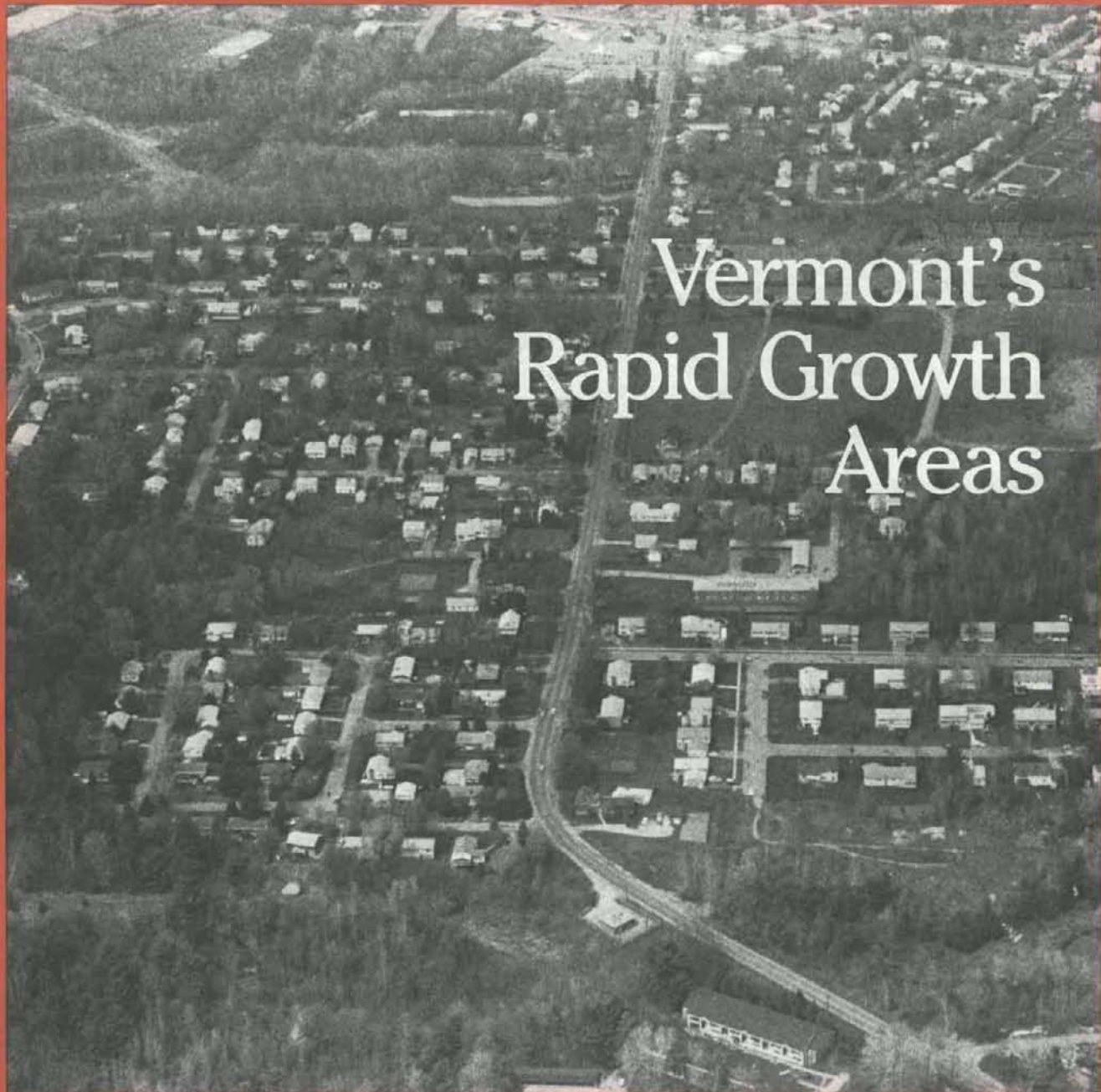


Vermont Environmental **REPORT**

Vermont Natural Resources Council

Summer 1985



Vermont's
Rapid Growth
Areas

YEAR AFTER YEAR WE GIVE YOU THE BEST

NEW CARS • USED CARS • TRUCKS • SERVICE



WE HAVE
THE LARGEST
PARTS INVENTORY
IN THE AREA
CALL 295-7103



We
Treat You
Right!

FORD
MERCURY
LINCOLN

GATEWAY

SYKES AVENUE, WHITE RIVER JUNCTION, VERMONT 05001

NEW HAMPSHIRE RESIDENTS DO NOT HAVE TO PAY VERMONT VEHICLES PURCHASE AND USE TAX.

TEL: 802/295-3124

Vermont Environmental REPORT

Summer, 1985

Published by the Vermont Natural Resources Council

The Transformation of Vermont: Growth Patterns and Growth Policies for the 1980's 5

The Environmental Law Center of the Vermont Law School releases their Growth Areas Research Project report—with some important new findings and recommendations on Vermont's most rapidly-developing areas. By Richard Cowart.

Legislating Growth Management— A Tale of Two Bills 11

H. 295 and S. 80 are two significant attempts to manage growth in Vermont. By Eric Palola.

Acid Rain—The Storm of Controversy Continues 13

A look at some of the most recent work, both scientific and political, on curbing acidic precipitation. By Erik Johnson.

Washington Update 15

A summary of the major environmental legislation considered in the U.S. Congress this year. By Steve Maier.

Reflections on the Citizens' Lobby for the Environment 17

VNRC's first Red Arnold intern discusses what "lobbying" means in Vermont—and how VNRC fits in. By Peter Lavigne.

From the Front Office 2

VNRC Executive Director Lou Borie.

In From Outdoors 19

The Green Mountain Club—75 Years of the "Footpath in the Wilderness." By David Engels.

Vermont Perspective 3

The Council 22

Calendar 24



Credits

Cover photo: Looking east on Hinesburg Road, South Burlington. Aerial photography courtesy of Chris White, Box 32, Montpelier, VT 05602.

Illustration page 3 by Sherry Frazer.

Masthead design by Laughing Bear Associates.



VNRC Staff

Lou Borie, Executive Director
Eric Palola, Acting Operations Director
Cherie Langer, Administrative Assistant
Nancy Miller, Membership Coordinator
Pam Fowler, Office Assistant
Susan Clark, Editor

1985 Board of Directors

Lou Borie,
Secretary
David Brook
Jonathan Bump
Dean Burrington
Chester Eaton
Jean Flack
H. Kenneth Gayer,
Treasurer
John Hemenway
Patsy Highberg
Sarabelle Hitchner,
Vice-Chair
David Jillson
Richard Mixer
John Nutting
Gail Osherenko
Donald Peddie
Carl Reidel, **Chair**
Mark Schroeder
Peter B. Smith
William Uptegrove
John Wiggin



The Vermont Natural Resources Council is a non-profit environmental organization working to promote the wise use of Vermont's natural resources. The Council does legislative lobbying, research, and educational work on a variety of issues including forestry, agriculture, water, energy, hazardous wastes, and growth management.

VNRC is the Vermont affiliate of the National Wildlife Federation.

The Vermont Environmental Report is published quarterly by the Vermont Natural Resources Council, 7 Main Street, Montpelier, Vermont 05602. Phone: (802) 223-2328.

The opinions expressed by VER contributors are not necessarily those of the Council. VNRC reserves the right to refuse advertising that is not in keeping with the objectives of the organization.

New England Culinary Institute

223-NECI
Tubb's Restaurant
24 Elm Street, Montpelier
229-9202
Elm Street Cafe
38 Elm Street, Montpelier
223-3188
La Brioche Bakery
24 Elm Street, Montpelier
229-0443
Vermont Caterers
223-6324

9,000 OUT-OF-PRINT BOOKS

Lilae Hedge Bookshop

NORWICH, VERMONT

Main St., across from Norwich
Inn, 1 mile from Hanover, N.H.
Open all year Thurs. thru Sun. 10-5

VIVID balans[®]

at These Fine Stores:

802-223-5269

MONTPELIER

VERMONT BUSINESS EQUIPMENT • 126 Main Street

802-773-8834

RUTLAND

ESSENTIAL ALTERNATIVES • 38 Center Street

802-496-5500

WAITSFIELD

UNIVERSAL MICRO SYSTEMS • 1 Bridge Street

802-655-1200

WINDOOSKI

THE BEST SEATS IN TOWN • 10 West Canal Street

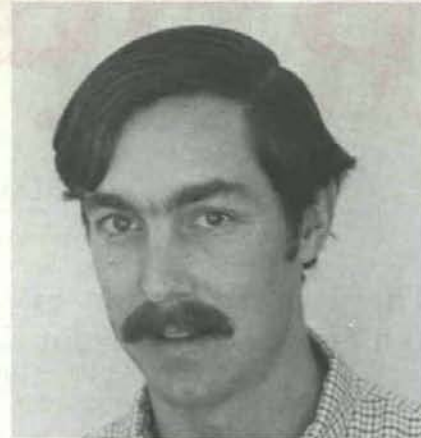


STAY TUNED!

THE BEST SEATS IN TOWN

FROM THE FRONT OFFICE

For the past year, the Council, through its own efforts and through its participation in the Ottauquechee Coalition, has been addressing the issue of growth and its impacts on Vermont's environment. The theme of the cover story in this issue of the **Vermont Environmental Report** can be summed up very briefly: "You have to know where you *are* before you can tell where you're going." As the article describes, parts of Vermont are undergoing a period of rapid growth and change.



In some respects, Vermont is no different from many other states—it's growing. The high technology, service, and recreation industries that are becoming the backbone of the U.S. economy are also becoming more dominant in Vermont. The traditional strongholds of Vermont's economy—agriculture and other resource-based industries—are continuing to decline.

But Vermont is different than many states. For nearly 200 years, Vermont has been a small, relatively poor, and predominantly rural state that has depended on its physical attributes and the strength of character of its people. Residents of Vermont and visitors alike recognize a certain essence that many people have tried to describe, but for which there are few words.

And, we haven't lost that essence, that unique character of our landscape that is so inviting to visitors and so comforting to residents. Vermont is still relatively unscathed. There is still time to take stock of what we have and decide how important it is to us.

One thing is certain: Vermont will continue to grow. The quality, quantity, and location of that growth will determine the Vermont of tomorrow. The data that Richard Cowart and his group of students have gathered is extremely valuable in giving us a snapshot of where and how Vermont has been growing in the last decade and a half. It's the kind of data the state of Vermont should be collecting regularly and using as a basis for long range planning and policy formulation; data collection and analysis could be done by the Agency of Development and Community Affairs, by the Office of Policy Research and Coordination (formerly the State Planning Office), or by another state office. This kind of information is absolutely essential, if Vermont is to engage in serious, thoughtful planning to steer future growth in directions that are in the long range best interest of the state. It is the kind of information that will allow individuals, local government, and state government to make *choices* about the future of the state.

I'm encouraged that the process of collecting this data has begun, and I hope that it will continue through the efforts of the Environmental Law Center, and, hopefully, through a coordinated state effort. Vermont stands to lose too much if this process isn't continued.

The recent success of environmental legislation in the General Assembly confirms Vermont's commitment to a high quality, clean, and safe environment. I would like to see the Council play an active role in extending this commitment to a discussion of the future of Vermont. I would appreciate any thoughts you have on how this discussion could take place and how we can develop a shared vision of the Vermont of tomorrow.

Lou Borie, Executive Director

Flowers for Vermont

Vermont environmentalists may not always get their way at the local level, but we can rest assured that our national delegation is paying us some attention. According to the League of Conservation Voters' annual ratings, Vermont's delegation is first in the nation on environmental issues.

L.C.V. is a non-partisan national environmental organization which researches, rates, and publishes congressional voting records on environmental legislation. According to L.C.V.'s tally released this spring, Vermont Senator Patrick Leahy was one of only four members who rated a perfect 100, voting "for the environment" on all of the bills selected by L.C.V. as important conservation legislation. Representative James Jeffords, with his 96% rating, had the highest score of any Republican congressman. Senator Robert Stafford received a 70% rating.

