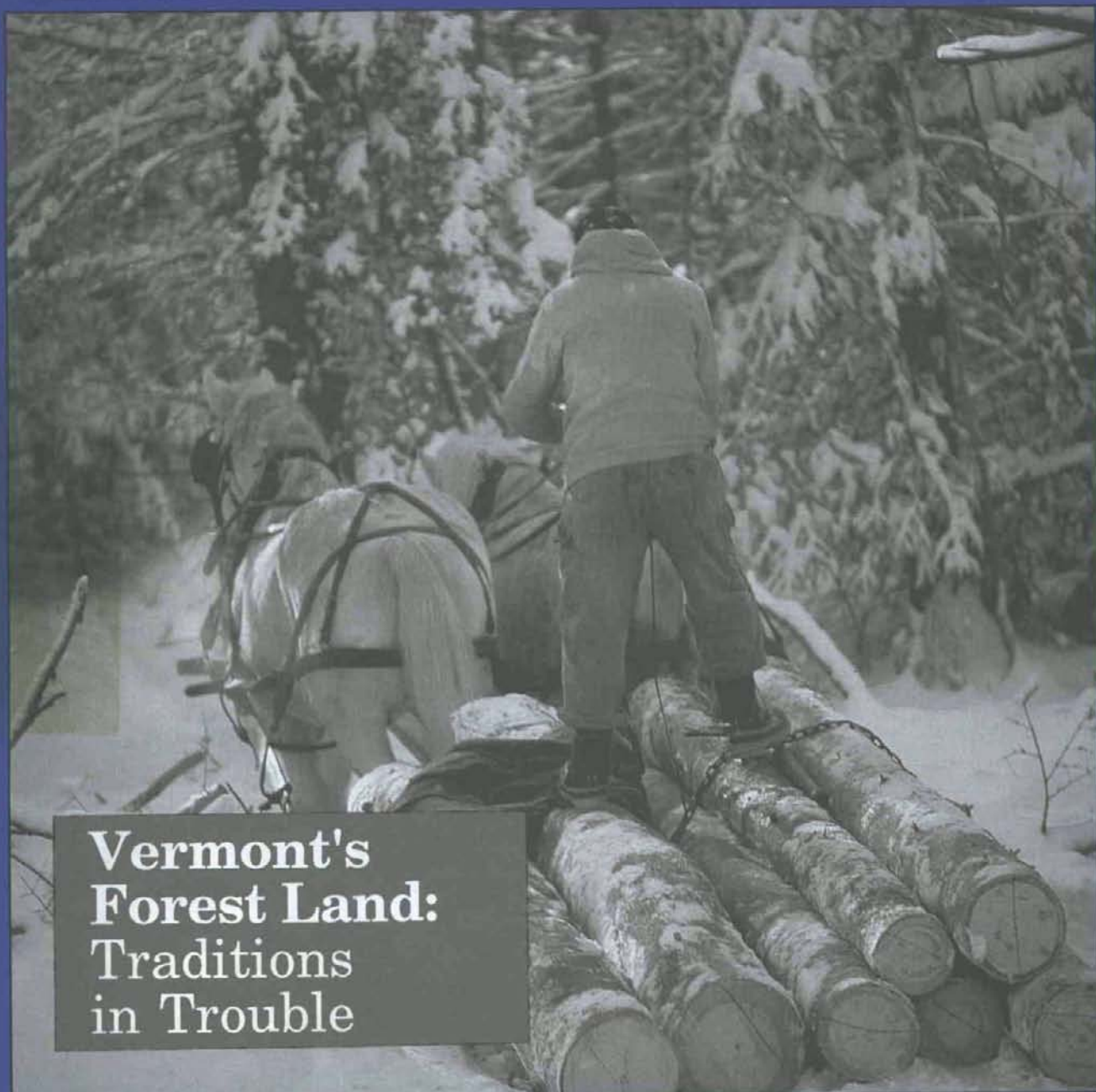


Vermont Environmental **REPORT**

Vermont Natural Resources Council

Volume 18, Number 4

Fall 1988/Winter 1989



**Vermont's
Forest Land:
Traditions
in Trouble**

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Vermont Environmental REPORT

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Vermont's Forest Land At Stake

The Forests of Essex County: The Spirit of the Northeast Kingdom 10

Huge tracts of forest land are the heart of Vermont's Northeast Kingdom; but market forces may take a dramatic toll on the traditional ownership patterns of the north woods. What is to come? By Brendan Whittaker.

Pardon Me—Is This A Land Rush? 14

A new federal study is analyzing forest ownership and use patterns, and alternative strategies for protection. By Ned Farquhar.

Geographical Information System—Computers Helping Planning 17

Funding for a computerized Geographical Information System (GIS) is an important component of Act 200, Vermont's new planning law. What is a GIS, and how will it help Vermonters? By Jay Appleton.

Impact Fees In Vermont: Does Everything Have Its Price? .. 21

Thanks to Act 200, impact fees may now be used by towns to help mitigate the effects of development. But is their use always appropriate? By Deb Brighton.

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Credits:

Cover photo by Richard W. Brown. Traditional New England forest activities such as logging may be endangered by new forest land ownership patterns.

Masthead design by Laughing Bear.



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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.

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FROM THE FRONT OFFICE

In the midst of wonderfully positive coalition-building and new channels of communication among traditionally antagonistic interest groups, differing perspectives still exist on recently enacted environmental laws. Although recent legislative successes have been tremendous, clouds of controversy concerning natural resources continue to swirl over Vermont.

Let me give you an example. For the last four years the Vermont legislature has deliberately and responsibly passed several dozen environmental bills designed to protect and manage Vermont's important water and land resources. With Governor Kunin's signature, the bills have become Vermont law.

But there is one further step which must be taken: crafting specific rules to implement laws. Therein lie the storm clouds.

Often the authors of the implementing rules do not have the benefit of having participated in the legislative process—a process in which much research, testimony and discussion occurs. The rule-making authors are simply reading the language in the law and trying to devise workable processes, including appropriate numerical standards, to carry out their mandate.

A missed connection between legislative intent and implementing language can mean the difference between good law being appropriately carried out, and good law being misinterpreted and poorly implemented.

VNRC staff, volunteers and members played an active role in seeing that these strong laws were passed. Now, VNRC is actively working on a number of rule-making issues, including indirect wastewater discharges and solid waste management. We hope that our new initiatives including our new environmental Action Center and outreach efforts will help to ensure that Vermont conservationists' concerns are heard just as clearly in the rule-making process as they were when we passed the laws. The point is that Vermonters need to pull together, not apart, in implementing the new laws.

On another matter, I will have moved on from VNRC by the time you read this. I do so with greatly mixed emotions. VNRC is a vibrant and important organization today, enjoying a renaissance of support and influence. The Board of Directors is involved, and the staff is top calibre. Leaving is difficult, but the opportunity to work in Washington as Vermont's Congressman Peter Smith's Legislative Director was an offer I decided to accept. I offer my thanks to you, the VNRC membership, for making VNRC the success that it is today.

I urge you to continue your generous moral and financial support of VNRC, just as I will in the years ahead.



Photo by Jon Gilbert Fox

Monty Fischer

R. Montgomery Fischer, Executive Director

Vermont's Energy Future

To the Editor,

I was pleased to see Paul Markowitz's article on energy efficiency in your Summer issue. I strongly agree that efficiency is "Vermont's Most Promising Power Source...."

We in the East are suffering the effects of acid rain because of decisions made far from us in the Midwest. We, in turn, are faced with a decision here in Vermont (as well as in Maine and New York) of whether to commit ourselves to the future purchase of billions of dollars worth of new Quebec power, and thus trigger Phase II of the already massive and destructive James Bay project. Worse, this would be another step toward Premier Bourassa's grandiose scheme to dam all the major rivers in the northern Quebec-Labrador wilderness, and ultimately to dam James Bay itself.

It was only through lengthy and costly litigation that Native People were able to get some compensation for flooded villages, for the destruction of their hunting territories, and for the roads which have brought so much disruption to their 5,000-year culture. How do we determine in dollars the cost of the loss of their land which is inseparable from their livelihood, cultural values, and spirituality? It's as if an alien culture took over Vermont, razed our churches, took our cars, looked with contempt at all of our cultural values, and left us natives with the most demeaning jobs.

I don't want to be an accomplice to more human rights violations or large-scale environmental damage in James Bay. If you want to take a stand, now is the time.... Write to Governor Kunin and George Sterzinger, head of the Public Service Board, both at 120 State St. Montpelier VT 05602. The alternative to recommend is energy efficiency and conservation as described in Mar-



kovitz's article!.... Also, if you write to me, I'll send you a petition for you and your friends to sign. Finally, look around your home and work place for ways to save energy....

If we no longer export the environmental impacts of our energy choices, we are more likely to choose responsibly.

Jim Higgins
RD 1 Box 730
Cambridge VT 05444

Believing In Your Product

Dear VNRC,

Although I have lived on Long Island for a great many years, I have owned a house in Peru, Vermont, for upwards of 25 years. I have followed your organization with a great interest and am most sympathetic to the majority of your objectives.

In this connection, I read Volume 18, the summer edition of your report, which included an interesting article by Leigh Seddon on photovoltaics. As I read the article I became more enthusiastic about the potential for the future of this energy source, but I was shocked to see at the conclusion of the article that the author is President of Solar Works of Vermont and Chair of your Energy Committee. I can think of no circumstance better guaranteed to destroy the credibility of the VNRC than having the Chair of its Energy Committee in the

"energy business." Additionally, how could you possibly entertain the thought that an article written on the potential of solar energy could be objective when it is authored by someone in the business of promoting solar energy?

