Many threatened and endangered species of both plants and animals are found in the Upper Valley segment, with the highest concentration in Hanover and Lebanon. They include the dwarf wedge mussel, the peregrine falcon, and approximately 50 species of plants. The Connecticut River Rapids Macrosite, one of the most biologically rich stretches of the river, supports a number of threatened and endangered species, includes the mainstem from the mouth of the Ompompanoosuc River downstream into the Mt. Ascutney segment, and has been identified by the Silvio O. Conte National Fish and Wildlife Refuge as an important focus area.

Land Uses and Development: Recreation is a major use of the river and its corridor in the Upper Valley segment. Swimming, canoeing, camping, power boating, bicycling, hiking, jogging, snowmobiling and cross-country skiing are some of the more popular activities. Agriculture is an important land use in the northerly section of the segment. Prime agricultural soils in the corridor are believed by some to be the best agricultural soils located in either state. Most of the residential housing found in the corridor is single family homes with only scattered housing occurring in the northern section of the segment. Higher density development, including commercial/industrial development, occurs primarily in Lebanon and the White River Junction area of Hartford but even here, there are areas where no development can be seen from the river.



Towns of the
Upper Valley
Subcommittee

Every town in the segment has riverfront properties which have been protected with conservation easements held by a number of non-profit, conservation organizations. These protected parcels vary in number, size, and type. The states of Vermont and New Hampshire as well as the ten municipalities in the segment have various regulations and ordinances involving the river corridor. A review of the local documents shows very clearly that, while most town and city plans contain strong recommendations for water resource protection, in most cases these recommendations are not implemented in local regulations.

Current Problems

The members of the Subcommittee believe that bank erosion is the greatest threat to water quality, aquatic habitats, water-based recreation, and landowner happiness in the corridor. There does not appear to be a simple solution to the problem. While engineers believe that multiple forces are responsible, it is unclear exactly which ones are primarily responsible for erosion in this segment of the river. Engineers do agree that changes in the configuration of the bank caused by such factors as erosion and rip-rapping will have an effect on the bank in other areas. The engineers with whom the Subcommittee consulted agreed that to have a better understanding of what is happening to the riverbanks, it is necessary to have a better look at a number of different sites upstream of Wilder Dam to know what happens when there is a drop or rise in water level at the dam. Boat wakes are also one of the greatest causes of bank erosion.

Siltation in the mainstem of the river is caused not only by actions taking place on the mainstem, but also in every tributary. It can be seen at the mouth of every stream entering the mainstem, where sedimentation is evident, particularly at the mouth of the Ompompanoosuc River. As the population grows and the use of the river increases, bank erosion will certainly intensify.

Nonpoint source pollution is defined as contaminants that enter our water resources when water washes across the surface of the land or infiltrates to groundwater. It is caused by human activities such as clearing and grading of land, construction of impervious surfaces, compaction of soils, fertilization of lawns, snow dumping in waterways, road construction, and poor agricultural practices. As these activities increase so will the problem.

Following best management practices will reduce the threat. However, some of the best management practices for agriculture that alleviate nonpoint source pollution are expensive, and farmers cannot pass on to the consumer the cost of these pollution remediation and prevention practices and devices.

According to the states' report on water quality in this segment, a problem could occur if the number of municipal and industrial discharges into the river increases, because the lack of gradient in this segment affects the reaeration capacity, or the ability of the river to assimilate additional wastes.

Because there is presently no regular, ongoing, monitoring of the water quality in the river or its tributaries, the quality of the water could deteriorate undetected, and affect many of the outstanding uses and values of the river.

Potential Problems

Further development of the 28.8 miles designated as Rural would change the character of the river, interrupt scenic vistas, suburbanize the river corridor, degrade water quality, and endanger wildlife habitat. Increased demands for impervious surfaces could cause tremendous increases in runoff and in sources of pollution. The mainstem and its tributaries are threatened at present by non-native species such as zebra mussel and Eurasian milfoil, that have the potential to do great damage. The primary method of dispersal of these exotics is by attachment to boat trailers and the hulls of boats and, therefore, the threat is reduced if these are thoroughly washed before being used in a different body of water. Increased recreational demands, failed septic systems in the floodplain, and siltation are additional potential problem areas.