As a group, Jeffords, Leahy, and Stafford won the highest rating of any state delegation. Massachusetts came in second; and New England had the best voting record of any region.

L.C.V. presented the 20 high-scoring members with live flowers. The 21 low scorers also received prizes: bouquets of dead flowers delivered to their offices. And the Reagan administration, along with former Senate Majority Leader Howard Baker, received the booby prize—vegetation killer. SC

Nuclear Waste Dump—High Level Controversy

By choosing to use nuclear power, we have "made our bed," and it's a hot one—radioactive, in fact. Now the question is, which American towns are "going to lie in it," and serve as hosts for the nation's high-level nuclear waste.

Ever since the first atom was split, people have been wondering what to do with radioactive waste; ideas ranging from burying it under polar icecaps to shooting it into the sun



have been considered. But in 1982, the U.S. government made its decision. With the passage of the Nuclear Waste Policy Act (NWPA) in 1982, Congress required that the Department of Energy (DOE) site, build, and operate geologic repositories to isolate high-level nuclear waste. And with their crystalline rock formations, as well as low population densities, nine Vermont communities have made it onto the national list of potential dump sites.

According to DOE representatives, two such sites are planned in the U.S. The search for the first site has already been narrowed down to three locations in Washington State, Nevada, and Texas. Two hundred thirty-six sites in 17 eastern states are now being considered for the second repository.

The DOE timetable is elaborate: by this fall, the DOE will have narrowed the prospective sites to 15 or 20, at which point the states involved will have about five months to evaluate the data. By October of 1991, the field will be narrowed to three sites, and the final site recommendation will be made by the President in 1998. The chosen state could veto the choice; Congress would have the power to override the state veto.

Although the technology necessary to construct the repository has not actually been developed yet, DOE plans to have it operational about 22 years from now. The facilities would permanently house high-level nuclear waste from power plants all over the country. DOE officials say that there is a "strong possibility" that waste from nuclear weapons will also be stored at the

sites. The facilities would have a surface area of approximately 450 acres, with a large mine area of about 2,000 acres constructed 2-4,000 feet below the surface. A surface-level "control area," where drilling and mining would not be allowed, would extend a minimum of 1 1/4 miles beyond the limits of the underground storage site.

April and May meetings coordinated by DOE in the Vermont towns of Charleston, Londonderry, and Newbury were designed to explain the nuclear waste repository plans to citizens. But DOE officials got an earful themselves: more than 400 Vermont and Canadian citizens attended the Charleston meeting, overwhelmingly voicing their dissatisfaction with the plan.

Citizens are especially fearful because groundwater supplies leading to Vermont communities, the Connecticut River, and Montreal could potentially be contaminated by leaking radionuclides. "Their fears may well be justified," says R. Montgomery Fischer, a consulting geologist to the state. "Frankly, no one really *knows* what's going on at 2000 feet."

Governor Madeleine Kunin followed up the meeting with a letter to the Secretary of DOE explaining her own objections to their search. The Governor strongly questioned DOE's scientific data, the premises on which the project is based, and the congressional mandate itself.

Kunin made note of Vermont's responsibility to "share its fair burden" of nuclear waste disposal. She expressed skepticism, however, that Vermont's crystalline rock formations, which are typically fractured and often contain groundwater, would meet the necessary safety standards. And she argued that targeting the waste dumps for rural areas was "disgracefully contradictory."

"If such a facility is safe anywhere," she wrote, "I seriously question why a greater risk is deemed acceptable in sparsely populated areas . . . I firmly believe that if the facility isn't foolproof it must not be built. If it is, it can be located anywhere." SC

And the Wilderness Debate Goes On

Peter B. Smith

For over a decade, environmentalists, sportspeople, government officials, and concerned citizens from all over the state have been debating the wilderness issue in Vermont. With commendable perseverance, the different factions came to a compromise in 1983. When the Vermont Wilderness Act became federal law on June 19, 1984, a National Recreation Area (NRA) of 36,400 acres containing two wilderness areas was finally formed in southern Vermont. However, the wilderness debate did not stop there.

House and Senate committee reports accompany the Act and

define the terms by which the NRA, its primitive, semi-primitive, and roadless qualities, and its fish and wildlife habitat will be protected. And the Senate report states, "The NRA is to be managed with special emphasis placed on: . . . (3) maintaining, protecting, and improving available habitat primarily for wildlife which require large remote forest tracts (e.g. bear, bobcat, fisher . . .)."

Both reports discuss how this is to be done, including closure of specific roads, types of vehicles permitted, and mechanisms of tree harvest. Except in their recommendations that the cutting be done with the purpose of "protecting and improving" habitat for the target species, however, neither report describes the location or extent of the cutting.

Last fall, in order to work out the specifics of the NRA management plan, the Forest Service brought together representatives of the various groups which came to the

compromise agreement in 1983. After several meetings, the Forest Service has produced a draft of their preferred alternative.

Snowshoe hare, which are primary prey of bobcat and fisher, will be encouraged through the creation of field habitats, according to the plan. Since all three of the targeted carnivore species avoid forest openings, the Vermont Fish and Wildlife Department recommended small forest openings of approximately a quarter acre in size. All clearing proposals in the Forest Service plan, however, are considerably larger than that.

It is relatively easy to quantify wildlife habitat and food needs, but quantifying disturbance factors is difficult. Environmental groups worry that because the Forest Service's plan would create forest openings with commercial timber operations and would require roads, they would create a long-range disturbance of the areas. And environmentalists argue that the larger clearings are unnecessary, especially if clearings will also be created by logging activity in the areas immediately adjacent to the NRA.

Another unresolved factor is deer herd management in the NRA. During the original negotiations, pro-wilderness groups gave up a significant portion of the proposed wilderness area because established deer wintering areas required various intensive management activities. According to the negotiated compromise, the few small areas remaining would not be subject to management activities requiring cutting of timber, particularly clear cutting of any kind. The Forest Service now proposes such action on some 1300 acres, however, at the rate of 26 acres per year for the first ten years of the plan.

Several issues need to be addressed before the National Recreation Area plan is completed. Watch for announcements of meetings, and a public hearing, on the final management plan for the NRA.

Peter B. Smith is a VNRC Board member and is the coordinator of the Wilderness Association.

Get acquainted
with the
brand new good old
Bank of Vermont!



**Bank of
Vermont**
MEMBER FDIC
Burlington Savings Bank

**HYDRO-
PURE** of Vermont

HOME, RESTAURANT
AND PORTABLE
WATER PURIFIERS



Jack Byrne, President
RD #1, Box 120
Moretown, VT 05660
(802) 223-6470

ROUND TOP WOODLOT MANAGEMENT

A COMPLETE LAND MANAGEMENT CO.

P.O. Box 294 Albany, Vermont 05820
802-755-6744

Serving Vermont since 1978
Richard Carbonetti, RPF-President

FORESTRY-SURVEYING-ACT 250-WILDLIFE PROGRAMS
ENVIRONMENTAL IMPACT STUDIES-CHRISTMAS TREES



OUR GOAL: Advising our clients to achieve their goals of ownership
OUR PLEDGE: Economically and ecologically sound resource management

The Transformation of Vermont:

Growth Patterns and Growth Policies for the 1980s

Richard Cowart

Today, in 1985, Vermont is beginning its third consecutive decade of sustained, rapid development. After 100 years of slow change, we are transforming the economy and landscape of our state—in the space of a single generation.

Most Vermonters are aware that in the mid-1960's the state was subject to extreme growth pressures and very large development proposals. At that time, neither the towns nor the state government were prepared to manage these developments or accept their fiscal and

environmental impacts. In response to this "development crisis," Governor Deane C. Davis and legislative leaders such as Senator Arthur Gibb took the lead in creating Vermont's unique mechanisms for managing the problems of rapid growth. Chief among these tools has been Act 250, a widely-admired statute that has served the state well, despite its inherent limitations.

In many significant respects, the economic growth of the '60s and '70s has been good for Vermont. The state's economy has diversified con-

siderably, and average personal income has been rising more rapidly than the national average. Many new people have been drawn to the state; and job opportunities for young Vermonters have improved dramatically, in contrast to earlier decades when it was said that Vermont was "a good place to be from."

But it is a grave mistake to assume that simply because the rate of investment, in dollar values, is high, the resulting pattern of growth is wholly desirable. This is no more true now than it was in 1969; now, as then, we have discovered that there can be serious negative consequences to persistent growth—unless development is sensitively managed.

Valley Suburbs, Mountain Resorts

Since 1960, a remarkable transformation has occurred in the economy of Vermont, which is moving away from its traditional bases in agriculture, natural resources, and manufacturing toward its new bases in the post-industrial age: service industries, tourism, information industries, and high-technology manufacturing. This transformation has been accompanied by, and in part fueled by, rapid population growth and physical development at a scale without precedent in Vermont history.

Vermont's population grew by 14% in the 1960s, and another 15% in the



Above: Condominiums fill in fields along Spear Street in South Burlington.

What is GARP?

The Growth Areas Research Project (GARP) was organized in the Environmental Law Center at Vermont Law School in order to study the rate and patterns of growth that Vermont is experiencing in its modern growth boom, to study the state and local programs that have facilitated that growth and attempted to manage it, and to offer suggestions for improvements in state programs and policies. This is a summary of the first major report of the GARP study group.

Several ELC faculty members and students contributed to this project. Professor Richard Cowart, Acting Director of the Center, is the project director and chief author of the text. He is a specialist in land use and a former Executive Officer of

the Vermont Environmental Board. Dr. Rick Melberth, Adjunct Professor, is assistant project director, responsible for data collection and analysis. The directors were assisted by a dedicated team of graduate and law student research assistants, including Jeff Axelrod, Pat Daley, Fiona Farrell, Stephen Lachman, Kevin Mendik, and Fred Tuggle. The authors also wish to thank David Healy of the State Office of Policy and Research Coordination, Jed Guertin of the Agency of Development and Community Affairs, Ray Lovely of the Vermont Department of Employment and Training, and W. Gilbert Livingston, Pearl Houghton, and the staff of the Environmental Board, for their help in assembling the data used in this report.

1970s. Current estimates project a population increase of another 20% to 28% by the year 2001.¹ The chart at right puts this growth in historical perspective, showing population growth in Vermont for each census decade since 1790.

The population increase between 1960 and 1980 was greater than that for any similar period since the state's initial agricultural settlement between 1790 and 1830. In the last two decades of growth, Vermont grew nearly three times faster than Massachusetts, twice as fast as Maine, nearly six times faster than New York, and nearly 20% faster than the nation as a whole. In New England, only New Hampshire's increase (50.6%) outpaced Vermont's; much of that growth is due to the expansion of the Boston suburbs.

Equally significant is the rapid growth in the number of housing units, especially when the effect of housing projects on agricultural land and townscapes is considered. The state's housing stock grew 64% between 1960 and 1980; this is *more than double* the population increase of 31%. This difference is due largely to two factors: a significant decrease in average household size, and a significant increase in the number of second homes. In previous decades, relatively large families occupied rural farm homesteads. Today, even a small increase in population will result in a relatively large amount of physical development.

Recent census data from 1980 through 1983 reveal a somewhat slower rate of growth; however this does not in any way resolve Vermont's current growth problems. Even if that "slow" rate of growth continued for the entire decade, population would increase *nearly 10% again* in the 1980s. Moreover, physical development, commercial investment, and housing construction do not appear to have slowed at all.

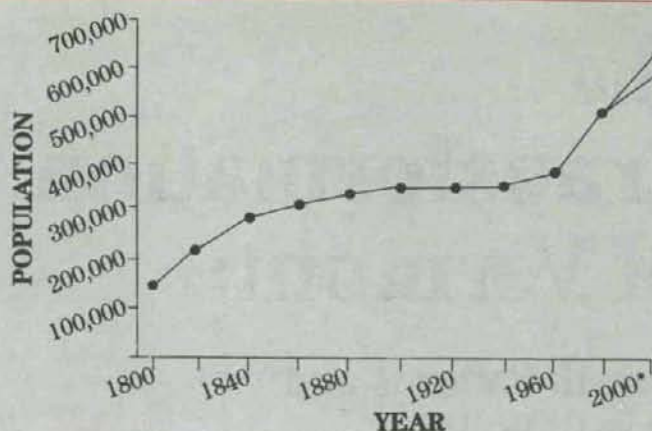
Cumulative Impacts— A Quiet Crisis

In the late 1960s, we were concerned about the massive effects of

¹ Estimates are from the "Vermont Population Projections, 1985-2000," Vermont Department of Health and Vermont State Planning Office, October 1983.