Clarence Michalis
Locust Valley, New York

Seddon's twenty years of experience in environmental and energy work—as an author, advocate, entrepreneur, and consultant on photovoltaics to the Peace Corps and many other federal and private projects—make him an authoritative source for publicizing an important energy alternative.

I make no apologies for attempting to pass along Seddon's passion for his field—I hope it's contagious! Just in case, though, I checked with him to see if perchance his article had drummed up any business for Solar Works. No such luck. SC

Have You Climbed a National Natural Landmark Lately?

There are only 578 of them in the country, and Vermont's got one of the newest additions to the list; Mount Mansfield was officially dedicated this summer as a National Natural Landmark by the National Park Service.

Representatives from the University of Vermont, the State of Vermont and the Mount Mansfield Resort—three organizations that own portions of the mountain—were on hand at the summit to accept the award. "We hope that Mount Mansfield's selection will help encourage conservation of the area, and strengthen scientific and public understanding of the mountain," says Rick Paradis, UVM Natural Areas Manager. SC

An Action Center for Vermont's Environment

Action. Environmental action. That's what we hope you have come to expect from VNRC, and that's what we'll be able to deliver even more of starting in January, 1989 through our new VNRC environmental Action Center.

Through the generosity of a three-year grant from the Jessie B. Cox Charitable Trust, VNRC is hiring two new staff people who will be available to help members solve local planning and pollution problems. In fact, we've hired the first: Peg Elmer begins in January as our new Land Use Associate. She is formerly staff assistant to Natural Resources Secretary Jonathan Lash and staff member for the 1987 Governor's Commission on Vermont's Future.

A key goal of the Action Center will be to provide strong support for our members. For example, if Act 200 has sparked your interest in getting involved in your town planning process, the Action Center staff has considerable knowledge and energy that is available to you—all you have to do is call!

VNRC will also hire a water and solid waste specialist who will assist citizens in protecting local water resources and participating in solid waste planning.

"VNRC has worked for years toward the passage of strong environmental laws in Vermont," says VNRC Executive Director R. Montgomery Fischer. "Now we'll be able to help our members get these laws into action. I hope our new staff people get 500 calls a day," says Fischer.

Keep in mind that the staff will be available out of both our Main Office in Montpelier and our Southern Vermont Office in Manchester. Call us, and get VNRC's environmental Action Center working for you! NF



"SEE THEM WATCHDOGS? ALL THEY DO IS YIP. GOT NO BITE. KEEP POURING!"

Without strong regulation and enforcement, Vermont's environmental laws aren't worth much. VNRC's new environmental Action Center will

work with citizens to be sure that the new laws get the teeth they need.

Cartoon by Tim Newcomb, reprinted from the Montpelier Times Argus.

Looking to the Legislature: Budget, Enforcement, Property Tax Reform and More

The new Vermont Legislature now taking its place in Montpelier will face a broad array of environmental issues. Among VNRC's priorities for the session are:

- **A thorough review of environmental funding.** "We hope the Resources and Appropriations Committees of both houses will follow up on the past four years of environmental activism with some detailed budget work," says Ned Farquhar, VNRC's Associate Director and legislative lobbyist.

VNRC has been working with a coalition of Vermont environmental groups to put new attention on budget issues. As Governor Kunin put the final touches on the FY 90 budget proposal in December, VNRC and eight other groups signed onto a letter urging more funding for groundwater

research and mapping and environmental enforcement.

- **Environmental enforcement legislation** will be another high priority in the coming session. Currently Vermont law requires the Agency of Natural Resources and the Environmental Board to prosecute environmental permit violations through court action. If the Agency could by-pass the cumbersome court process in certain cases, and assess some environmental penalties administratively, faster and stronger enforcement would go a long way toward increasing compliance with Vermont's laws and permits, according to Environmental Board Chair Leonard Wilson and Environmental Conservation Commissioner Pat Parenteau.

A provision allowing citizens to take violators to court would be a desirable part of the legislation, according to Farquhar. "There have been several cases around Vermont where citizens have seen massive permit violations taking place and haven't been able to get the Agency or Attorney General to proceed with enforcement,"

Farquhar notes.

"Recognizing that legitimate business operators shouldn't be subjected to harassment or frivolous lawsuits, I hope that the environmental enforcement legislation will include some provision for citizens suits," states Farquhar. "This will increase the access of citizens to government, a Vermont tradition, and increase the disincentive for permit violations."

- **Property tax reform** was left out of Act 200, the 1988 planning law, because many towns objected to changing Vermont's existing property tax structure. But the unanimous recommendation of the Governor's Commission on Vermont's Future in 1987 remains a compelling statement of the need to address the link between property taxation and land use.

"Numerous development projects proposed see local support solely because they'll increase the tax base," says Seth Bongartz, VNRC's Southern Vermont Associate Director. "VNRC is involved in project review for the Bolton highway interchange, Salmon Hole resort development, and the Pyramid and Rutland Mall proposals and believes that these projects wouldn't be getting such serious consideration if the property tax enhancement incentive weren't there for local governments."

- With regard to **forest land protection**, VNRC argues that the legislature must begin to prepare for the possible sale of up to a million acres of privately owned large timber tracts around Vermont. "Are the acquisition priorities ready if these lands become available? Is there any funding together to buy massive forest land tracts? Not yet," says Farquhar.

- **Other issues** will also arise. VNRC will oppose changes to Act 200 unless they are clearly needed, and will take the same approach with any proposed amendments to Act 78, the existing solid waste law.

Packaging legislation, a process

for low-level radioactive waste storage site selection, merging of the Environmental and Water Resources Board, and control of erosion and sedimentation in Vermont rivers and lakes are also likely to be proposed this year. As it has been for twenty-five years, VNRC will continue to be present in the consideration and drafting of new environmental laws for Vermont. SC/NF

A Kinder, Wetter Nation (and Vermont!)

President Bush has committed to a new, aggressive policy of no-net-loss of the nation's wetlands, and industry groups nationwide are buying in on a new national wetlands policy that should lead to a wholesale reversal of the wetland conversion trend of recent decades. These steps are encouraging—especially in view of Vermont's implementation of a 1986 law requiring strong protection of our significant wetlands.

Vermont hasn't lost a large percentage of its wetlands yet. Today about 3.7% of the state is included in National Wetland Inventory maps prepared by the U.S. Fish and Wildlife Service from aerial photographs. As the rule-making process to implement our 1986 law begins, Vermont is in a strong position to protect a large portion of our original fresh water wetlands.

Under the 1986 law, the Vermont Water Resources Board will adopt wetlands rules to be administered by the Agency of Natural Resources (ANR). The Agency provided the Board with its draft proposal in September; it appears now that the Board will issue its own "pre-publication" draft for public review and consideration in late January or February.

ANR's proposal was especially strong in one respect: it presumed

that any wetland shown on the national maps would qualify as "significant"—and therefore deserving the protections provided under the Vermont law. It also provided for a fair process for deciding whether wetlands should be designated or undesignated as "significant," depending on their performance of ecological functions delineated in the law.

In reviewing the ANR draft proposal over recent months, members of the Water Resources Board have expressed some concern about the Agency's proposed approach. Vermont Environmental Commissioner Patrick Parenteau met with the Board in December, bringing along national wetlands expert Jon Kusler to help answer some of the Board's questions. According to Kusler, the Agency's proposal is "in the mainstream" of state wetland laws nationally, and contains due process provisions that should protect against challenges on constitutional grounds.

The protection of our wetlands is vital to Vermont's water quality, ecological health and diversity, and aesthetics. The Water Board's course of action on the rules implementing the 1986 law will be one of the most important policy actions of the decade. NF

Solid Waste Planning for Vermont

In 1987 the Vermont legislature adopted a new law emphasizing waste stream reduction and recycling over traditional solid waste management alternatives such as landfilling and incineration.

The 1987 law is one of the most progressive in the country, reflecting Vermonters' long-term concern for their environment. But until the law is implemented in a state-wide plan that will

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guide local solid waste district planning, its effect will be indirect at best.

At this writing a draft of the plan, prepared by the Agency of Natural Resources, has been brought before the Legislative Committee on Administrative Rules for its endorsement. In testimony before the Committee, VNRC Associate Director Ned Farquhar pointed out that Vermonters, including VNRC members and the waste districts themselves, urgently need the targets and guidelines for waste stream reduction and recycling included in the plan.

Partly as a result of VNRC's testimony and comments on earlier Agency drafts, the plan now includes some minimal siting criteria for solid waste facilities to protect water quality and other natural resources. "Although these criteria could be much stronger, they serve as an acceptable bottom line for en-

vironmental protection," says Farquhar. "At the local level, Vermonters should keep in mind that stricter limits may be needed for some types of facilities."

Approval of the plan by the legislative committee is not technically required, but failure of the Committee to endorse the proposed plan would force legal burdens onto the Agency in any eventual court challenge. SC/NF

Pyramid Mall: The Shifting Sands

The proposal for a massive mall in Williston, so familiar to opponents who turned back a similar proposal some ten years ago, is about to be reviewed by the District 4 Environmental Commission.