Objective

The Connecticut River and its corridor provide an extraordinary quality of life for residents of the Upper Valley as well as for visitors. The objective of this management plan is to protect the quality of the river while permitting its existing uses and ecological values to flourish. The goal is not to dictate, but rather to educate, encourage, and support steps that will accomplish that objective.

The Upper Valley River Subcommittee encourages the adoption of the following recommendations, developed through consensus among its diverse membership. In addition, the Subcommittee suggests possible individuals, groups, and organizations who might be responsible in implementing the recommendations, identified by a number code. They are listed at the end of this chapter.

COMPREHENSIVE SHORELAND PROTECTION ACT ◆

With the understanding that these measures are to affect the corridor in both New Hampshire and Vermont and the water quality of both the river and its tributaries, the Subcommittee recommends that all the municipalities within the segment adopt the following provisions:

1. Within 250 feet of the riverbank, prohibit the establishment or expansion of salt storage yards, auto junk yards, and solid waste and hazardous waste facilities. (10)
2. Considering the environmental impact to the river, the application of fertilizers should be used with great caution within 250 feet of the river. (10,23,24,25,26,33)
3. Within 250 feet of the river, minimum lot size in areas dependent on septic systems should be determined by soil types. (10)
4. Setback requirements of all leaching portions of new septic systems should be determined by soil characteristics but with a minimum setback of 75 feet and a greater setback of 125 feet where more porous soils occur. (10)
5. New Hampshire's Comprehensive Shoreland Protection Act has set 50 feet as a minimum setback from the water body for all non-water dependent buildings. The Subcommittee recommends that communities set such setbacks according to their soil conditions. The historic record of soil loss into the river should also be considered. (10)

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6. Natural wooded riverbanks are important for the health of the river and, where they exist, a 150 foot buffer should be protected from clear cutting. Stumps and their root systems should be left intact within 50 feet of the shoreline. If it is necessary to remove vegetation of any size in these buffer areas, the Subcommittee recommends that landowners seek professional expertise in order to lessen any impact on the river. (10)

WATER QUALITY ♦

Primarily as a result of measures introduced under the federal Clean Water Act, the quality of the water in the Connecticut River has recuperated tremendously over the past 20 years. However, more improvement can be achieved and steps should be taken to stop any further deterioration. Many uses of the river ultimately depend on the quality of the water. The Subcommittee recommends that:

1. Water quality monitoring should be an ongoing activity. The number of monitoring sites should be increased. Volunteer organizations such as the Connecticut River Watch Program should be encouraged and funded. (35,18,19)
2. Municipalities should implement recommendations in their master plans concerning water quality and shoreline protection measures by adoption of regulations supporting those measures. (10)
3. Professional and financial assistance should be made available to riparian landowners to clean up nonpoint pollution sites. (11,12,18,19,22,23,24)
4. Steps should be taken to protect the pollution filtration processes, the flood control capabilities, and the fish habitats of the wetland ecosystems along the river. (36,18,19,10,42)
5. Measures should be taken to protect the river and its tributaries from run-off from impervious surfaces, by requiring suitable filtration of the run-off and minimizing all impervious surfaces adjacent to water bodies. (18,19,10)
6. Financial assistance should be given to municipalities to separate existing combined sewer overflows. (11,12,18,19,41)
7. Existing regulations that protect water quality should be enforced and the Clean Water Act should not be diluted. (10,11,12,13,18,19,41)
8. To provide pollution filtration, buffer strips should be created and/or retained. (10,33,7,18,19,20,40)

BANK EROSION ♦

Understanding that nature has the final word, the Upper Valley River Subcommittee strongly supports steps to protect the riverbank from erosion, including:

1. A study of the effects of water level fluctuations on bank erosion as well as upon fish habitat and populations of endangered species. The study should be conducted on-site, at multiple locations, and result in action recommendations. (21,18,19,5,42,41)
2. A dialogue between New England Power Company and its successors and independent engineers to ascertain what steps could be taken at Wilder Dam to reduce its effects on the banks of the river. (21,42)
3. Continued research into methods of bank stabilization including the funding of test areas. (5,14,16,18,19,22,23,24,42)
4. Increased education of riparian landowners concerning methods of stabilization such as targeted workshops in municipalities along the river. (14,16,33,18,19,23,24,22)
5. Expanded programs offering professional and financial assistance to riparian landowners for bank stabilization. (14,18,19,23,24)

6. A comprehensive program of education for boaters concerning the impact of boat wakes, with sufficient funding to enable increased enforcement of existing boat speed regulations. (17,1,2)

WILDLIFE ◆

The river corridor is a vital habitat for many threatened and endangered species. The continued existence of other wildlife within the corridor, including fish, animals, birds, and plants, appears to depend on a delicate balance which determines whether their habitat is adequate or inadequate. With the understanding that all types of land uses in the corridor affect these wildlife habitats, the Subcommittee recommends:

1. A study to identify the fish species, population sizes, and their health/condition in the segment. (1,2,3,5,29)
2. Creation and retention of buffer strips along the mainstem and the tributaries to help form wildlife corridors. (33,1,2,3,4,5,23,24,7,22)
3. Consideration for protection of wildlife habitats during the planning of all land uses in the corridor. (10,28)
4. Increased funding for research on endangered and threatened species. (3,5,13,14,41)
5. Increased funding and development of innovative methods to enable landowners to protect and provide habitat. (10,3,4,5, 41,11,12)
6. Enforcement of existing regulations which protect endangered and threatened species while showing sensitivity to possible effects for landowners. (3,5,41)
7. Increased funding for state Natural Heritage Inventory programs. (11,12,13)
8. Recognition of the value of working farms as habitat. (10,14,33,34)
9. Support for the activities of the U.S. Fish & Wildlife Service in the Silvio Conte Wildlife Refuge which include incorporation of local recommendations in their decision-making process and respect for property owners' rights. (5,33,34)

PUBLIC BOAT ACCESS ◆

The Subcommittee believes that car-top boat access for the use of canoes and other small craft, because of their low impact on the river, should be encouraged in the future and that such access points should be placed more frequently along the segment. Parking should be screened from the river by a riparian vegetated buffer strip and a site for educational information should be provided. (1,2,10,20,18,19,43,28)

Because of the negative impact of motor boat wakes on riverbanks, the Subcommittee suggests that no new public boat ramps be built in this segment of the river. Rules should be written to guide the management of existing public and private landings, as well as the construction of new private ramps, which would include the maximum bank height to be used, a riparian vegetated buffer strip, and a site for educational information dissemination. (1,2,10,20,18,19,43,28)

BOATING ◆

The Subcommittee believes that enhanced education of boaters concerning the river is extremely important, and strongly supports steps to accomplish that goal. It recommends an emphasis on such topics as: existing regulations concerning boat wakes, for both the safety of all people using the river and the protection of the riverbanks; and aquatic exotics, stressing how they spread. Educational efforts should also emphasize respectful use of private land, such as asking landowner permission and avoiding littering.