Vermont's Population Growth, 1790-2000

* Vermont Dept.
of Health
projections



large-scale development projects. Today, however, we realize that those same effects, and sometimes worse, can result from the quiet but steady accumulation of development projects, whether large or small, in a town or region. This has been called the problem of "cumulative impacts."

Cumulative impact problems can be explained by the simple phrase, "things add up." Development effects that are acceptable in small doses become unmanageable or undesirable when many small doses add up to large impacts.

It is not possible here to detail the environmental, fiscal and community impacts of Vermont's recent growth—impacts which may intensify as the development boom continues. But a few examples may help paint the picture.

In many areas, cumulative impacts threaten natural resources. Some examples: We are witnessing the piecemeal but rapid conversion of primary agricultural soils and the loss of sustainable farming communities. Four municipalities in Chittenden County are in violation of Clean Air Act standards for automobile-related pollutants, yet major traffic-generating projects continue to be approved and built. The quality of both ground water and surface water is threatened or degraded in many regions across the state. The Vermont Department of Water Resources has recently listed 33 "Water Quality Limited" river, lake, or stream segments—segments that will be unable to reach state and national water quality standards even if current discharges are upgraded to secondary and best practicable treatment

levels.²

Cumulative development impacts can overtax human-made systems as well. Serious traffic problems have arisen in Essex Junction, South Burlington, Stowe, Woodstock, and many other towns. Sometimes the response to this problem is the development of costly new highways; sometimes the congestion is simply allowed to worsen. Electric utilities are similarly stretched, and must call on increasingly expensive power sources to expand baseload capacity. Schools are also affected. In Manchester, for example, the school board recently realized that uncontrolled growth could soon add hundreds of new students to the schools, and is now studying ways to keep population growth and school costs under control.

Sewage treatment "capacity crunches" are another result of persistent and rapid development. *Nearly one third* of the state's public wastewater treatment plants are "capacity sensitive"—that is, they are fast approaching or have exceeded their design capacities. And since federal grants for treatment plant expansions are drying up, future expansions to accommodate new growth will be increasingly expensive to state and local taxpayers.

Finally, cumulative effects of development may dramatically alter the character of Vermont towns, the beauty of the Vermont landscape, and the quality of life for Vermonters, newcomers, and future generations.

Across the state, towns have

² Vermont Department of Water Resources and Environmental Engineering, "State of Vermont Water Segment Designations," December 31, 1983.

experienced widely varying rates of growth. In some areas, growth has been explosive, overwhelming town services and radically altering the character of local communities; in Ludlow, for example, townspeople have been so concerned about the mounting changes in town that at town meeting this March, voters endorsed a moratorium on further condominium developments. In other areas of the state, growth has been slow and economic progress stagnant. One result of uneven growth has been considerable disparity among municipal property tax rates and school expenses, and therefore in tax rates, even among neighboring towns.

Growth Patterns Emerge

While the state-wide picture of sustained, rapid growth is dramatic, these data do not tell the entire story. We need to look at the distribution of population growth and development throughout the state to see where the effects of rapid growth are most obvious.

To develop a meaningful, broad picture representing growth in population, housing, jobs and invest-

ment throughout the state, our study team ranked every town according to four selected growth measurements:

- 1: **Numerical increase** in population and housing units, 1970-1980.
- 2: **Rate of growth** in population and housing units, 1970-1980.
- 3: **Employment growth** (rate of increase and numerical increase), 1980-1984.
- 4: **Dollar value/estimated construction costs** for projects with Act 250 permits, 1980 and 1984.

For each indicator, we closely examined the 25 highest-ranking (most rapidly-growing) towns—that is, only the top 10% of all towns in the state. We then mapped these towns and compared maps of all the indicators to develop a complete picture of statewide growth patterns.

Four major findings emerge from this analysis:

- 1: **The rapid pace of development that occurred in the '60s and '70s is continuing into the '80s.**

While population growth may now be as "slow" as 10% for the '80s, housing and commercial development may be speeding up. Non-agricultural employment increased

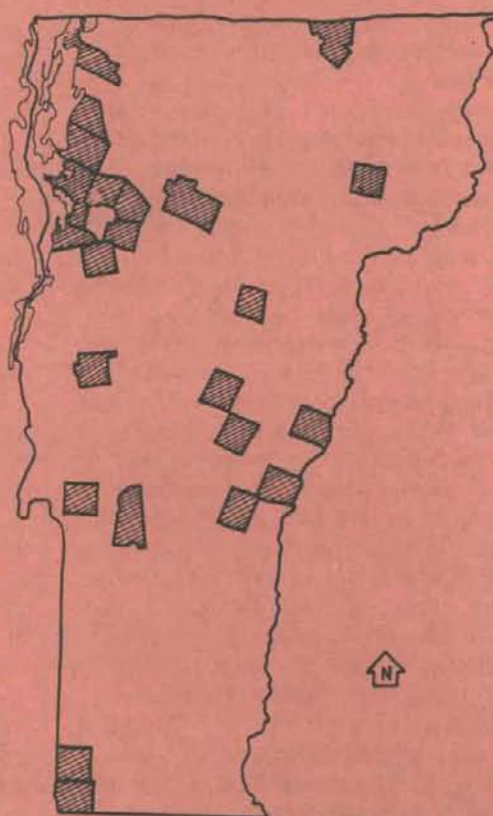
by nearly 15,000 jobs between 1980 and 1984. The dollar value of construction projects subject to Act 250 review increased from \$126 million in 1980 to \$274 million in 1984—an increase of 120%. The number of Act 250 permit and amendment applications increased by nearly 60% in the same period, suggesting that there were not only more major development proposals presented in 1984, but that on average they were larger in 1984 than in 1980.

- 2: **Suburbanization of rural towns around major employment centers is a dominant growth pattern in all regions of Vermont.**

Table 1 and Map 1 show the 25 towns with the largest numerical increases in population and housing, 1970-1980. As one would expect, the greatest absolute change in population and housing has occurred in the more urbanized areas of the state, and in towns along major roads. But, except in South Burlington, none of Vermont's major cities even appears on the list; instead, new families are settling in the nearby towns, where new housing is being built largely on converted farmland.

Table and Map 1
Absolute Growth Index, 1970-1980

Combined Rank	Town	Population		Housing Units	
		Increase, 1970-1980	Rank	Increase, 1970-1980	Rank
1	Essex	3441	2nd	1773	1st
2	Colchester	3853	1st	1478	3rd
3	Hartford	1486	4th	1362	4th
4	Milton	2334	3rd	909	8th
5	Bennington	1229	7th	1077	6th
6	Shelburne	1272	5th	597	13th
7	Lyndon	1219	8th	595	14th
8	Middlebury	1042	11th	502	20th
9	Derby	970	13th	519	18th
10	South Burlington	647	27th	1093	5th
11	Jericho	1232	6th	444	27th
12	Thetford	766	20th	520	17th
13	Rutland Town	1052	10th	438	26th
14	Pownal	828	17th	488	22nd
15	Georgia	1107	9th	415	35th
16	Stowe	603	31st	701	12th
17	Hinesburg	915	14th	415	34th
18	Royalton	701	22nd	453	26th
19	Castleton	800	19th	427	31st
20	Richmond	910	15th	412	36th
21	Barre Town	581	34th	487	23rd
22	Randolph	807	18th	401	40th
23	Clarendon	835	16th	380	44th
24	Swanton	519	39th	493	21st
25	Woodstock	606	30th	417	33rd



3: Resort area development is occurring at a rapid rate; the cumulative effects of this development will alter the landscape and economy of the state.

Resort towns tend to show substantial increases in second homes, but very little population growth. Consequently, they do not rank high on Table 1. But resort towns do appear prominently on other growth measures. For example, eight resort towns appear in the top 10% in the rate of growth index.

In most of these towns, the growth in housing dwarfs the growth in population. Warren, for example, experienced a 285% increase in housing, but only a 63% increase in population, between 1970 and 1980.

Data on employment and Act 250 applications for 1980 and 1984 clearly demonstrate the continuing boom in destination resort developments. In 1984, for example, ten resort towns were among the top 25 in Act 250 activity. Applications in Sherburne totalled over \$30 million, which puts that town just behind Burlington and far ahead of South Burlington in Act 250 applications. Resort towns also appear among those with rapid increases in employment, although they rank somewhat lower on this growth indicator.

4: To a significant degree, rapid growth in Vermont is concentrated in a few rapidly-growing towns, mostly in multi-town rapid growth areas.

Map 2 shows those towns that appeared in the top 10% of all towns on at least two indicators used in this study. Considering the wide range of variables measured, the study reveals a high degree of concentration of recent growth. Altogether, only 37 towns, or about 14% of all towns, appear on this map. The patterns of growth shown here are now familiar; with few exceptions, the rapid growth towns are suburb or resort towns.

Each of the indicators measured shows this growth concentration, with Act 250 projects being the most striking examples. In 1984, for example, total estimated construction costs for Act 250 projects in the entire state totalled approximately \$275 million. Approximately \$234



Above: Construction begins on a new shopping center on Shelburne Road in Shelburne.

million, or over 85% of that activity, occurred in the top 25 towns; and 17 of those towns were also at the top of the list in 1980.

Although interpretations of Map 2 will differ, we see perhaps six significant multi-town rapid growth areas across the state. The six growth clusters are: (1) The Burlington region; (2) Stowe-Cambridge; (3) Warren-Waitsfield-Fayston; (4) The Rutland County cluster; (5) The Southern Vermont resort cluster; (6) Bennington-Pownal. The information in this report is not by itself sufficient to define the boundaries of the most important areas, but it is highly suggestive, giving decision-makers a good idea of where to focus further attention.

Vermont Without A Growth Policy—Many Tails, No Dog

In the past twenty years, the legislature has created numerous state programs to promote, guide, and manage growth in Vermont. Viewed individually, each of these programs appears to be working unambiguously for the public good.

Our study of these programs reveals, however, that they are routinely administered with little regard for their effects on development patterns, on other government programs, or on environmental factors outside the jurisdiction of the decision-making agency. The chief reason for the lack of coordination among state agencies is the lack of a coherent growth policy, or even a coordinating mechanism within

state government.

The current controversy over the land spraying of treated effluent by ski area developers is a typical example. It is widely understood that state government approval of the practice, which is regulated under the water quality laws, will greatly enhance mountaintop development opportunities. Leonard Wilson, Secretary of the Agency of Environmental Conservation, has stated however, that the growth effect is irrelevant to the pending regulatory decision. "Let me make it clear," he said, "that we are concerned with the water quality impact, not with the growth impact."

In the existing regulatory framework, this is an appropriate decision: important decisions on state and regional growth priorities normally should not be made by the technical staffs of the individual state agencies. As state program administrators frequently warn, "let's not have the tail wagging the dog." But the plea unintentionally exposes the vacuum in state growth policies: since there is *no policy to apply*, the agencies must go about their business without addressing the secondary consequences. Many tails are wagging, but there is no dog at all.

State Agencies at Cross Purposes

It should come as no real surprise to learn that the many governmental programs for economic and

environmental quality do not automatically work in concert. Why should they? They were established at different times, they often have competing mandates, and they are administered by essentially independent agencies and boards. The consequences are nevertheless unfortunate.

An especially clear example is occurring in South Burlington. The city is now building, with state support and funds, an expansion in its Airport Parkway sewage treatment plant. South Burlington's plans clearly reveal that the expansion is intended to permit the subdivision and conversion of up to 4,000 acres of prime agricultural land in the southeast quarter of that city.