VNRC is working with local residents to oppose the mall and has received party status in Act 250 proceedings. "Unquestionably, this is a project with unacceptable county- and state-wide impacts," says Ned Farquhar, VNRC Associate Director. "It was an inappropriate proposal ten years ago, and it hasn't improved much. To allow this kind of growth is to create new growth magnets, pollution, and costs—in defiance of the planning principles adopted by the Legislature last year," says Farquhar.

One of the most serious environmental concerns about the proposal relates to protection of air quality. Clearly there is a limit to the amount of air pollution that can be accommodated in a developing area; in Pyramid's case, development of a major regional mall would attract thousands of new drivers to Williston every day.

In August, concerned by the growing number of projects waiting in line for air pollution permits in Burlington's suburbs, the Agency of Natural Resources denied Pyramid's application for an air quality permit. Based on its own air quality models Pyramid is now attempting to prove that the air can take a new load of pollution.

Mall proponents recently went on the attack, purchasing space for a full-page ad in the *Burlington Free Press* to deny impacts and problems expected by opponents. The ad, which cost around \$2700, was a curious example of the tactics of the development advocates. "We'd like to see them addressing the issues before the Commission, not waging a public relations campaign," says Farquhar. "I hope that the developers will present their strongest case in the established forum, right now, and not wait for some later appeal."

VNRC has applied for party status in the hearings for a mall of equally massive proportions recently proposed in the Rutland area by Finard-Zamias developers.

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VNRC Southern Vermont Associate Director Seth Bongartz has pointed out the possibility of new growth and pollution resulting from the mall. "VNRC has a twenty-five year commitment to environmental protection in Vermont," says Bongartz. "We have to get involved in the review of these mega-projects at the earliest level, even though the costs of involvement are very high." SC/NF

Local Governments and Conservationists—Working Together

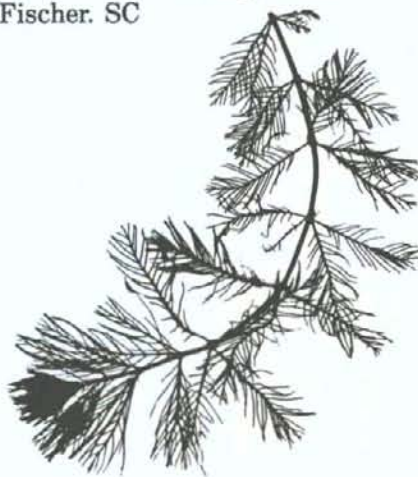
Most Vermont towns have a strong concern for environmental issues, and the majority of Vermont town officials that work with conservation organizations are pleased with the cooperative efforts. Many towns, however, are not aware of the services that conservation groups have to offer. These are some of the conclusions of a study conducted this summer by Vermont municipal and conservation groups.

Organized by the Vermont League of Cities and Towns (an organization representing Vermont municipal officials), the study was co-sponsored by VNRC, the Vermont Land Trust, the U.S. Forest Service, and the Quebec Labrador Foundation. The study included the distribution of questionnaires, as well as a series of interviews with municipal officials.

"Many of the municipalities and a number of the [conservation] groups interviewed have similar interests in managing growth," concludes study coordinator Joss Besse in his findings. "Local officials should make an effort to contact these groups when planning strategies for managing growth."

"We are pleased that the study shows so many towns interested

in planning and conservation issues," notes VNRC Executive Director R. Montgomery Fischer, "and we will help municipalities in any way we can. VNRC's new environmental Action Center staff will increase VNRC's education efforts tremendously," adds Fischer. SC



Lake Bomoseen: Foiled by Milfoil

Would drawing down the water level of Lake Bomoseen help curb the infestation of the aquatic weed Eurasian milfoil? According to the study commissioned by the Vermont Agency of Natural Resources, the drawdown ordered by the Vermont legislature could actually accomplish the opposite result. Ironically, the lowered water level could eliminate much of the ecological diversity in the lake and allow the milfoil to opportunize areas of the lake previously kept in check by other plant populations.

In early September, as the Bomoseen drawdown grew near, VNRC sought an injunction in both state and federal courts in an attempt to halt the process. "We were and continue to be concerned by the establishment of a dangerous precedent," says VNRC Southern Vermont Associate Director Seth Bongartz. "The drawdown could do irrevocable harm to the ecology of the lake. It is vital to increase public awareness about the environmental consequences of this and other proposed drawdowns."

"In this educational aspect, at least, we succeeded," notes Bongartz. "But we knew from the start that we were getting involved in a no-win situation, since the legislation was so extremely clear and recently authorized." Although VNRC succeeded in interrupting the drawdown for a few days, ultimately the drawdown occurred.

"Eurasian milfoil is a very real problem, and it requires attention," says Bongartz. "But we need a thoughtful response, not a series of legislative attempts at micro-management of lake ecosystems."

"We encourage the 1989 legislature to appropriate adequate money to study the Eurasian milfoil problem in Vermont lakes, and to call for a comprehensive report on the subject," says Bongartz. "And we strongly urge leaders to prohibit the authorization of new drawdowns or other scientifically questionable milfoil control measures until the studies are submitted to the legislature for review." MM

Salmon Hole—A Fish Out of Water

What's a \$100 million, 1,480-acre condominium resort proposal doing in Stratton and Jamaica, Vermont? Many southern Vermont residents are asking the same thing, but answers are not quickly forthcoming in the Salmon Hole resort case.

The members-only luxury resort proposal, a project of the Connecticut-based Richard Roberts Group and the Cavendish Partnership of Ludlow, remained in limbo this fall as developers attempted to answer key questions about water supply, sewage treatment, wildlife habitat, traffic, sprawl, and more. (See "VNRC Dives Into Salmon Hole Resort Proposal," *V.E.R.* Summer 1988).

VNRC was granted party sta-

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tus this summer under Act 250, Vermont's land use management law; as a party, VNRC can offer evidence, cross-examine witnesses and appeal a decision if necessary. VNRC has hired an attorney as well as four technical advisors who are now examining the potential effects of the project in such areas as water quality, wetlands and wildlife habitat, traffic, affordable housing and the secondary impacts of sprawl likely to be triggered in Jamaica and adjacent rural communities.

In October the VNRC team made one of several visits to the as-yet-undeveloped Salmon Hole site. "During the course of the day we walked the area proposed for the septage spray field," recalls VNRC Southern Vermont Associate Director Seth Bongartz. "As we stopped at a test pit we looked up to see a beech tree with bear claw marks going all the way up the trunk to the bear's resting place in branches twenty-five feet in the air."

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"Later as we walked the site proposed for the eighteen-hole golf course we skirted wetlands scheduled to be drained and turned into fairway," notes Bongartz. "And to get from the little village of Jamaica to the Salmon Hole site we drove a small country road that would have its traffic increased by 1,000%. Mostly, we were simply struck once again by the degree to which this proposal is inappropriate for rural Vermont," he says.

VNRC Southern Vermont Office staff, working closely with an attorney and the technical consulting team, will be analyzing data as it becomes available and preparing for the renewed proceedings. The case is expected to resume in early 1989. SB/SC

State Discharge Rules Expected

The Vermont Agency of Natural Resources has prepared a pre-publication draft of possible rules to implement changes in the state's water quality laws as they pertain to indirect discharges of wastes.

The rules' primary effect will be to guide waste treatment and disposal at Vermont ski areas, including attendant residential and resort development.

The scale of ski area growth in recent decades leaves many Ver-

monsters concerned. "At this time we don't have nearly enough knowledge of what is happening ecologically as a result of this development," says VNRC Associate Director Ned Farquhar. "That is why the legislature amended the law to incorporate extremely high standards of protection for our sensitive upper elevation environment."

The draft rules appear to fall short of meeting these standards, Farquhar says. VNRC is currently working with other groups including the Environmental Law Foundation, the Connecticut River Watershed Council, and the Lake Champlain Committee, to make recommendations to the Agency.

"It's safe to say that some of our upper elevation basins and headwaters are already overloaded," Farquhar says. "How much can they take? Can we be sure that we'll be able to tell when we are reaching the peak point where existing or further development might actually be unacceptable under our water quality laws?"

"Some ski areas other ski-related developers want to expand. But they shouldn't be allowed to do so at the expense of the natural environment," Farquhar says. "VNRC will insist that the rules carry out the law's requirement for 'clear and convincing evidence' that proposed waste systems will not result in 'significant alteration of aquatic biota,'" says Farquhar.

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The impending battle over rules to implement the indirect discharge law indicates a whole new realm of work and business for VNRC. "We pushed hard for strong environmental laws in recent years," notes R. Montgomery Fischer, VNRC's Executive Director. "It will be just as much work making sure that the laws are carried out with maximum effect in the short term." SC/NF

The Battenkill: An Outstanding Resource

Southern Vermont conservationists are spearheading a drive to designate a key scenic fishing river in southern Vermont as Vermont's first Outstanding Resource Water (ORW).

In 1987, the Vermont legislature created the ORW option. "The designation recognized waters which have exceptional natural, recreational, cultural or scenic value," says VNRC Southern Vermont Associate Director Seth Bongartz.

Joining in the effort with VNRC's Southern Vermont Office are the southwestern Vermont chapter of Trout Unlimited and the Battenkill Conservancy. The three groups, along with dozens of area residents, met on the banks of the Battenkill in Sunderland early this winter to kick off the petition drive for designation.