The Subcommittee suggests that an increased charge for boat licenses could support such an educational program. (1,2,10,11,12, 15,17,34)

The Subcommittee recommends the promotion and continued funding of the primitive campsites presently located on the river, in part because they can help to reduce trespassing on private land. For the same reason, the Subcommittee encourages inn-to-inn canoe trips, which have the added benefit of commercial value to local inn owners. (7,14,16,30)

AGRICULTURE ♦

The benefits to all residents and visitors to our segment are increased many times over by the continued existence of agriculture in the river corridor. The Subcommittee supports the following steps:

1. Research and develop new marketable products from the area. (14,22,25,26,27,23,24,31,32)
2. Develop additional markets for agricultural products. (25,26)
3. Educate the public to the necessity and the advantages of local agriculture. (7,10,14,25,26,27,30)
4. Take appropriate measures to relieve the cumulative negative impact that taxes have on the farming industry. (10,11, 12,13)
5. Support current use assessment for property taxation. (10,11,12)
6. Provide information for the public concerning the benefits of conservation easements. (6,7,8,9,10,14,34,39)
7. Educate officials and voters about zoning techniques, such as clustering of development, that protect agricultural soils and the rural environment. (7,8,10,28)
8. Adopt local regulations that support agriculture including local right-to-farm sections. (10,34)
9. Promote availability of professional expertise for farmers. (23,24,25,26,27,22)
10. Support research for agricultural advances. (11,12,23,24,25,26,27)
11. Support the use of nutrient management plans by farmers. (23,24,25,26,27)
12. Support programs that assist farmers in voluntarily adopting best management practices. (18,19,22,23,24,25,26,27)
13. Support continued research, enforcement of rules and regulations, and public education concerning the spreading of municipal wastewater solids. (18,19,23,24,27,31,32,41)

LAND-BASED RECREATION ♦

Although most land-based forms of recreation in the river corridor have little impact, the Subcommittee recommends the following:

1. Educate hikers, joggers, cross-country skiers, snowmobilers, and hunters and all others on the proper use of private land to help prevent unwanted trespassing and littering. (10,30,14)
2. Work to enhance bicycle safety by promoting construction of low cost bike paths. (10,30,37,38)
3. Promote the use of abandoned railroad rights-of-way as bike paths while continuing to permit landowners to access their own land. (10,30,37,38)

MISCELLANEOUS ♦

1. Encourage programs that will protect our historic and archeological sites along the river corridor including historic bridges and barns. (9,11,12,27,44,45)
2. Encourage protection of scenic views of the river corridor. (10,8,28,30)
3. Support better communication between groups/organizations/agencies which are concerned with the Connecticut River. (Everyone)



PARTIES RESPONSIBLE FOR CARRYING OUT KEY ACTIONS

1. New Hampshire Fish & Game Department
2. Vermont Fish & Wildlife Department
3. U.S. Fish & Wildlife Service
4. New Hampshire Non-game & Endangered Wildlife Program
5. Silvio O. Conte National Fish & Wildlife Refuge
6. The Nature Conservancy
7. Upper Valley Land Trust
8. Vermont Land Trust
9. Vermont Housing and Conservation Board
10. Local municipalities
11. New Hampshire Legislature
12. Vermont Legislature
13. U.S. Congress
14. Connecticut River Joint Commissions
15. SeaGrant Program, Cooperative Extension Service
16. Connecticut River Watershed Council
17. New Hampshire Dept. of Safety
18. Vermont Dept. of Environmental Conservation
19. New Hampshire Dept. of Environmental Services
20. New Hampshire Wetlands Board
21. New England Power Company or its successors
22. USDA Natural Resources Conservation Service
23. New Hampshire Cooperative Extension Service
24. Vermont Cooperative Extension Service
25. New Hampshire Dept. of Agriculture
26. Vermont Dept. of Agriculture
27. State Farm Bureaus
28. Regional Planning Commissions
29. Trout Unlimited
30. Tri-State Scenic Byway Committee
31. University of New Hampshire
32. University of Vermont
33. Riverfront landowners
34. Local people
35. River Watch Network
36. Federal Emergency Management Agency
37. New Hampshire Dept. of Transportation
38. Vermont Dept. of Transportation
39. Society for the Protection of New Hampshire Forests
40. Vermont Wetlands Board
41. Environmental Protection Agency
42. U. S. Army Corps of Engineers
43. Public Water Access Advisory Board
44. New Hampshire Division of Historical Resources
45. Vermont Division for Historic Preservation

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