State support for this project is especially ironic. In a recent Act 250 appeal, the Agriculture Department successfully opposed the subdivision of 40 acres of primary agricultural soils in the same area, winning a unanimous decision from the Vermont Supreme Court.³ Yet neither the Agriculture Department nor the Agency of Environmental Conservation has sought to restrict state funding or approval of the sewage treatment expansion which will undoubtedly lead to the conversion of thousands of acres of adjacent agricultural soils.

This case is only one of many examples of state agency isolation. Similar conflicts arise in the administration of VIDA and other economic development programs, road expansion and access decisions, and other public programs.

It seems obvious that state government has an obligation to coordinate its activities and programs, in the long-term best interest of Vermonters. And yet major state agencies are working at cross-purposes with respect to environmental and economic development decisions.

Act 250 Needs Improvement

Since Act 250 was enacted in 1970, Vermonters have relied upon the District Environmental Commissions to protect our state, our towns, and our natural resources from the potential undesirable con-

sequences of development. Under Act 250, major development proposals and subdivision proposals are reviewed on a case-by-case basis by the District Commissions.

Although the Act originally called for the creation of a statewide land use plan to guide the decisions of the District Commissions, that plan was never enacted and language referring to the plan was removed from the statute in 1984. As a result, for the last 15 years, District Commissions and their state agencies have been making case-by-case permit decisions on Act 250 applications without an underlying planning base. How well has this system worked?

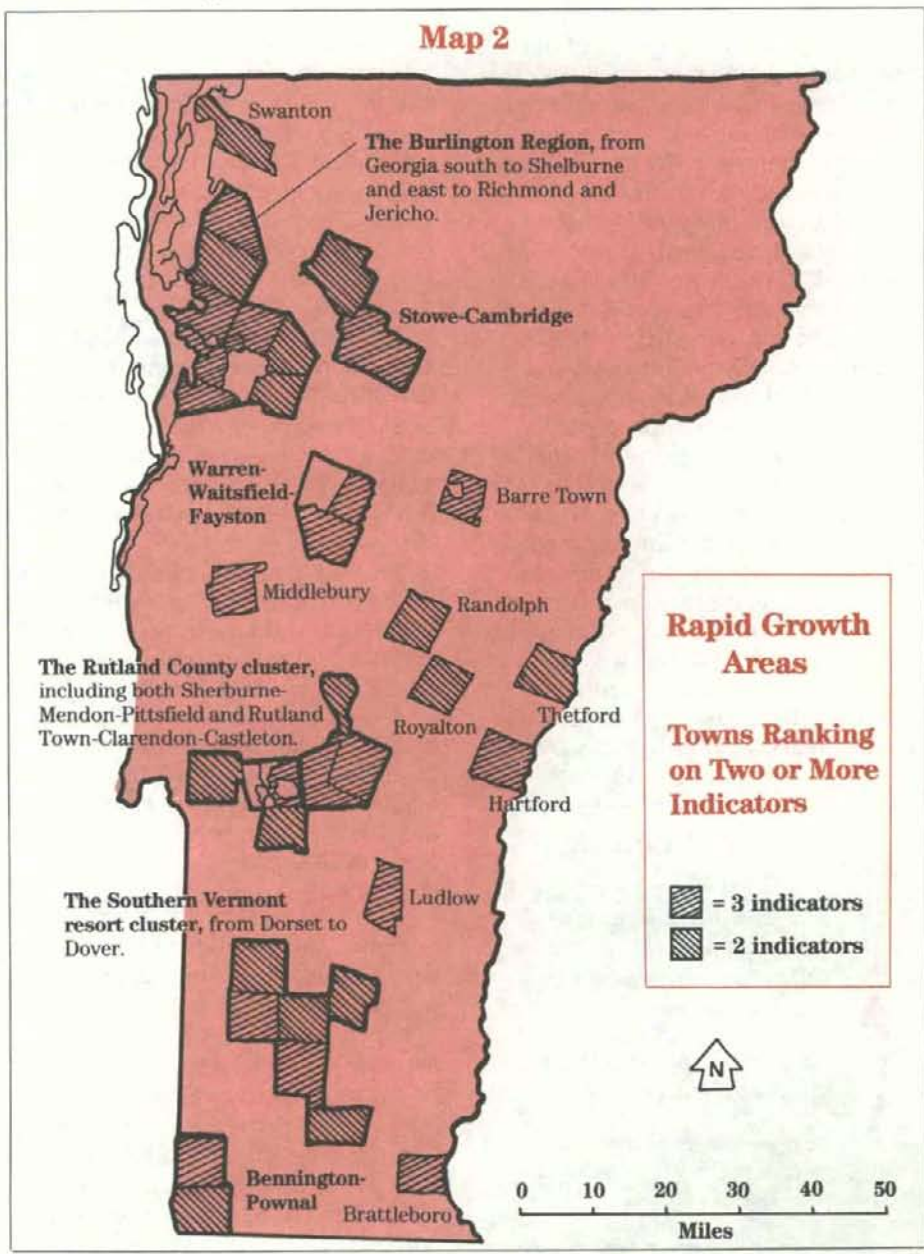
After a thorough examination of

the Act 250 process, and a review of hundreds of permit cases from all regions of the state, our study team has reached the following conclusions.

1: The Act 250 process does a good job of softening the impacts of individual development projects, but it is unable to protect the public from the cumulative impacts of multiple projects, especially in areas of rapid growth.

With stirring success, the Act 250 process has allowed for the sensitive modification of development proposals, minimizing their negative effects. Virtually all Act 250 applicants are approved, but most permits contain several mitigating conditions.

Map 2



³ *In re Spear Street Associates* (No. 82-544), April 12, 1985.

Unfortunately, however, the present fragmentation of the review process makes it virtually impossible to review a proposal in the context of any "big picture" for development of an area. Consequently, undesirable and damaging patterns of development have evolved, on a piecemeal basis, in the state's rapidly growing regions.

2: State agency support for the Act 250 process has become woefully inadequate.

One of the critical features in the formation of Act 250 was the legislative decision to place permit decisions in the hands of citizen boards rather than professional administrators; moreover, the decision was made not to create a technical support staff within the Act 250 agency, but to rely on the expertise of personnel in existing state agencies. Experience has shown these decisions to be wise ones.

However, despite the fact that the state is experiencing unprecedented, continuing development pressures, state agency support for the Act 250 process is at an *all-time low*. In the early years of Act 250, an "environmental advisor" in each region provided the District Commissions with detailed information on each development proposal, most often after a site inspection. Those staff positions were taken away in the mid-1970s and never replaced. Today, the Environmental Agency employs one full-time attorney to coordinate the input of every state agency on every Act 250 application, amendment, and appeal—700 to 800 different proceedings annually. This attorney has time to attend hearings in only a tiny frac-

tion of these cases; if the state submits any evidence at all, it is most likely in the form of a short memo, written by someone who has never seen the project site. In these circumstances, it is hardly surprising that the state agencies give so little guidance to the District Commissions on the cumulative effects of specific proposals.

3: Background growth studies are needed to assist Act 250 participants in assessing impacts and heading off capacity problems.

Computer professionals use the expression GIGO—"garbage in, garbage out," to remind themselves that even the most sophisticated computers cannot produce meaningful results from incomplete or inaccurate data. The same rule applies in development review. Act 250 is a well-crafted growth management statute, but District Commissions can only make decisions based upon evidence in the hearing record. Evidence concerning cumulative impacts is almost never presented today—despite the fact that this information is necessary to apply the criteria of Act 250.

4: Experience with the Mad River growth study demonstrates that cumulative impact/capacity studies can be performed at reasonable cost and that such studies can be very helpful in assessing development impacts in the Act 250 process.

Over the past five years, the towns of the Mad River Valley (Warren, Waitsfield, and Fayston) have developed a cooperative technique to assess and manage rapid growth in their region. The success of this process suggests that cumulative impact and capacity studies based on the Mad River Valley model are feasible for the other rapid growth areas of the state.

Recommendations

The initial study of the Growth Areas Research Project addresses only a small part of the important policy questions that arise in the administration of state laws and programs affecting the pace and quality of growth in Vermont. Continuing, in-depth analysis is needed to address VIDA administration, water resources planning, and other critical topics. The following

recommendations concern the topics discussed in this first study.

1: State agency support for the Act 250 process, now at an all-time low, must be substantially improved.

2: The Act 250 process should be amended to provide for the creation, maintenance, and use of capacity and growth studies, particularly in the areas of rapid growth. The Act 250 system is not adequately addressing the problems of cumulative impacts. The District Commissions, and all parties to the hearing process, need complete information on area capacities and growth trends. These studies do not need to be done for the entire state, but can be restricted to those towns undergoing the most rapid growth. We recommend passage of H.295 (see following article by Eric Palola) or similar legislation.

3: State agencies must assist towns, legislators, regional planning commissions, development interests and other decision-makers by collecting, analyzing, and distributing data on growth and growth impacts.

4: The Governor should give the reconstituted Development Cabinet a clear mandate to develop state growth policies and to coordinate state agency positions within the bounds provided, and participate actively to set policies and resolve interagency conflicts when necessary.

During the Snelling Administration, a Development Cabinet was organized to coordinate administration positions on development issues. However, this group (consisting of the Secretaries of the Transportation, Development, Agriculture and Environmental Agencies, and the head of the State Planning Office) typically met only to resolve episodic development controversies. Governor Kunin has recently reconstituted the Development Cabinet, but it is not yet clear how active the group will be in resolving major interagency conflicts. We believe that the Governor must become personally involved, if the state agencies are to coordinate their activities, and pursue a comprehensive vision of economic vitality and environmental excellence for Vermont.

Vermont Northern Growers Co-op

Producers and distributors of storage vegetables
Offers interest-bearing equity shares to the public.

Help promote sustainable agriculture in Vermont!

Write for a free brochure.

Box 125, E. Hardwick, VT 05638
(802) 533-7175



Legislating Growth Management— A Tale of Two Bills

Eric Palola

"Today we are facing a second wave of development, a second wave that makes it necessary to take new initiatives to ensure that what we have is controlled development that preserves our countryside."

Madeleine Kunin, August 1984

It was the tenor of rapid growth as a fall campaign issue that helped propel a loose committee of legislators, conservationists, academics, and state officials to the drafting table in early January. The group met feverishly in an effort to sort through legislative suggestions for managing the impacts of "suburbanization and resort-ification."

Yet, as the summer unfolds, the people of Vermont still await a legislative reply to the growth management question. The impressive environmental agenda before the General Assembly on such topics as leaking underground storage tanks, groundwater protection, and a state superfund program helped detract from work on growth management bills.

The inability to deal with rapid growth in Vermont has been linked to deficiencies in Act 250. But the debate over modifying the Act has served as a springboard for questions concerning the overall environmental future of Vermont. Today's questions hearken back to those which first gave rise to Act 250 and the initial attempts at statewide and regional planning. Such overtones also helped prevent any bills from surfacing early in the session.

Following several drafts and discussion, two bills, one each from the House and Senate (H.295 and S.80) were quietly introduced in mid-February. Of the two bills, only H.295 has received testimony so far. Both bills represent serious

attempts to grapple with a problem that threatens to overwhelm the environmental quality, rural landscape and unpretentious character of Vermont's communities.

The House Version

H.295, sponsored by House Natural Resources Committee Chairman Steve Reynes (D-Pomfret) zeroes in on the failure of Act 250 to account for the cumulative impacts which several developments can have on the air, water, and municipal services in a region.

"This bill [H.295] is perhaps the single most important new proposal to Act 250 since the adoption of the Capability and Development Plan in 1973."

Darby Bradley, Environmental Board Chairman

To evaluate such impacts the Environmental Board would, under H. 295, have the authority to designate "rapid growth areas" (RGAs). Once an RGA is identified, the Director of Planning, within the Agency of Development and Community Affairs, is directed to undertake environmental "capacity studies" to measure the availability and limits of traffic corridors, water supplies, energy resources, and wildlife habitat, among other factors. Such studies would be used in Act 250 proceedings and would be funded through a combination of development fees and general appropriations.