"The law requires that we collect thirty signatures and present them to the Vermont Water Resources Board, so that they can begin hearings and discussion on the potential ORW designation," notes Bongartz. "We collected the thirty signatures in the first ten minutes. Now we plan to prove the popularity of the river by collecting fifty times that number."

"If the designation effort is successful, an ORW classification would help curtail inappropriate hydroelectric development and

streambed/streamflow alterations on the Battenkill, and reduce the amount of gravel that can be extracted from the river. And just as importantly," notes Bongartz, "the designation would send the message to state and local officials that we appreciate the Battenkill—and that it should be respected." MM

Town Conservation Commissions—The Seeds of Vermont's Future

"Sometimes you wonder whether one person can make a difference," notes Virginia Scharf. "That's what's most exciting to me about the conservation commission concept: it only takes one person to start a commission—which can then grow into the town's focal point for conservation interests."

Virginia Scharf and her husband Craig, with support from UVM Professor Carl Reidel and VNRC, recently received a Ben and Jerry's grant that will fund the promotion of conservation commissions across the state.

These volunteer commissions, which towns can create through the Town Meeting process, may care for town natural resources in a variety of ways. Projects can include natural resource inventories, conservation education, receiving gifts of land, assist planning commissions and more. Although Vermont legislation allowing conservation commissions was passed in 1977, few towns have taken advantage of the law. With the help of the grant, however, the Scharfs are working to change this.

One hundred people, representing over thirty-five towns, attended a workshop in November designed by the Scharfs to give people the tools to begin and run a commission. Funding allowing, the Scharfs plan another workshop later this year. And the Scharfs also created a Town Con-

servation Commission packet with background information and project ideas.

"Vermonters are actively looking for responsible, thoughtful ways to deal with development pressures," says Scharf, "and conservation commissions are a powerful tool whose time has come." For a Town Conservation Commission information packet, write Virginia and Craig Scharf, HC 32 Box 36, Adamant VT 05640, or contact VNRC. SC

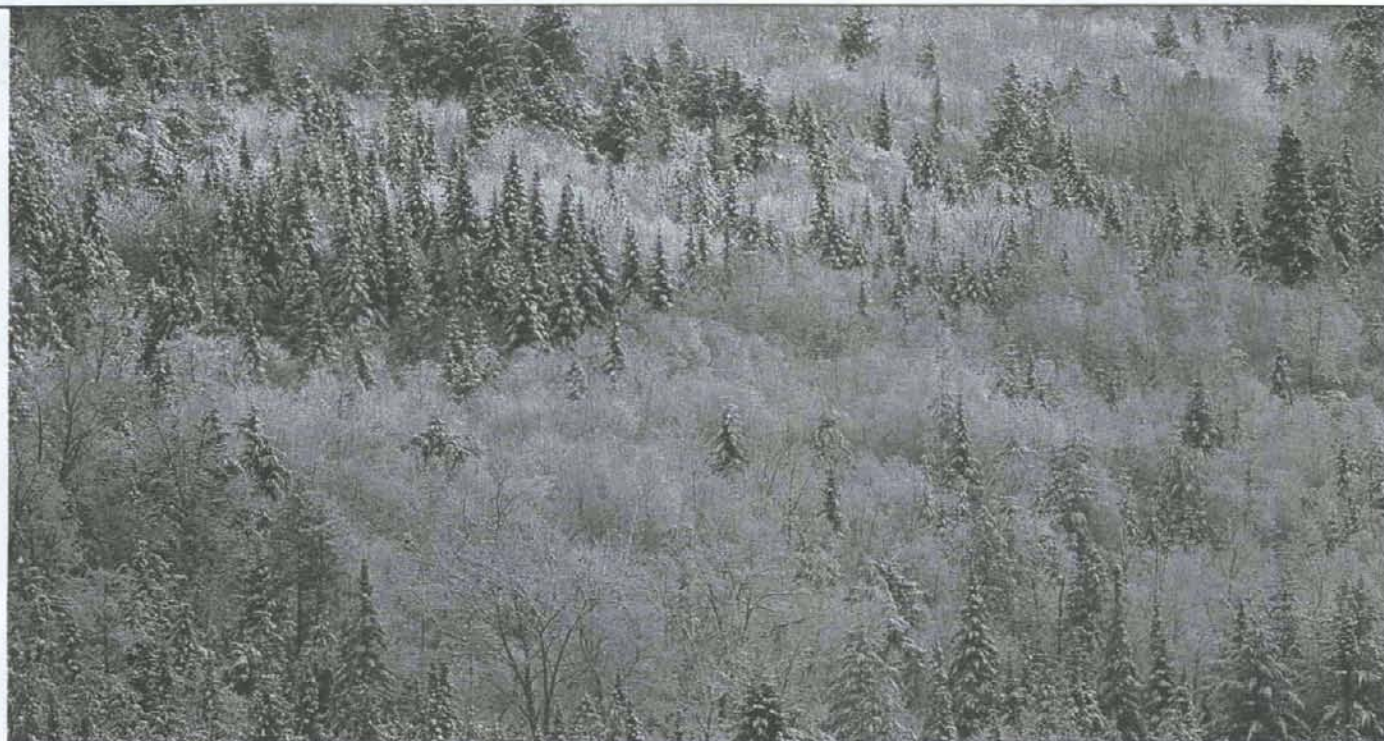
A Proliferation of Highways

Represented by Lewis Milford, Vermont staff attorney for the Conservation Law Foundation of New England (CLF), VNRC has been participating in the Act 250 project review for a proposed interstate highway interchange to serve the town and ski area at Bolton.

Milford has brought attention to the need for a federal Environmental Impact Statement (EIS) to address the growth and development impacts of the proposed interchange. The Agency of Transportation recently stalled the Act 250 process, requesting an indefinite delay pending review of the need for an EIS.

Given shortfalls in the state Transportation Fund and the attitude of many Vermonters toward the \$2 million "skiers' exit" on I-89, the action by VNRC and CLF appears to have been timely.

Milford also represented CLF in recent Act 250 proceedings for the proposed Chittenden County Circumferential Highway. His advocacy of a trust fund for agricultural land protection resulted in a landmark decision to provide for a new trust fund to address such "secondary" impacts of highway construction as conversion of prime ag lands. This decision may be appealed, and VNRC will continue to keep its members posted on the status of the issue. NF



The Forests of Essex County:

Drive east out of St. Johnsbury along U.S. Route 2. Three miles from Concord Village at the turn for "Victory, Gallups Mills, Granby," stop and look. The plot of land northeast of Route 2 and the Victory Road is the beginning of a different kind of historic land use in Vermont.

With your right arm, point east along Route 2 and imagine traveling to Bangor, Maine, where Route 2 ends, and from here easterly along the Atlantic shore to Eastport. With your left arm point north toward the Quebec border along the Victory-Granby Road. You are at the apex of a huge, roughly outlined triangle of woodlands: the northern New England paper company ownerships.

To picture the vast size of this land, keep in mind that the forests stretch, almost uninterrupted, far to the east until they break out into the potato fields (and more recently, broccoli plantings) of Aroostook County, Maine. Recall that from Route 2 north to the Quebec border, there never were many farms, settlements or small land holdings; the traditional New England images of stone walls, white Congrega-

By Brendan Whittaker

tional churches and covered bridges lie mainly to the south-east, south, and west of where you stand.

Note that ahead to the northeast lie stretches of woodland of twenty, thirty, even fifty miles or more with no paved state or town highways—only private logging roads. The next U.S. interstate highway in this direction, the Maine Turnpike, is over 250 miles away.

Finally, remember that from this junction, you will soon will be leaving Vermont behind as you cross the Connecticut River heading east through New Hampshire. Thus, Essex County is the only share Vermont has in this forested, still quite wild region of paper company land.

Essex—County of the Kingdom

Among Vermont's fourteen counties, Essex is unique in a number of ways. First, its geographical position relative to the rest of Vermont: Essex is east! A

sweeping bend of the Connecticut River causes Vermont to jut so far east that a map line drawn due south from the easternmost part of Vermont will pass near the center of New Hampshire and on to Worcester, Massachusetts, considered a part of the Bay State's eastern region.

Then there is topography: thin soils, bogs, and glacial boulders—millions of boulders, from fist-size to modest-house girth scattered through the woods. Geologists describe the Essex Uplands as properly belonging to the White Mountain Region of New Hampshire rather than the Green Mountain ranges. Timber types—mainly spruce and balsam fir—are northern. Moose and black bear populate the area, along with truly northern bird species such as the boreal chickadee, grey jay and the rare spruce grouse.

Farms are few and mainly confined to the Connecticut Valley intervales. The rest of the region is forest, huge stretches of it by New England standards. Solid stands of trees are interspersed with bogs, beaver holes, streams, small ponds and occasionally lakes.

The contrast with the rest of Vermont is strong and quite abrupt. Just over the Essex-Orleans county line, the soils deepen, and farm after dairy farm appear toward Derby and Newport. Similarly, in Caledonia County at St. Johnsbury, red oak appears. Here, a forester would be more impressed by the quality of the ash and sugar maples, due to Caledonia County's deeper soils.

But the trait peculiar to Essex County that will play the most critical role in its future is the human factor: much of the land is owned in huge single-ownership blocks by the paper industry. That fact, which has been true since the beginning of this century, may be about to change. Something very stable in northern New England appears to be shifting. What is to come?

From Logs and Pulpwood To...

The stability of the Northeast Kingdom over the past century can be traced to the region's primary land use: logging.

Essex County's first loggers worked with the long logs—spruce and white pine exclusively

in the beginning. Loggers recall their grandfathers' stories of sixteen-foot spruce butt logs, twenty and thirty inches in diameter, bought by the companies on the banks of the Connecticut at four dollars per thousand board feet. (Today at the local mills they would be worth \$200 or more.) These Essex County logs were driven down the Connecticut River, and the lumber sawn from them still stands in countless homes, tenements, factories and farm buildings all over southern New England.

Then came the paper industry, logging the northeast for writing paper, household tissue, box board liner, glossy brochure paper, stock for the Sears and Roebuck catalog, and for the Bell Telephone "Yellow Pages" of yesteryear. Just about everything in paper except possibly newsprint has, at one time or another, been made from Essex County pulpwood.

Paper mills themselves are huge industrial complexes, among the largest heavy manufacturing

centers left in New England's service/high-tech economy. New England mills include James River at Groveton and Berlin, N.H., International Paper at Jay, Maine and Ticonderoga, NY, Boise Cascade at Rumford, Maine, and the mighty Great Northern Paper mills at Millinocket, Maine.

Unlike the private land ownership history of the Adirondacks, New England's paper company tradition has been to maintain land as open and available for hunting, fishing, trapping, camping and other outdoor activities. (Snowmobiles have been welcomed too, but interestingly, the companies in recent times have generally banned ATV's). Leases for "camps" have been easily and, until recently, inexpensively obtained, traditionally by employees of the mills and assorted local folk—business people, doctors, railroad workers.

Essex County land ownership has long been dominated by the former St. Regis Paper Company, now Champion-International. Champion owns about 140,000 acres in Essex County, acquired years ago from the former logging and river-driving companies.

Photos by Richard W. Brown

The Spirit of the Northeast Kingdom



The Champion holdings include the bulk of the Essex County's northern interior, including entire towns such as Lewis, VT—towns with few or no full-time human inhabitants, but plenty of moose, and black flies in season. (In my own Connecticut River town of Brunswick, population 65, Champion owns about 50% of the town's total area of 16,000 acres.)

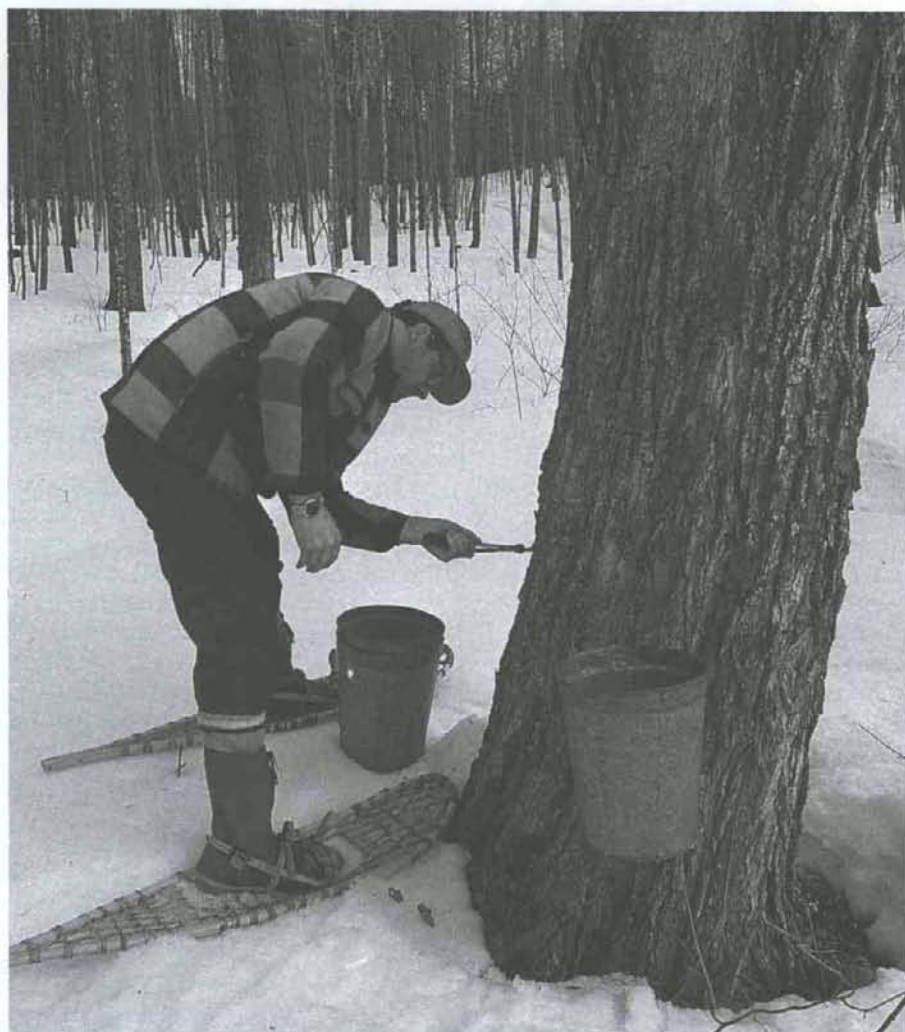
Changing Hands

Predictions about changes in the paper industry and its New England land holdings have been made for some time now. The U.S. paper industry, along with so many of its fellow heavy-industry relatives, has seen foreign competition, corporate takeovers, a driving need for profits in an intense world market situation, and an increase in the rate of sheer change. Some companies have been raided in take-overs and seen asset-stripping for junk-bond collateral.

Some New England firms are determining that they do not need to own large stands of timber. They will risk purchasing their raw material on the open market, thus saving fixed costs in forest protection, management overhead, and land taxes. Although these ideas had been brewing in northern New England for about ten years, the summer of 1988 still brought a shock, when over 90,000 acres of former Diamond International Corporation lands in Coos County, N.H. and Essex County, VT went on the market—"option to buy, cash down on the table." And that offer was taken, not by another paper company, as had been predicted confidently by many, but by a developer.

New Hampshire swung into action (or reaction), and some 45,000 acres, including the key scenic areas of the Percy Peaks and Nash Stream in central Coos County, will end up as public lands.

Back in Vermont's own Essex County there are changes too. The old St. Regis Corporation's name is gone, subsumed in the Champion-International Company.



That firm now owns the former St. Regis acreage (and is selling some too—for example all of the St. Regis lands in Canaan, VT, some 2,000 acres.)

Rumors abound, as usual based on few facts and much speculation, about the future of Essex County's Champion lands, and also the Essex County ownerships of such firms as Boise Cascade, James River, and International Paper. One basic fact is indisputable: the timber production value of Essex County lands is rapidly becoming outweighed by their value as "amenity lands."

One local forester of long experience whose firm had Florida timberlands thirty years ago put it this way: "One day in Florida we had productive company timberland; overnight it changed due to the Florida boom and became 'real estate.' Forestry went out of business." What, then, does the future hold for Essex County?

Northeast Kingdom National Forest and Park?

Periodically, Essex County gets "discovered" by outsiders, and there comes a flush of publicity and ideas about what to do about this most northeasterly corner of the Northeast Kingdom. Everything from wilderness area to national park and national forest has been proposed at one time or another. The last serious national park proposal was in the early 1960's when Vermont Senator George Aiken secured a U.S. Park Service preliminary feasibility study. That concept relied heavily on impounding the Moose River at Victory, however, drowning Victory Bog in a lake that was then to have attracted motorboats, fishermen, water-skiers and the like. Vermont's Fish and Game Department subsequently bought

Victory Bog, and the dam idea quickly lost favor.

Now, with the possibility of a change in paper company ownership, what does good public policy require? First, Vermonters ought to look at what Essex County really is today – not romanticize it on the one hand, nor ignore it on the other.

Clearly, it is not a trackless wilderness; paper company truck roads extend all through the interior and are being constantly upgraded and extended. Most of the streams of any consequence have been bridged with sophisticated structures, including concrete abutments and steel bridge-beams. Areas have been clear-cut, either to curb spruce budworm, prevent blowdowns resulting from the thin soils, or to feed today's massive logging equipment. The recently-completed Quebec-U.S. powerline, presently carrying 690 megawatts of James Bay

hydropower, traverses the entire length of the county, 52.3 miles. Although the county still contains stretches of forest that are quite vast (by New England standards), it is by no means an untamed boreal jungle.

Second, in addition to taking stock of the trees, bears, moose and Canada lynx, it is essential to consider the human resources of the county as well. Some six thousand people live here. Some earn livings here as well – everything from government work (teaching, working for the state or the federal Border Patrol and Immigration Services), to farming, to, of course, the still-dominant woods industry. Others commute, mainly to Coos, Orleans, and Caledonia Counties. Residents are generally very self-reliant and used to "making do" in this most rural area with its relatively low wage scale. Their ideas and desires on the county's

future are invaluable.

Finally, we must encourage the retention of large-block forestland ownerships, as intact as possible, and augmented where feasible. If paper companies such as Champion and IP choose to retain the lands and grow timber, it must be remembered that generally this use has been quite beneficial for all of us: it has provided relatively open access for outdoor recreation, essential jobs for the county economy, and vital open space in the urbanizing northeast.