In a memo to the House Commit-

tee, Environmental Board Chairman Darby Bradley noted, "This bill is perhaps the single most important new proposal to Act 250 since the adoption of the Capability and Development Plan in 1973."

Leonard Wilson, Secretary of the Agency of Environmental Conservation testified to the need for a more comprehensive data base but concluded, "I'm not sure the bill meets the demand for change . . . this bill raises, by inference, larger questions such as the adequacy of the existing institutions in Chapter 117, [regional planning]."

For large projects to be built over several years, H.295 also requires that a developer submit a project "masterplan." These project overviews would assist District Environmental Commissions, who are responsible for reviewing Act 250 applications, in their evaluation of the projects. Anticipated traffic flow, availability of sewage disposal, and a project's consistency with local and regional plans would all receive closer scrutiny under H.295.

While the bill would provide more evidence for review of big development, no specific guidelines exist as to how the District Commissions will use such information. The interpretative role of the Commissions remains the same.

In testimony to the House Committee VNRC emphasized, "The Council sees the bill [H.295] as a strengthening amendment to a permit process that, with some limitations, has served Vermont fairly well . . . The important thing this bill doesn't do is set out any specific policy decisions . . . The Council does not view H.295 as a planning bill."

. . . And in the Senate

Unlike H.295, the Senate bill was written with the express intent of encouraging planning. Sponsor

Arthur Gibb (R-Addison), Chairman of the Senate Energy and Natural Resources Committee, has not taken testimony on S.80. The bill has, however, generated considerable discussion due to its "carrot and stick" approach to managing rapid growth.

The Senate bill attempts to get planning out in front of development pressures by requiring concise regional plans prior to the granting of any land use permits.

Similar to "rapid growth areas" in H.295, the Senate bill highlights, for planning purposes, areas of "substantial regional impact." However, the designation of such areas in S.80 lies not with the Environmental Board but rather is triggered by developments that cross the threshold of either 100 subdivision lots, 100 dwelling units, or 100,000 square feet of nonresidential floor space.

Regional planning commissions are currently responsible for developing a regional plan, under the purview of the Agency of Development and Community Affairs. Under S.80, the commissions would still have this responsibility, but with

"There is a need to eliminate the existing competitiveness between towns for tax dollars that contributes to the haphazard nature of growth in certain areas of the state."

Senator Harvey Carter Co-sponsor of S.80

three additional requirements.

First, the new regional plan would include a five year capital budget for anticipated school, road, sewer, and utility needs, as well as a schedule for their utilization. Second, the plans would draw on "capacity studies," like those in the House bill, which identify the actual limits of various resources to support development.

Third, as the bill now reads, "After Jan. 1, 1987 no project or development of substantial regional impact will be deemed to be consistent with the regional plan, unless that plan has been adopted and approved . . . [by the regional planning commission and the Agency of Development and Community Affairs]."

Much of the discussion on rapid growth has pointed to the imbalances on demands for municipal services and the varying ability of towns within one region to support the "infrastructure" that inevitably arises as more people, cars, and houses inundate a given area.

"There is the need to eliminate the existing competitiveness between towns for tax dollars that contributes to the haphazard nature of growth in certain areas of the state," said Sen. Harvey Carter, D-Bennington, a co-sponsor of S.80, "Concise and thorough planning encourages a commitment to environmental quality and to providing services that are currently, on an equity basis, unevenly distributed."

Mixed Responses

Developers have been hesitant in their reaction to S.80 and H.295. A concern most often expressed, not

only by developers, is the difficulty in separating planning objectives from regulatory requirements.

"There is a planning process and a permit process. I don't think we can mix the two," said former Governor F. Ray Keyser, who also represents several developers in the Rutland area. "I think there needs to be more capital planning . . . if you want to do planning you should do it other than in Act 250."

Others are concerned that the autonomy of local decision-making will be smothered as a result of new legislation. In a position paper on H.295, Representative Michael Kimack (R-Wilmington) contends, "The study [of environmental capacities] must provide funding and resources necessary to reinstate the town's ability to plan its own course. Had communities kept pace with capital planning requests to support development this modification process [of Act 250] may not have been necessary."

The summer promises to be an active one. Representative Reynes plans to take his Committee "on the road" to encourage discussion and receive input from around the state on H.295 and the growth management issue in general. Likewise, Senator Gibb intends to hold several committee meetings throughout the summer.


Commissioner of Agriculture Paul Stone recently toured the state asking farmers, "What do we want to see the Vermont farming picture look like in the next twenty years or by the year 2000?"

But the question begs for broader application: What do we want to see in Vermont in the next twenty years? Can Vermont grow in a way that will enhance those qualities that make the state unique, or is a certain measure of sacrifice inevitable?

Considerable ground has been broken by S.80 and H.295. Yet the environmental community will have to press hard through the summer and the next legislative session to realize any substantive progress for coming to grips with Vermont's "second wave of development."

Eric Palola is Acting Operations Director of the Vermont Natural Resources Council.


100% VERMONT WOOL YARN



4 oz. skeins. Worsted, Heavy, Bulky
Sport weight
Please send \$1 for heather color samples

Settlement Farm
Robert and Julia Northrop
Box 540 V Cambridge Vermont 05444
Telephone (802) 899 2522

P.S. We have our own sheepskins and maple syrup, too!



**Great American
Salvage Co.**

Architectural Antiques
Doors • Stained Glass • Bars
Columns • Mantles • Tubs

3 Main St., Montpelier, VT 05602 (802) 223-7711
34 Cooper Sq., N.Y.C., NY 10003 (212) 505-0070

Acid Rain

The Storm of Controversy Continues

Erik Johnson

Forest decline is spreading like a cancer through the tops of our Appalachian Mountains. The most sensitive areas deteriorate first: high evergreen forests in shallow acidic soils on windward slopes. But the movement of destruction has been dramatic. Walking through mountain forests of the northeast today one can see red spruce and balsam fir dead or dying; and brown needles cover many of the remaining trees.

Acid rain, the alleged culprit, is not confined to the forests of the northeastern U.S. Traces of high acidic deposition are now showing up in the western mountain regions of the U.S., and an estimated two and a half to five million acres have been damaged in Europe as well.

Considerable research has been conducted around the world over the past decade, including several extensive joint ventures between afflicted nations. But forest ecosystem research is very complex. Despite research efforts, current information is insufficient to prove direct cause-and-effect relationships.

The Green Mountain Division of the Society of American Foresters, Vermont's professional foresters' association, recently issued a position statement warning of increasing forest decline, but noted that the exact cause of the decline is not known. The SAF recommended a "more aggressive research program to... provide the basis for strategies to reduce the emission of air pollutants that are harming forests."

University of Vermont researchers have a detailed data base of Camel's Hump in 1965, but no control group in North America with which to compare trends. "We can only say that the evidence strongly indicates that atmospheric sulphur and nitrogen oxides are causing our forest deterioration," states Tim Sherbat-

skey, University of Vermont research botanist, "but there is just no way of being certain."

Acid rain research varies in other fields. Air transport studies conducted in 1982 at UVM's Proctor Maple Research Center showed that although the most common elemental signature detected came from local sources, a midwestern signature was present; and 25% had sulphate concentrations seven times higher than the almost sulphate-free local sources.

"Despite research efforts, current information is insufficient to prove direct cause-and-effect relationships."

Monitoring of lakes and stream acidity levels is extensive. The Conservation Society of Southern Vermont is currently coordinating volunteers to monitor acidity levels in six southern counties. The Vermont Department of Water Resources and Environmental Engineering has also conducted a systematic sampling program in geologically sensitive areas. According to their research, 18% of Vermont's surface water has been affected, with six lakes on the critical list.

Most experts agree that research is inconclusive, and there is a bitter dispute over any present plan of action. Most environmental groups maintain that the burning of fossil fuels is a likely cause of acid deposition, and charge that if we don't act now on this evidence, the effects could be disastrous. As Senator George Mitchell (D-ME) notes, "We



know more about acid rain now than we did about air pollution when we passed the Clean Air Act."

Opponents of immediate action argue for further research before spending billions on emission controls. In addition, they point to developing boiler technologies, such as fluidized bed combustion or limestone injection multistage burners, which could lessen the economic impacts of emission control. These technologies won't be commercially available, however, until the 1990s.

With the passage of the Clean Air Act in 1970, the standards of which are administered by the E.P.A., the issue of air pollution became national in its scope. It is in the federal arena, then, that many resolutions to the acid rain problem have surfaced. Currently Vermont and other New England states are suing the E.P.A., challenging the agency's enforcement of several clauses of the Clean Air Act, in an effort to force the E.P.A. to enforce existing regulations more stringently. Lawsuits similar to this one, however, have only had a modicum of success.

The current legislative strategy for acid deposition control—reducing sulphur emissions through the Midwestern utilities—is based on a 1982 Office of Technology Assessment study which determined that midwestern utilities were responsible for 74% of sulphur emissions in

Frederick Johnson Pianos Inc.



Steinway
And Other Fine Makes

Howard Johnson Complex
White River Junction, Vermont 05001
(802) 295-2674

the 31 eastern states. Methods of sulphur emissions reduction are currently commercially available, including switching to low grade sulphur coal, washing coal, and installing scrubbers. Each method, however, has its drawbacks.

Switching to low grade sulphur coal may prove to be politically or economically unfeasible. Midwestern utilities currently use high grade sulphur coal mined in their region; switching would mean breaking contracts and arousing both utility and mining lobbies. Washing coal involves crushing and floating it in water: the coal will float, while the sulphur will sink. However, only 20-30% of the sulphur sinks—not enough to substantially reduce emissions. Scrubbers have become the most widely accepted solution; but scrubbers also have their problems: they are expensive, and their by-product, calcium sulfite, presents a new waste storage problem.

Current emissions control bills include a bill introduced by Senator Stafford calling for a 10 million ton reduction in sulphur emissions in the 31 eastern states by 1995. In the

House, Reps. Kerry Sikorski and Henry Waxman introduced legislation calling for ten million ton reductions in sulphur dioxide emissions and a four million ton reduction in nitrogen oxide by 1995, by the 100 plants with the highest emissions.

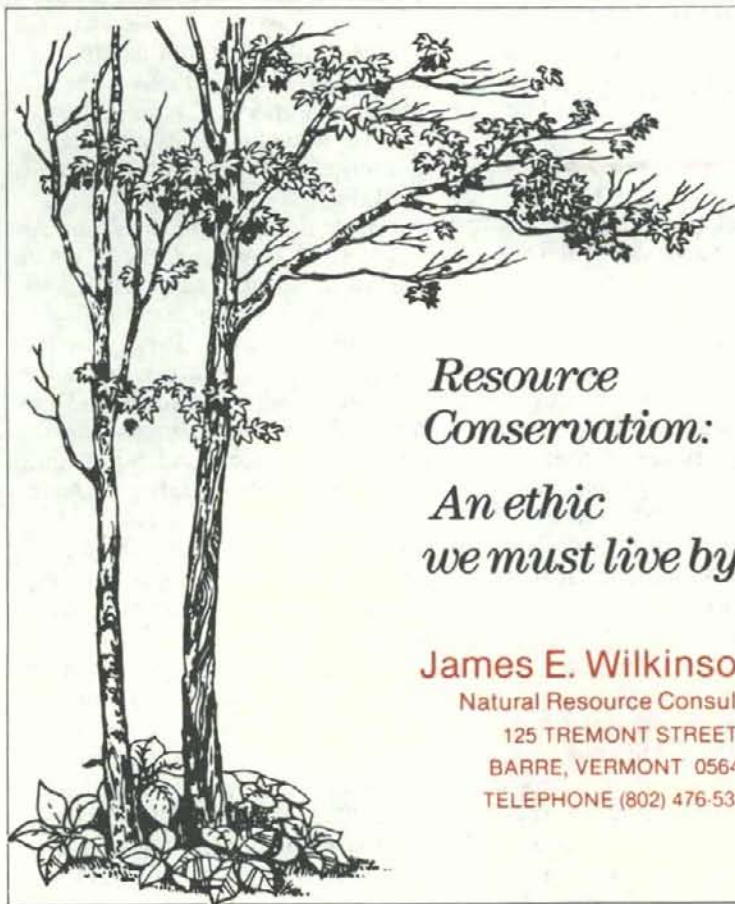
Both bills also include a "Superfund" component, distributing a tax among 31 eastern and mid-western states. Contributions into the fund from each ratepayer would be proportional to energy use, so that the tax would reflect the fact that electricity consumption is partially to blame for acid rain.