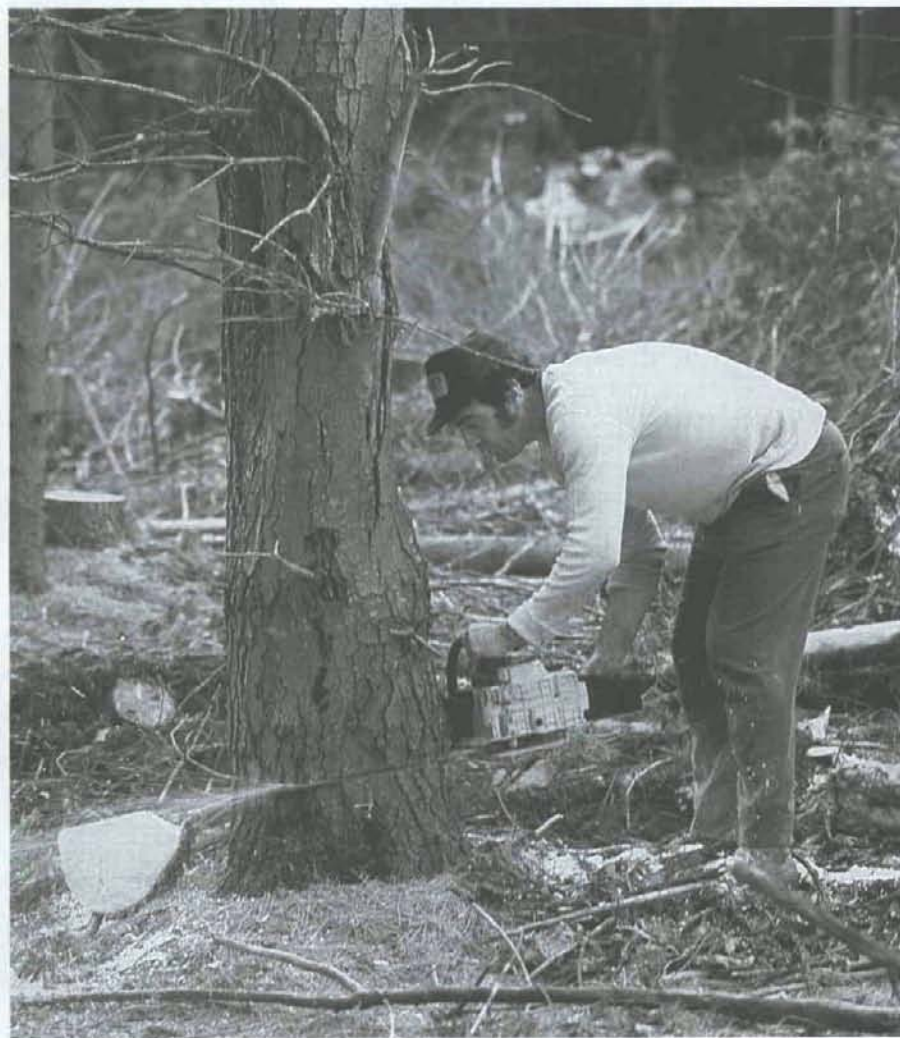
But what if the Essex County large-block holdings are to be dumped, or checkerboard-subdivided, for the first time in history? What if they are to become become pawns in high-roller take-over bids by absentee raiders? What if the Essex County annual harvests begin to exceed radically the annual growth increments – in other words, the owners opt for rapid liquidation of the timber resource – a "cut and get out" philosophy? Then I maintain that government, representing all of us, has an obligation to intervene, even as both state and federal government has in New Hampshire's Diamond lands transaction.

Options for Ownership

The Essex County interior lands, it can be argued, would make an excellent addition to the National Forest System. There would be room on an "Northeast Kingdom Ranger District" for true multiple-use: timber harvest areas, some true wilderness, protected deer and moose winter yards, and other wildlife areas, and all sorts of outdoor recreation. With modern computer communications, the "NEK Ranger District" could very easily be added to the Green Mountain National Forest, with its headquarters still in Rutland, and with the new Ranger District Office perhaps in St. Johnsbury, Island Pond, or Guildhall.

It is also possible that an entirely new way of owning and

(Continued p. 16.)



Carl Reidel, forester and Director of the Environmental Program at the University of Vermont, says it reminds him of the story about the Vermont old-timer who is asked if there's any land for sale in the area. The Vermonter responds, "It's *all* for sale, son—at the right price."

If we can judge by this summer's experience, we might be seeing the first signs of a land frenzy starting up in New England. The sale of 90,000 acres of

"New England may look the same, but all the rules have changed."

Carl Reidel, Governors' Task Force on Northern Forest Lands

forest land in Vermont, New Hampshire, Maine and New York—land owned by Diamond International Paper Co. and brokered by a New Hampshire real estate developer—might have signalled the beginning of a new era. At the very least, it indicates instability in our current forest land ownership patterns.

The Federal Response

Fortunately there is a response developing as well. This year's federal budget includes \$250,000 for a U.S. Forest Service study of the northern forest lands of Maine, New Hampshire, Vermont, and New York. In Vermont the study is focused on large timber tracts north of Route 2, including the largest of them all: A 140,000-acre tract owned by Champion International in Essex County.

The Northern Forest Lands Study was funded after U.S. Sen. Patrick Leahy (VT) and Sen. Warren Rudman (NH) heard about this summer's Diamond land sale. The study is headed by Stephen C. Harper, familiar with Vermont's forest products industry, recreation, and habitat needs from his years of experience as

Forest Supervisor of the Green Mountain National Forest.

To be presented to Congress in the fall of 1989, the study will analyze forest resource values including timber, fish and wildlife, lakes and rivers, and recreation, on large forested tracts in the 32 million-acre study area. Harper is directed to look at land ownership patterns and trends, the potential impacts of changing land ownership, and alternative strategies to protect the long-term integrity and traditional uses of the northern forest lands.

"It is clear that development pressures throughout the region are raising land values so that now, much of the land in question is worth more than you can afford to pay if you're simply using it for timber production," says Harper.

"Every landowner is different—some are concerned about income from the land, some with retaining control of a wood supply," notes Harper. "But many of the timber companies are now owned by multi-national corporations from Connecticut or France or who-knows where, and their lands are treated as assets. Given current market conditions, they're likely to sell."

State Responses

Harper is advised by a working group of experts from the four affected states. Independent of the congressional study, the governors of Maine, New Hampshire, Vermont, and New York have appointed their own Governors' Task Force on the forest lands which will look at state strategies

Pardon Me —



Richard W. Brown

Is This A Land Rush?

By Ned Farquhar

for protecting forest resource values and assist in the Harper study.

Vermont's delegates to the Governor's Task Force are UVM's Carl Reidel; Mollie Beattie, Commissioner of Forests, Parks and Recreation; and Peter Meyer, a land manager with broad exposure to Vermont forest land issues.

As Forestry Commissioner, Beattie is working closely with Vermont forest land owners to assure them of the state's interest in maintaining a viable timber economy and private ownership of productive forest lands. She helped negotiate a strong deal for about 7,000 acres near Victory Bog this summer in the Diamond International sale.

Task Force members note that sorting out citizens' needs under changing market conditions is a challenge. "When we ask people for a vision of the region's forest future, we've heard, 'Things have been fine the way they are—why do we have to do anything?'" says Reidel. "But the economic climate has seen a dramatic shift. Although New England may still look the same, all the rules have changed. This means that in order to retain the characteristics we value the most, we will have to take action."

What Should Vermont Do?

When it comes to protecting forest lands in Vermont, there is a broad conservation constituency. Users include the people whose jobs depend on the renewable timber resource values on the lands; people who hunt and fish, snowmobile, hike, ski, and picnic; people who value wildlife and habitat; and others who are concerned about protecting Vermont's characteristic working rural land uses.

"This summer's frantic effort to scratch up funding for the acquisition of the 7,000-acre Victory Bog parcel simply can't be duplicated in the future," notes VNRC Executive Director R. Montgomery Fischer. "We can not count on Vermont's Housing and

Conservation Trust Fund, with conservation funding that might amount to only a couple of million dollars annually, to cover such potentially massive pur-

Fortunately, this year's federal budget includes \$250,000 for a U.S. Forest Service study of the northern forest lands of Maine, New Hampshire, Vermont and New York.

chases. And there haven't been legislative appropriations or other funds made available for meaningful levels of forest land acquisition."

Concerted funding campaigns have been organized in other northeastern states to provide for

forest land and open space acquisition, Fischer notes. Bond issues and large appropriations have allowed for long-term forest protection at the state and local level. "Has the time arrived for Vermont to consider such a funding campaign?" asks Fischer. "Should we buy now, before the land rush, or later, when we can pay higher for a more threatened resource? These are the kinds of questions we need to act on immediately."

The Council argues that the Governor and Legislature should be putting together a long-term strategy for: protecting private ownership and use of working forest lands; identifying potential acquisition priorities across Vermont in cases where private ownership won't work (especially in the southern part of the state not included in the Harper study); and funding a stable forest land acquisition program.

How Vermonters Can Help: Suggestions for Action

- Participate in the Northern Forest Lands Study. The study will include many opportunities for public involvement. You can get on the mailing list for information about the study by contacting Northern Forest Lands Study, PO Box 520, Rutland VT 05701, telephone (802) 773-2133.

- Get ready for Town Meeting. Municipalities may urge the state through town meeting resolutions to make forest land protection a high priority. Call your town clerk and prepare to warn the issue in January for your March meeting. In a resolution for the town's consideration, stress the value of open, working forest land in your community and ask the state to work on setting a protection policy, identifying key parcels, and creating stable funding for land acquisition. For more information on Town Meeting resolutions, contact VNRC.

- Communicate your views to legislators and the Governor.

They need to know you're interested in solving the problems *before* a land rush occurs.

- Be sure that your town plan reflects forest priorities. A town that wants to preserve its working landscape has very right to channel sewer and road investments into growth areas rather than working forest land, and also can use zoning to limit settlement.

- Keep tabs on your local situation. Where are the best lands in your area, and what are their owners' plans? Are the lands enrolled in the Use Value Appraisal program, so that they receive a property tax preference? You can be an important information source in the future.

- Join private land protection efforts. National, state, and local land trusts are there to help! They've been extraordinarily influential and helpful in protecting some important parts of Vermont. NF

Conserving Vermont's Natural Resources:

*A land ethic for
today and
tomorrow.*



James E. Wilkinson, Jr.

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Photo: Sandy Millers

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(Continued from p. 13.)

managing the lands may present itself. In the New Hampshire Diamond Land case, for example, thanks to creative and timely work in both public and private sectors, the state now owns the land (except forest land inholdings) with the Forest Service holding a conservation easement on it.

But whatever the tactic—public lands, private, or some combination—the time has arrived for a policy decision on this unique northern New England working forest. Once divided, large-block single-ownership areas like those of Essex County could never again be re-assembled—or at best, only at enormous expense.

Indeed, there is only one other area in Vermont which can be compared with the Essex County holdings: the present Green Mountain National Forest in the opposite corner of the state. With a very different land use history, geography and appearance, the National Forest shares with Essex County the only remaining undeveloped areas on any size in Vermont—a state that is suburbanizing at a headlong pace.

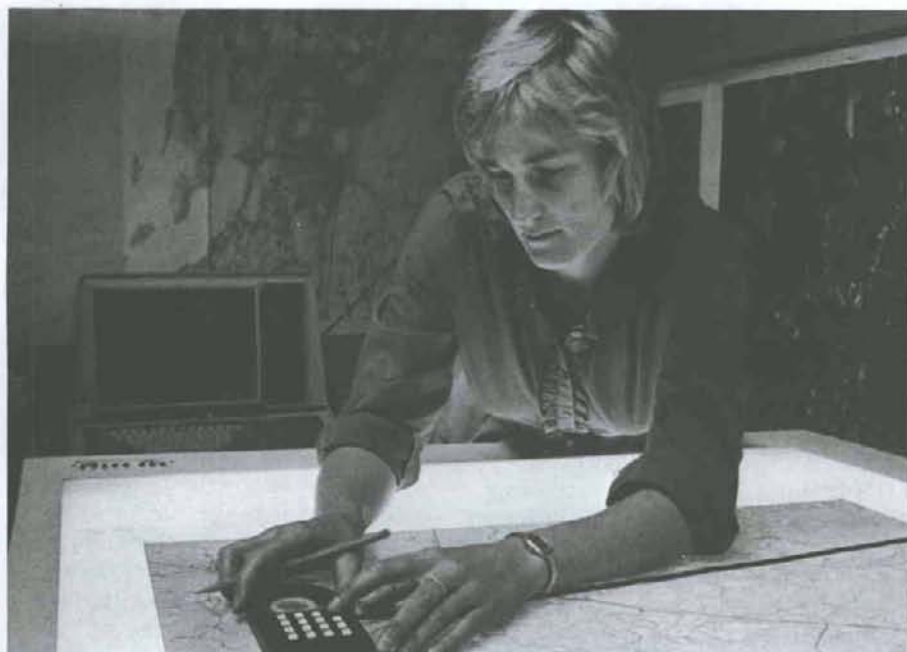
The value of maintaining undeveloped open space is inestimable as we look decades into the future—a future that we are helping to determine now.

With large measures of individual initiative and entrepreneurship, we can keep hold of the "big woods" of Essex County, along with even larger portions of New Hampshire and Maine. In our time, we can help guarantee that these forest holdings will remain intact for generations to come; that timber, jobs, outdoor recreation, the Connecticut Valley farms, all have their place.

Brendan Whittaker is a former Essex County forester and served as Secretary of the Agency of Environmental Conservation under Governor Richard Snelling. Also a practicing Episcopal pastor, he has been an Essex County resident for 28 years. Whittaker is a VNRC Board member and Chair of the VNRC Forestry and Wildlife Management Task Force.

G.I.S.

Computers Helping Planning



By Jay Appleton

You are on the planning commission in a small Vermont town. Several different development proposals are before the commission, each requiring action. Town residents are sharply divided over which proposals should be approved, and many are asking about the cumulative impacts of the proposed developments on their town and region. On the other side, the developers are pushing hard for approval.

Many questions need answers, but the town does not have the resources to answer them quickly. How much prime agricultural land has been developed? How

Above: Eileen Powers, Natural Resource Data Specialist, enters map data into the ARC/INFO GIS at the School of Natural Resources at the University of Vermont. "Digitizing" the information will allow planners to use it in conjunction with other relevant data on the computer.

much undeveloped land is adjacent to existing residential areas? What is the average distance a homeowner must travel to a commercial center? What areas of the town have the greatest potential for on-site sewage disposal? Where are the town's best scenic views found?

As a planning commission member you ask: How could we get this information quickly and accurately? Is there some way towns could have such information at their fingertips, and as towns change and grow, could such an information source be updated easily so the time required for surveys and map drafting could be greatly reduced? And finally, could such a system make geographic information available not only on individual towns, but for regions, or even the entire state?

These same questions are repeated by land use planners at the regional and state levels, as

well as by developers, land trusts, and other land use interests. To answer these needs, the Growth Management Act of 1988, Act 200, appropriated \$4.75 million over five years for the development of a state-wide Geographic Information System (GIS).

So What's A GIS?

A Geographic Information System is a generic term for a family of computer software packages that stores, processes and manipulates geographically referenced information. There are about a dozen GIS packages commercially available in the United States. These products vary in what they can do—a fact which has added to the confusion over what a GIS is all about.

Many people look upon a GIS as nothing more than a computerized library for geographic information, with the capability to produce attractive maps (computerized cartography). While database management and map production are important components, a GIS can do much more. A GIS also has the ability to extract, combine, and show relationships among large amounts of geographic data.

"Many computer mapping systems are not meant to handle large amounts of geographic information," says Gary Smith, GIS Program Coordinator at the University of Vermont (UVM). "In fact, some apply a sort of 'pre-Columbus' approach—they deal with data as if the earth were flat." A GIS, notes Smith, not only recognizes that the earth is round, but also "provides a central information data base which is easy to access and use, no matter where you are in the state."

In addition, with a computerized GIS, previously labor-intensive and costly data analysis and map production can be done easily and efficiently. And the use of computers makes repeating projects easier: when a map needs to be revised, it does not have to be redrawn by hand (a feature that is especially important for municipal tax mapping).

Another important advantage is derived from a GIS's capability to assemble large amounts of information into one data base. This means Vermont does not have to be mapped all at once, but instead can be mapped piecemeal with the computer putting all the parts together. This opens up numerous opportunities for citizen input—using local knowledge—in mapping projects.

Take for example municipal mapping to develop town plans. A town can be divided into a series of maps, and the people who live in these areas can be solicited to identify important features that may be unaccounted for, such as abandoned gravel pits, deer yards and other wildlife habitat, archeological sites, old-growth forest, hiking trails, or logging roads.

The key requirement for these grassroots mapping efforts is that each map use a common set of control points, or map corners, so that the GIS can match all the maps together precisely. The standardized system now existing is the orthophoto map base, on which the entire state has already been mapped.

GIS As Planning Tool

"One of the beauties of a GIS is the ability to overlay maps," says Joyce Ohlson, planner for the town of Williston. Through a consultant, the UVM GIS facility has been used to update Williston's town plan. The town's general parcel map, open space recreation map, and a map of ecologically sensitive areas were superimposed within the computer, in order to identify potential areas to preserve through transfer of development rights. (TDR's are a mechanism used by land use planners to shift the legal right to develop land from one area to another.) The remaining areas of the town were then overlaid with a soils map to identify areas of the town that can best assimilate development for possible designation as TDR receiving areas.

"A GIS allows people to get curious and find out what's out there," says Ohlson—to identify

what resources are where, and which overlap, to avoid spoiling natural and cultural resources through ignorance. Also, Ohlson notes, "with the GIS you are able to say to developers, 'Here's our open space plan and here's your proposed development,' and really lay it out for them. This is extremely helpful, since developers need to see everything up front."

Bill Rowley, GIS Project Manager for the City of Burlington, is intrigued with the application of

"With the GIS, decisions still have to be made by humans—just better-informed humans." Joyce Ohlson

GIS numerical output for land use planning. Through a cooperative agreement with the UVM GIS facility, Rowley is overseeing the entry of Burlington tax maps into that GIS. Using attribute files, the GIS will have owners' names and addresses, the appraised value of properties, and other building characteristics for all parcels on Burlington tax maps. After the tax maps are complete, Rowley plans to enter utilities, streets, zoning districts, and wards into the GIS.

Rowley envisions the GIS as an effective aid for developing street maintenance programs, setting zoning densities, even planning recycling projects. The use of attribute files allows the user to associate virtually any information desired to geographic features contained in a GIS.