Meanwhile, various efforts on the state and local level are underway. Activists from around New England have joined their representatives in Congress in lobbying the E.P.A. for more stringent tall stacks regulation. Senator Stafford's Environment and Public Works Committee has also been urged to hold oversight hearings on acid rain by early this summer. The New Hampshire legislature is considering its own state emissions control bill, while New Hampshire Audubon is working on an education exchange program with the state of Ohio.

At their town meetings last March, 152 Vermont towns approved acid rain-oriented resolutions. A resolution initially offered by Rep. Peter Allendorf (D-Underhill) made the ballot on some 30-40 of the towns. VNRC followed up with the more detailed resolution requesting 50% reductions of sulphur dioxide and nitrogen dioxide emissions over the next ten years (corresponding to legislation being proposed in the U.S. Congress) as well as a treaty with Canada to assure such reductions in both countries.

Speaking from the Senate floor, Vermont Senator Patrick Leahy reported the Town Meeting tally in a speech which he addressed to President Reagan: "Well, Vermonters have spoken in most communities—and the message they want me to deliver is this: We have studied the acid rain problem long enough. It is time to do something about it."

Erik Johnson is a recent graduate of the University of Vermont's Environmental Program.



*Resource
Conservation:*

*An ethic
we must live by.*

James E. Wilkinson, Jr.

Natural Resource Consultant
125 TREMONT STREET
BARRE, VERMONT 05641
TELEPHONE (802) 476-5359

Washington Update

A summary of the major environmental legislation considered in the U.S. Congress this year.



Steve Maier

Congress has had serious trouble reaching a consensus on many environmental laws over the last few years. However, several bills amending major environmental laws have been introduced since January, and change is in the air.

☆☆☆

Clean Water Act

Several bills have been introduced amending the Clean Water Act, including one prepared by the Reagan administration. The major issues being debated are:

Sewer grants The Reagan administration is proposing a four-year phase-out of the federal sewage treatment plant program, which provides grants to local governments. Reagan proposes a total of \$6 billion over the four years, phasing it out completely by fiscal year 1990. In contrast, Senate bill S. 652 would authorize a total of \$18 billion, with a 1994 phase-out date. It would also establish state revolving loan funds, to continue financing sewer construction after the flow of federal money stops. In the House, H.R. 8 is identical to a bill that was passed last year by a 405-11 margin. It would not phase out grant funding and, in fact, calls for an increase in grant funds from the \$2.4 billion of recent years to \$3.4 billion per year through 1988. It adds \$1.6 billion annually for state revolving loan funds.

Permits The Reagan administra-

tion, some industry groups, and several of the Senate and House bills propose extending to ten years the current five-year period that may elapse before EPA must renew industries' discharge permits. The National Wildlife Federation, the Sierra Club, and other environmental groups, however, favor keeping the five-year term. They feel that because water quality problems are often not discovered and dealt with until permit reissuance, the 10-year term would "freeze" pollution clean-up for a decade.

Non-Point Source Pollution Both House and Senate bills call for increased funding for states to develop and carry out plans relating to nonpoint source pollution. Non-point source pollution—pollution that cannot be traced to a particular factory or discharge pipe—includes sediments and fertilizers washing off of farmlands, and oil and grease from city streets, and has been shown to cause a significant portion of the pollution entering the nation's streams.

Superfund

The federal fund established in 1980 to clean up inactive hazardous waste sites, known as the Superfund, will run out of money shortly after its taxing provisions expire on September 30th. While it is clear that the Superfund will be extended, it is not clear how much money will be made available and under what conditions. In 1984,

EPA estimated that \$11.7 billion will be needed to clean up an expected 1,800 sites; and one House bill, H.R. 2022, calls for that \$11.7 billion reauthorization. By comparison, the Reagan administration bill proposes \$5.3 billion; and a coalition of environmental and labor groups are seeking \$13.5 billion.

One bill (S. 51) has already been approved by the Senate Environment and Public Works Committee. The bill, supported by Vermont Senator Robert Stafford, calls for a \$7.5 billion reauthorization. The committee also added a \$30 million-per-year demonstration program for aid to victims of toxic incidents, gave citizens the right to sue the government to meet its legal obligations, and adopted new measures to reduce chances of a toxic tragedy like the one last December in Bhopal, India.

Clean Air Act

Current prospects for a comprehensive reauthorization of the Clean Air Act are not good. Separate action is expected, however, on toxic air pollutants. Also, several bills have already been introduced calling for acid rain controls. One bill (S. 2) is sponsored by Vermont Senator Stafford. It calls for a 10 million ton annual reduction in sulphur dioxide (SO₂) over the 31 eastern states, to be accomplished within 10 years. Other bills have been introduced calling for different combinations of these criteria.

DH Dufresne-Henry

Inc.

CONSULTING ENVIRONMENTAL ENGINEERS

No. Springfield, Vt.

Montpelier, Vt.

St. Johnsbury, Vt.

**PARTNERS IN ENVIRONMENTAL PROTECTION
FOR THREE DECADES**

**THERE ARE
SO MANY
FLAVORS
TO CRAVE AT
BEN & JERRY'S**



VERMONT'S FINEST ALL NATURAL ICECREAM

BEN & JERRY'S
ICE CREAM SHOP & SODA FOUNTAIN

SHELBURNE Rt. 7, Shelburne Bay Plaza BURLINGTON 189 Cherry St.
ESSEX JCT. Complex 159 Pearl St. PLATTSBURGH 14 Margaret St.

Other Laws

The **Endangered Species Act** will expire on September 30, 1985. House and Senate bills would extend the act for 3-5 years without amendments. Issues expected to be raised, however, include increased funding, conflicts between endangered species protection and western water development, the overturning of a court decision limiting taking of the threatened eastern timber wolf, and increased protection for plant and candidate species.

Action is also being taken to reauthorize and strengthen the **Safe Drinking Water Act**. Senate bill S. 124 would place EPA on a strict timetable to decide whether to set standards for scores of unregulated contaminants now found in drinking water supplies. Even stronger legislation is expected in the House, including groundwater and aquifer protection provisions.

Congress will also be debating amendments this year to the **Federal Insecticide, Fungicide, and Rodenticide Act**, the primary law governing the use of pesticides. The EPA is proposing a two-year extension of the act with no amendments.

Let Your Views Be Known

Let Vermont's elected representatives know your views on these important environmental laws. If you would like additional information, call VNRC at 223-2328, or one of our Washington delegations.

U.S. Representative James Jeffords
Toll free in VT 1-800-835-5500

U.S. Senator Patrick Leahy
Toll free in VT 1-800-642-3193

U.S. Senator Robert Stafford
Call collect: Burlington 951-6707
Rutland 775-5446

Steve Maier is in the Master's program of the Environmental Law Center at Vermont Law School; he covered hazardous waste issues in the Vermont Statehouse this year as a legislative intern with VNRC.

Reflections on The Citizens' Lobby For the Environment

Peter Lavigne

VNRC must spend a good deal of time and effort working to influence Vermont's environmental legislation. Yet lobbying is one of the least understood of our many functions as environmental advocates. What does "lobbying" mean in Vermont—and how does VNRC fit in? Peter Lavigne, who represented the Council to the Vermont Legislature on a full-time basis this year, responds here to these questions.

Peter is the first intern to be supported by VNRC's Red Arnold Memorial Internship Fund. The fund was created by VNRC's Board to honor Maurice "Red" Arnold, a state legislator, former VNRC director, and a devoted environmental advocate, who died suddenly in 1983. Peter holds a Master's degree from Vermont Law School's Environmental Law Center, and completed his law degree from Vermont Law School this year.

The word "lobbying" often conjures up an image of back room

deals and big spenders who lavish expensive gifts and meals on politicians in efforts to influence their votes. While still valid in Washington, this image has little to do with the citizens' environmental lobby in Montpelier.

In fact, that "big bucks" image has little to do with most lobbies in Vermont's capital. Successful lobbying of a part-time citizen legislature requires, most importantly, a forthright, trustworthy and open approach. The Vermont General Assembly, and in particular the House of Representatives, is composed of a broad cross-section of individuals with wide ranging educational and vocational backgrounds. Chicanery of any kind is probably the quickest way any lobbyist can lose influence.

Lobbyists, in the best sense of the term, are information providers. They provide information which would not otherwise come before the legislature for consideration. Information is only half the story,

however. Advocacy and persuasion are what the job is really about.

Particularly interesting is the tacit dependence of the legislative committees on lobbyists and interest groups for facts, figures, interpretation and research. The major work on most bills happens in committee and it is with the committee members that the lobbyist's influence is greatest. Staff support for the committees is limited to the Legislative Council, a small group of six highly-skilled and grossly-overloaded lawyers, and 27 full and part-time typists, researchers, stenographers and clerks.

Committee workloads often loom large. The Senate Judiciary Committee, for example, had 30 Senate bills and 15 House bills pending at the start of the last week of the session. Because the Legislative Council cannot meet all of the research demands made upon it, the committees depend upon information provided by lobbyists.

While the thought is scary at first, the system can work remarkably well. A number of different interests were well represented on the major environmental bills this year, and the committees had plenty of material to work with.

Lobbying for a non-profit citizens' group like VNRC is a two-edged sword. Because we represent, at the most basic level, the environment, VNRC does not have the credibility problems of lobbyists who represent many different clients for hourly fees. No one can accuse us of being shills for the environment because the money is so good. On the other hand, the lack of paying clients



(Left to right:) Rep. Curt McCormack, Peter Lavigne, and Rep. Michael Kimack discuss environmental legislation in the Statehouse lobby.

severely limits our resources. VNRC's lobbying effort depends largely on interns for basic research and testimony on many bills. Happily, however, influence depends less on cash in Vermont, than it does on the ability to maintain a trustworthy and helpful presence.

Of the five registered organizations which actively lobby on environmental issues, three maintain a full-time presence in the State

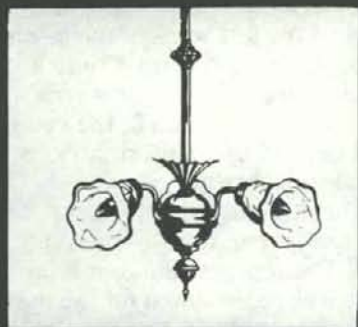
ORIGANUM

natural foods

- 100% whole foods, natural & unprocessed
- Organic & local produce
- Freshly milled flours
- Imported cheeses
- Bulk herbs & spices
- Dried fruits & nuts

SEE US AT NEW LOCATION
187 St. Paul Street
Burlington, VT 05401
(802) 863-6103

BRASS



Restored Antique
Fixtures
Quality Brass Hardware
Brass & Copper
Antiques
Repair & Refinishing
Custom Fabricating
Lighting Design

• Conant Custom Brass •

270 PINE ST. BURLINGTON, VT
(802) 658-4482

House. Of the three, VNRC, Vermont Public Interest Research Group (VPIRG), and the Vermont Federation of Sportsmen's Clubs, only VNRC actively covers the complete range of environmental legislation. With its team of four active lobbyists, VNRC maintained the equivalent of 2 fulltime lobbyists during most of the 1985 session.

Still, while VNRC and other citizens' organizations need to maintain a virtual omnipresence in the State House to be effective, other lobbies find it possible to exert influence with occasional appearances. Unfortunately, some lobbies, in combination with key members of the House or Senate, flex enough political muscle to stop good environmental legislation with or without good cause.

Whatever cause one is promoting, winning friends is a large part of lobbying. Talking, cajoling, listening, trading, finding out likes and dislikes—they are part and parcel of the process. No matter the differences of opinion, establishing personal relationships is key.

It's also a question of being in the

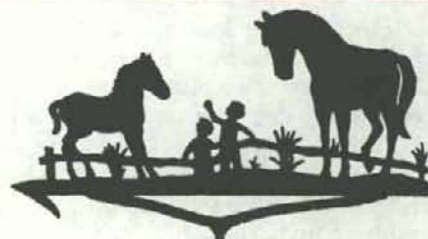
right place at the right time. VNRC had the good fortune to support its first full-time legislative intern at the same time citizens of the State elected a Governor and a legislature committed to strong environmental legislation.

The 1985 General Assembly will be recorded as the most productive environmental session in the history of Vermont. Only once before, in 1970 when Act 250 and Act 252 passed in Vermont, has any state acted so swiftly and decisively to protect its environment. The progress of the 1985 session restored Vermont to its position as a leader in environmental protection among the states. In the end it is not the lobbyists who make the biggest difference—it is the citizens of the state who elect the Governor and the legislature and give them a mandate for sensible action to protect the environment.

For a listing of the major environmental legislation addressed this session, see VNRC's 5/20 Bulletin. Extra copies are available from VNRC.

KNOLL FARM is proud to be the first property in the Mad River Valley Farmland Preservation Project to complete a donation of permanent conservation restrictions.

We hope others will follow suit to make The Valley and Vermont a better place to live!



KNOLL FARM INN

RFD BOX 179
BRAGG HILL RD.
WAITSFIELD, VERMONT

WEBSTER RD.
SHELBURNE, VT 05482
802-985-8058

COPYTEK

OFFICE PRODUCTS, INC.

FURNITURE, SUPPLIES & MACHINES



The Green Mountain Club

75 Years of the "Footpath in the Wilderness"

David Engels

"The Green Mountains have been sadly neglected, which is strange, as the entire range is within plain sight of the much frequented White Mountains and Adirondack Mountain groups and their noble skyline might well have inspired excursions into a virgin mountain region. This neglect lies with the people of the State who failed to make the mountains accessible or to give them due publicity; up to ten years ago only half a dozen of the principle peaks had trails up to their summits...."

GMC Guidebook, 1920

The Green Mountain Club was founded on March 11, 1910 by James Taylor and twenty-three others with the goal of making the "mountains of Vermont play a larger role in the lives of the people." As the Green Mountain Club members celebrate the Club's 75th anniversary this year, the worry farthest from their minds is that not enough people will get a chance to use some of the 450 miles of trail the GMC has established and maintained over the years.

Over 100,000 hikers use the trail each summer, 50,000 of whom visit Camel's Hump and Mt. Mansfield alone. The Club has caretakers for the many lodges along the way; ranger-naturalists provide information to hikers about the environment and the trail; Long Trail Patrol crews work on maintenance of lodges and trails as they become worn with use; and over 4000

members volunteer time and labor to keep the trail open for the public to enjoy.

Despite the successes of the GMC, there are several problems that come along with the job of being in charge of the good-sized and popular Long Trail system.

Executive Director Harry Peet is optimistic about the Club's future. "The legislature has been quite supportive over the years," he says, "and legislative recognition sets the stage for, at the very least, a morale boost. But also, it will help when—as land changes hands and more pressure is put on landowners to sell out—we try to get rights-of-way through bits and pieces of the land."

Some 20% of the Long Trail is on State land, 45% was built on land owned by the Green Mountain National Forest, and another 5% was purchased by the National Park Service as part of the Appalachian National Scenic Trail. This leaves

30% of the Long Trail that now runs across privately-owned land—and there's no assurance that owners will necessarily remain Long-Trail-friendly.

Most Vermonters first caught wind of the threats to some of that shaky 30% in 1983. A compromise agreement worked out by the National Parks Service and Green Mountain Club with Killington, Ltd. protected a right-of-way for the Long Trail/Appalachian Trail across lands owned by Killington in Mendon; but both the Green Mountain Club and the Park Service were criticized for allowing the possibility of too much additional ski area development to impact the Trail.

"The Long Trail passes through or next to ten different ski areas in the state," says Peet. "As major ski expansions occur, it becomes more and more difficult to retain a natural environment for the Trail. The mountains should be open to all



At right: "Burlington Section and friends" visit Taylor Lodge on Mt. Mansfield, February 22, 1927. GMC founder James Taylor is in the front row, fifth from left.

types of recreation," he maintains, "but we must keep in mind that the Green Mountains are only so big."

Clearly, as land uses change and land values rise, the Long Trail will have to be protected in order to be maintained at all. Peet is quick to point out, however, that the Long Trail owes its seventy-five year existence to the generosity of the many private landowners who have allowed the Trail to cross their lands, and that any protection efforts undertaken by the Club will build upon this history of cooperation.

While economic reality rears its head, Club members remain determined about years to come. For years, the GMC kept a low media profile; hikers were "loving the trails to death," and Club directors needed time to develop a management plan dealing with concentrated overuse. But now, the GMC's successful education campaign, which included the publication of *A Day Hiker's Guide to Vermont*, has improved the patterns of trail use: Vermont hikers are better dispersed, and more

environmentally aware.

"We are primarily an outdoor recreational organization," Peet says, "but at the same time we are an environmental one, and we are constantly trying to meld these two concerns together." For example, the GMC staff is now helping to coordinate member volunteers with the various research studies on acid rain being conducted on Mt. Mansfield and Camel's Hump. Says Peet, "The Club is doing all it can to show that all of the clubs and organizations are united in saying that something has to be done fast."

In order to maintain the Trail and the Club's goals, however, the Club needs more support. "The organization has 4000-plus members," notes Peet, "but in any given summer there are 100,000 people using the trail. I look at those two figures and I think that if just ten percent of those people would send in their membership fees, we could get some incredible things accomplished."

GMC membership ranges from simply paying the dues, to becoming active in group excursions and trail/

shelter maintenance. Each local Club section is responsible for a certain portion of the trail, assigned to them by the main branch of the Club. At-large memberships accommodate people who are not involved with a particular chapter.

The central office in Montpelier represents the GMC as a whole, and is involved in the long-range planning for the trail and coordinating events that affect the Club. Currently, the main office, with the assistance of members, and other local and federal organizations, is working on a five-year "Action Plan," to decide upon the changes and improvements necessary to the Trail's continued quality as a system.

But the event that is taking up much of the time at the GMC office now is the bi-annual meeting of the Appalachian Trail Conference, which the GMC will host this year at Green Mountain College on August 2-9. The Conference was founded in 1925 to coordinate the various clubs involved in establishing the 2100 mile "Georgia-to-Maine" Appalachian Trail—a group which has now grown to some 32 organizations.

"See you in Vermont," the brochure urges: "Stand atop Stratton Mountain where Benton McKaye dreamed the Appalachian Trail...." As GMC members are quick to point out, it was in Vermont that the concept of the Appalachian Trail was conceived. Indeed, the building of Vermont's Long Trail (1910-1931) well preceded that of the Appalachian Trail (1922-1937). "Around here," laughs Peet, "we just call the Appalachian Trail a side trail."

With hundreds of workshops, hiking trips and excursions planned, ATC attendees from all over the east coast will have an excellent opportunity to experience the beauty of the Green Mountains, and the trails that have been maintained here for 75 years.

"The Club's message," says Peet, "is much the same as it always has been: there are some great hiking opportunities in the Green Mountains, and we want as many people to see this as possible."

David Engels is currently a student at St. Michael's College, and is the assistant editor of the Catamount Trail News.



Orvis Showroom

SERVING OUTDOOR PEOPLE SINCE 1856

Fly Rods and Reels	Waders and Vests
Fly Tying Kits	Custom Shotguns
Gore-Tex® Rainwear	Sporting Gifts
	Sporting Art
Trout, Bass, Salmon and Saltwater Flies	
Classic Clothing in Cotton, Silk and Wool	

Open 7 Days a Week 8:00 a.m. - 6:00 p.m.

ORVIS®

Historic Route 7A Manchester, Vermont
Telephone 1 - 802 - 362-1300
Just 15 Minutes from Stratton and Bromley

From good listening to good reading



The Nature of Things

Edited by
Will Curtis

302 pages
Clothbound
\$15.95

Please add \$1.50 per
order for shipping.

Collected here are 200 of the best commentaries on the natural world around us, broadcast over National Public Radio stations, under a grant from the National Audubon Society.

From his own and his wife's observations, and from such authoritative sources as the Vermont Institute of Natural Science, the National Wildlife Federation, Natural History, and Audubon, Will Curtis has selected fascinating and useful short scripts about the seasons, mammals, birds, insects, aquatic life, unusual places, planets and space, and "The Nuclear Sword."

The Nature of Things has an introduction by Les Line, editor of Audubon, and engaging illustrations by Nora S. Unwin.

FROM LOCAL BOOKSELLERS OR

The Countryman Press

P.O. Box 175, Woodstock, VT 05091

Forestry • Wildlife Habitat • Wood Energy



J.P.R. Associates

Forestry is growing trees — and a lot more!

Recreation * Wildlife Habitat * Aesthetics * Water Quality

Our favorite clients abide by a strong environmental and stewardship ethic.

Alan C. Turner, President
Box 280
Stowe, VT 05672

(802) 253-7220

(802) 244-5455

The Fairbanks Museum and Planetarium

Main Street, St. Johnsbury



presents a special exhibition

**VISIONS, TOIL, & PROMISE
Man in Vermont's Forests**

Sizzling Summer Sports!

Full programs of instruction for adults & children in Windsurfing Canoeing Kayaks

Other exciting activities include: Guided river trips daily • Moonlight cruises • Overnight paddling tours • Custom designed package tours • White water rafting

"THE STORE WITH THE BEACH INSIDE"

Mention this ad and receive a free T-shirt when you sign up for any instruction packages.

Clearwater Canoe & Windsurfing

RT. 100 WAITSFIELD VERMONT 05673

496-2708



THE COUNCIL

June is Vermont Rivers Month

In coordination with a nationwide effort, Governor Madeleine Kunin signed a proclamation on May 29 declaring the month of June as Vermont Rivers Month. The national effort, begun by the Washington-based American Rivers Conservation Council (ARCC), is held each year to emphasize the importance of rivers as a natural and cultural resource. In the past, AARC's Vermont coordinator has been Stephen Sease of the Vermont Agency of Environmental Conservation. This year, Ray Gonda, a long-time river recreationist, will coordinate the effort. VNRC is working closely with Gonda in organizing several events across the state. Look for announcements about Vermont River Month happenings—especially the culminating event on June 26 in Pomfret, which will be attended by the Governor.

Sterling College

The Grassroots Project
in Vermont

The Rural Resource
Management Program

The Short Course Programs

Box 9, Craftsbury Common
Vermont 05827, 802-586-7711



Address-Change Blues

You won't believe what happens when you forget to notify VNRC that your address has changed—even if it's just a routine box number reorganization at your post office. First, we receive a notice that your **Vermont Environmental Report** was sent to the wrong address. (And there's 27¢ postage due on every notice. Office Manager tears out her hair.) The notice is sent on a tiny scrap of the **V.E.R.** we sent you. (The rest of the magazine was scrapped by the post office. Editor weeps silently.) Then we mail out another **V.E.R.** to you at first class postage rates. (Budget aches!) Ah, if only our members could tell us about address changes as soon as they know . . .

The best way to see the news is to hear it.

Any radio or television news program will give you the news. "Morning Edition" makes the news come alive.

So when you really want to see the news, listen to National Public Radio's Bob Edwards on "Morning Edition." It's radio worth every minute.

Morning Edition

107.9 FM Burlington/89.5 FM Windsor
Monday-Friday, 6:00 a.m.-6:50 a.m.

Public Radio in Vermont

Worth every minute.

VNRC Board Retreat

There wasn't even enough corn snow left to ski on during the last weekend in March, but a majority of the VNRC staff and Board of Directors still made it to the annual VNRC Board retreat at the Craftsbury Center in Craftsbury, Vermont.

The Board not only heard from their various committees and task forces, but also received first-hand updates on current environmental issues from three of the best informed and most involved environmentalists in the state. On Friday night, the Board heard from Darby Bradley, Chair of the Vermont Environmental Board. Bradley addressed the Board on the many proposed legislative revisions to Act 250.

On Saturday morning, Beth Humstone, a planning consultant, presented the Board with some of the planning "messages" of last winter's Grafton Conference on Economic Development and the Environment, and also summarized her opinions on planning bills before the legislature. Humstone also had praise for the successful and exceptionally



**FEEDS
& needs**

19 Barre Street
Montpelier, VT
229-0567

cooperative planning efforts of citizens, municipal officials, and developers in the Mad River Valley.

Jonathan Lash, Commissioner of Water Resources and Environmental Engineering, spoke last. Lash updated the Board on water resource issues, including proposed legislation regulations, and state policy.

Reports from VNRC standing committees and task forces reflected the hours of hard work and dedication of VNRC's many volunteers. Dick Mixer of the Finance Committee reported on his recent success at designing—with the assistance of Cherie Langer and the approval of VNRC's outside accountant—an improved internal accounting system. The Membership and Development Committee updated the Board on their several fruitful membership renewal phonathons. And the Agricultural Task Force reported that their work has included holding productive meetings with the Department of Agriculture, and presenting testimony on both state and federal agriculture bills.



When you want a book —
ANY book — first try

The Vermont
Book Shop

Middlebury 05753

(Thousands of records —
jazz & classics — too)

Prompt mail service

FOR THE FINEST IN
VERMONT MADE WOOD PRODUCTS
AT MILL PRICES



**WESTON
BOWL MILL**

ROUTE 100 — WESTON, VERMONT
OPEN YEAR ROUND — DAILY 9-5, SUNDAYS 10-5

NEW MEMBERS

VNRC is happy to welcome the following new members, who joined us between mid-February and mid-May:

Ross R. Anderson, Orion M. Barber III, Nancy Bell, A.G. Bowdery, Bertin Gianetta, Dave Chapman, Donald Chioffi, Dr. and Mrs. Willard A. Coy, Joel M. Currier, Martha C. Dier, B.B. Dodson, Jolet Dusenbery, Maxie Ewins, Kurt Fischer, Joyce Hargraves, John, Steven and Kim Hasegawa, Gilbert Heathcote, Clark Hinsdale III, Harold B. Hitchcock, Edith Hunter, Allen Johnson, Kevin Kennedy, Susan Kimmerly and David Gardner, Karla Kirkind, Langrock Sperry Parker & Wool, William T. Lhamon, Scott Michael Mapes, Mollie Matteson, Dore B. McKennis, Marianne S. Meijer, Larry Morris and Dart Thalman, Gardner Moulton, William Oman, Adele Pierce, Lucille Poirier, James A. Riel, Wally Rogers, Robert Schaffner, Jim Sirch, E.R. Taylor Investments, Cassie Thomas, Michael Thompson, Bruce E. Thunberg, Tim Trapp, Rebecca Reno, Mark V. Webster, The Wilderness Society, John and Joyce Williams, Mr. and Mrs. James T. Wilson, Mundy Wilson.

Pure Vermont Maple Syrup



David R. Marvin
Johnson, Vt. 05656

(802) 635-7483

Fancy or Grade A Medium Amber

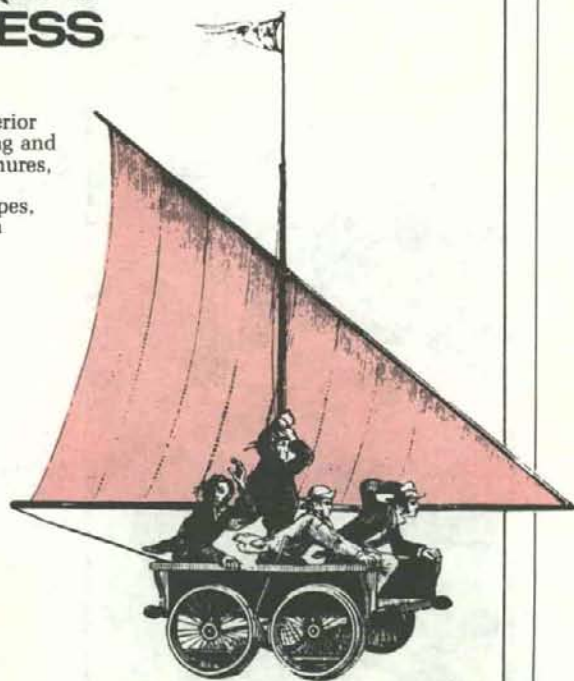
½ gal. \$15.25, qt. \$9.85, pt. \$5.95 ppd

Rush us your order for the new crop of syrup

NORTHLIGHT STUDIO PRESS

We are fully equipped to offer superior creative design, typesetting, printing and binding of all kinds of books, brochures, posters, stationery, magazines, business forms, letterheads, envelopes, and much, much more! Check with us and discuss the design, paper and inks of your next printing job. We'll give you the printing service and quality that you expect at a cost that will pleasantly surprise you!

**FIRST IN
QUALITY &
SERVICE**



ROUTE 14 (NORTH OF BARRE) BARRE, VERMONT

479-0565

THE CENTER FOR NORTHERN STUDIES

Arctic & Subarctic Studies

Fall Semester

Ecology, Paleocology, polar biota, peoples and cultures of the Circumpolar North. 12 weeks/14 credits.

Winter Ecology

January Term

Responses of plants and animals to snow, ice and cold temperatures. Field and lab study. 4 weeks/4 credits.

For graduates & undergraduates

THE CENTER FOR NORTHERN STUDIES

Wolcott, Vermont USA 05680
(802) 888-4331

The Laughing Bear Associates, Inc.

Complete graphic design
and book producing services

Two Downing Street
Montpelier, Vermont 05602
802-229-0925



CALENDAR

Summer Courses

The Center for Northern Studies in Wolcott will offer several short courses (3-5 days) covering topics including field bird and insect study, arctic wildlife, adaptation to severe environments, the Dene Indian peoples, shamanism, contemporary Inuit art, and arctic energy resources. Guided bird walks are also offered every Saturday in July. Call 888-4331 for details.

July 7-August 25

The Conservation Society of Southern Vermont will sponsor a **Summer Conservation Camp** in Jamaica, VT, with nature discovery and camping for ages 9-15. A variety of sessions are offered. Call 365-4663 for details on programs, dates, and cost.

July 9, 16, & 23 or July 10, 17, & 24

Vermont Institute of Natural Science of Woodstock is offering a **Nature Study and Creative Discovery Series** for children entering grades 2-4.

And contact VINS about their Aug. 29 **Bats**, Sept. 12 **Live Hawks**, and Sept. 15 **Bird Banding** presentations, as well as their canoe and birding outings, guided fern walks, and Summer Nature Drawing series. For details, call 457-2779.



June 22-23

The Vermont Institute of Natural Science will host the **13th Annual Vermont Bird Conference** at Bennington College, with workshops and field trips for birders of all levels of ability. Cost is \$60/person, with lower fees if room or meals are excluded. Call 457-2779 for more information.

July 8-12

A one week **Environmental Leadership Training Institute** will be held at Tufts University in Medford, Mass. Volunteers, leaders, and others will benefit from a wide variety of practical workshops. Cost is \$125 for the week. Call (617) 381-3291 for details.

August 2-9

The Green Mountain Club is hosting this year's meeting of the **Appalachian Trail Conference**, to be held at Green Mountain College in Poultney. A huge number of workshops and outings are planned. Call GMC at 223-3463 for program.

August 24

The Vermont Institute of Natural Science is organizing a full-day **Whale Watch** boat expedition leaving Newburyport, Mass. at 7:30 a.m. Transportation provided. The fee is \$55 for members, \$60 for non-members; register by July 27. Call 457-2779 for further information.

September 15-20

The Federal and Provincial Governments of Canada will host the **International Symposium on Acidic Precipitation** in Muskoka, Ontario. Conference cost, including transportation from Toronto, is \$650 (Canadian). Write Muskoka Conference '85, 112 St. Clair Ave. West, Suite 303, Toronto, Ontario, Canada M4V 2Y3, tel. (416) 961-6505.

October 17-20

The **New England Environmental Education Alliance's Annual Conference** will be held this year in Colebrook CT. With the theme "Celebrating New England: Enjoying and Developing Our Sense of Community," the conference will provide a forum for environmental educators to share ideas and resources. For more information call (203) 684-5926.

We are glad to publicize events of interest to Vermont environmentalists as space allows. Please send contributions for the **Calendar** section to Susan Clark at VNRC, 7 Main St., Montpelier, VT 05602.

*America's Finest
Cast Iron FirePlaces
Are Made In
Randolph, Vermont.*



Visit our factory showroom and see these world-famous heaters: the Defiant[®], the Vigilant[®], the Resolute[®], the Intrepid[®], and the new FirePlace[™] Insert.

We are open Monday - Friday from 8 a.m. - 5 p.m.

Saturday from 8 a.m. - 4 p.m.

Vermont Castings,[®] Inc.
Prince St.
Randolph, Vermont 05060
802-728-3111

The FirePlaces[™] by Vermont Castings

I speak  for the earth

This spring, VNRC, the VT Chapter of the National Education Association, and Parents and Teachers for Social Responsibility co-sponsored *I Speak for the Earth*, a collection of poetry and artwork about our fragile planet. The response from people of all ages was tremendous—and heartening. 100 entries have been chosen to be published this fall.

Speak for the earth. Join VNRC.

Please accept my membership in the Vermont Natural Resources Council, for which I will be receiving quarterly issues of the *Vermont Environmental Report* and other membership benefits.

Name _____

Address _____

City _____ State _____ Zip _____

_____ Supporting (\$100 annually)

_____ Sustaining (\$50 annually)

_____ Family (\$20 annually)

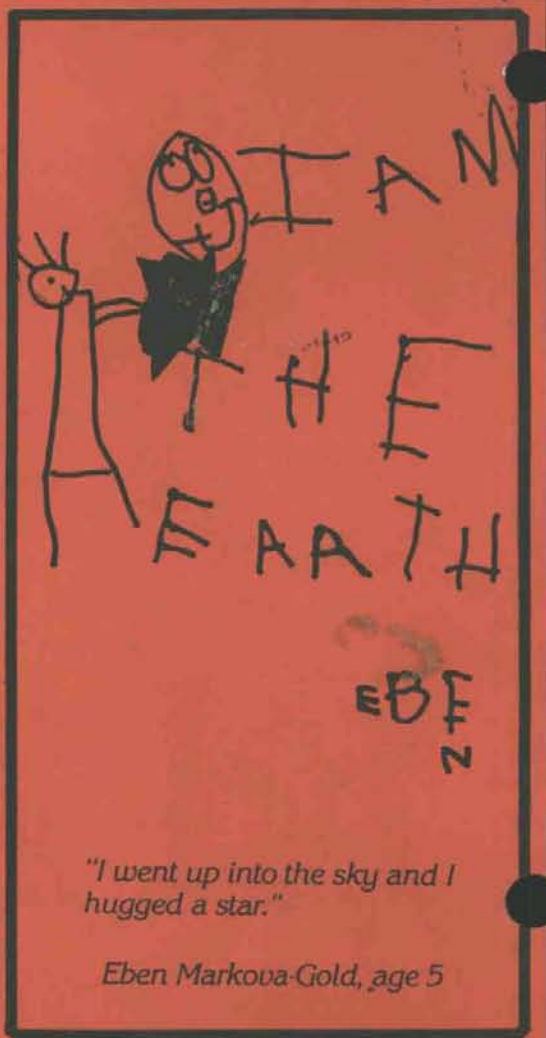
_____ Individual (\$15 annually)

_____ Student/Limited Income (\$6 annually)

_____ Business (\$25, \$50 or \$100 annually)

In addition to my annual dues, please accept my contribution of \$ _____

All contributions are tax-deductible.



Vermont Natural Resources Council

7 Main Street
Montpelier, VT 05602

Address Correction Requested

Non-Profit Org.
U.S. Postage
Paid
Montpelier, Vt.
Permit No. 285

MRS LEONARD WILSON

BOX 224
WAITSFIELD VT 05673