For example, the age, diameters, flows, and materials of Burlington's sewer pipes could be entered into the GIS, along with existing development as well as development that is likely to occur over the next fifteen years. Rowley would then take the resulting numbers out of the GIS and plug them into engineering programs to calculate the percentages of total influent entering the city's sewage treatment plants from various sections of the city—vital information for reviewing development proposals.

"In the overall picture, I don't see the GIS as a stand-alone tool to answer land use questions," says Rowley, "but the GIS is one part of a system of many software components used to answer municipal land use questions."

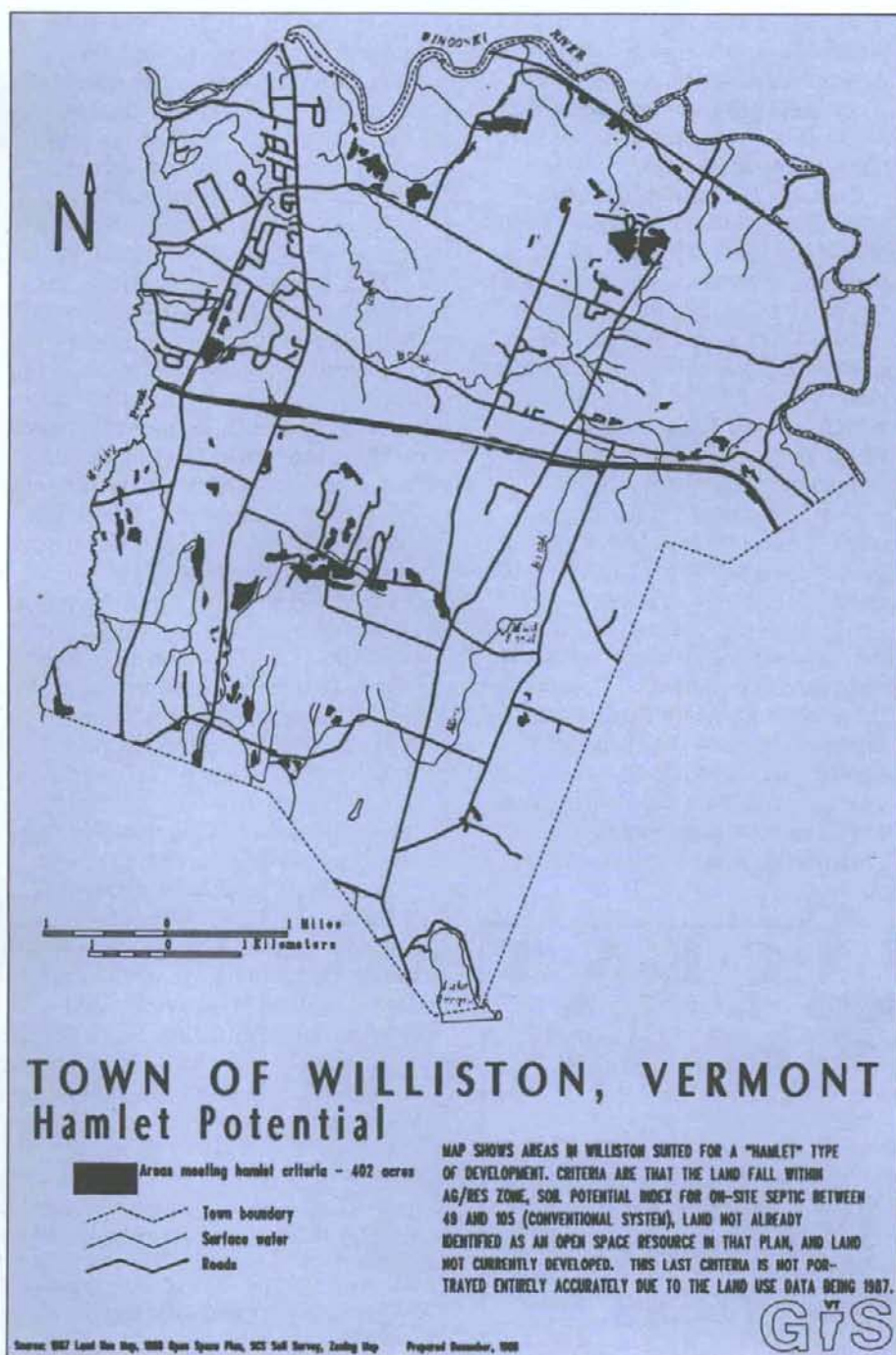
The planning firm Humstone Squires Associates has used UVM's GIS for planning work in Colchester, Charlotte and Williston, as well as for an impact assessment for the Chittenden County Circumferential highway.

"The GIS has tremendous potential for studying alternative scenarios," notes planner Beth Humstone. With a GIS as a modelling tool, the results of alternative land use policies or controls such as zoning densities can be displayed in both graphic and numerical formats. For example, predicted land use impacts for different types of highway interchanges could be shown, both with maps and with percentage changes in acreage for various existing land uses. In addition, Humstone notes that with the establishment of a state-wide GIS database, town planners will also be able to take into account regional and state-wide information and needs when developing their individual municipal plans.

Toward A State-Wide GIS

Act 200 charges the Governor with developing a comprehensive implementation strategy for a GIS statewide. The Act also requires that all geographic data gathered at local, regional and state levels be compatible with the state-wide GIS.

The new implementation strategy will detail computer hardware, GIS software, use priorities, data acquisition, data accuracy standards, how users will be networked together, user training needs, institutional support, and a five-year implementation schedule. Importantly, the strategy will determine the configuration, access and legal constraints surrounding the state-wide GIS. Will there be one big computer system, or several small ones linked together? Will towns have their own computers, or will



This map is an example of what a GIS can do to assist in municipal land use planning. The map is an assessment of "hamlet potential"—areas in the town of Williston which are suitable for single-family residential development where sewage can be disposed of on site.

The map represents an overlay of four different maps (or "data layers") with the shaded areas being common to all four. Land with hamlet potential must: lie within an agricultural/residential zone (information provided by the zoning map); have soils capable of supporting a conventional on-site sewage system (SCS soil survey); not be an open space resource (open space plan); and not currently be developed (land use map).

The GIS calculated the total acreage of areas in Williston meeting these criteria—402 acres—and produced the map shown with roads and surface waters added.

they be external users of a larger system? Where will people have access to the system, and who can use it? What will be the legal ownership status of GIS data?

Vermont Secretary of Administration Thomas Menson is directing the development of the GIS implementation strategy, with the support of an inter-agency task force composed of a fifteen-member policy oversight committee and a twenty-four member working group. As of this writing the task force, which is coordinated through the Office of Policy Research and Coordination, has not released any information on the content of the implementation strategy; however, the group has made progress toward its goals.

In September the policy oversight committee selected Plan-Graphics Inc. of Frankfurt Kentucky, which then joined on this job with the Cavendish Partnership of Ludlow Vermont, to draw up the implementation strategy. The strategy is due in February, 1989.

In addition, the oversight committee is coordinating several GIS pilot projects. The committee planned to award funding by early December to several regional planning commissions and towns to implement a GIS. In addition, soils maps for several counties will be entered into the UVM GIS, and alternatives for merging existing state data bases for highways, town tax maps and natural areas will be explored. The results of all the pilot projects will be used in evaluating and fine-tuning the comprehensive implementation strategy.

Grist for the GIS Mill

"Vermont may be on the forefront nationally in the use of the GIS for land use planning," says UVM's Gary Smith. However, while the potential benefits of a GIS for Vermont are great, significant obstacles still stand in the way of successful state-wide GIS implementation.

David Healy, Policy Analyst for the Vermont Office of Policy Research and Coordination, notes,

There's a better way of banking.



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"Deficiencies in data, and in communication among agencies on what data they have, have become painfully evident" during work on the comprehensive implementation strategy.

Beth Humstone adds, "the state has a long way to go to get all the needed information on a system." Not only will getting the required planning information onto a GIS statewide be costly, says Humstone, but it will be especially so for those counties which do not have soils and tax maps prepared in a standard orthophoto control format.

Further, not all data is good data. The GIS is a "data policeman," says UVM's Smith—information must be appropriately geographically referenced in order for the computer to process the data correctly. And of course the information entered must be accurate in-and-of itself, notes Smith, "or, as with any computer system, you risk the 'garbage in, garbage out' syndrome."

Humstone also observes that a

great deal of education will be required for planners, who are generally not computer operators, to utilize a GIS to its potential. Although GIS software is relatively easy to use, the software and the concepts behind it are not easy to learn, and the learning process takes a long time.

This leads to the question of whether computer professionals will take land use planning out of the hands of Vermont municipalities, spawning a planning technocracy which will lose the grassroots orientation that is key to Vermont's planning goals. The answer to this question elucidates the role of the GIS in land use planning.

A land use plan is a statement of policy or planning goals, with resulting directives on how land can be used in a given geographic area. These goals for land use can only be decided upon by people. A GIS (read "computer") can not "think" these up, but can only make available to decision-makers the best possible information in clear, timely and useful formats.

"With the GIS, decisions still have to be made by humans—just better-informed humans," says Joyce Ohlson. Humstone concludes, "Communities must decide what vision they have for the future. The GIS is an aid to help them realize their vision."

Jay Appleton is Research Project Assistant for the University of Vermont Water Resources Research Center. He uses the GIS to study the effects of agricultural land use practices on water quality.

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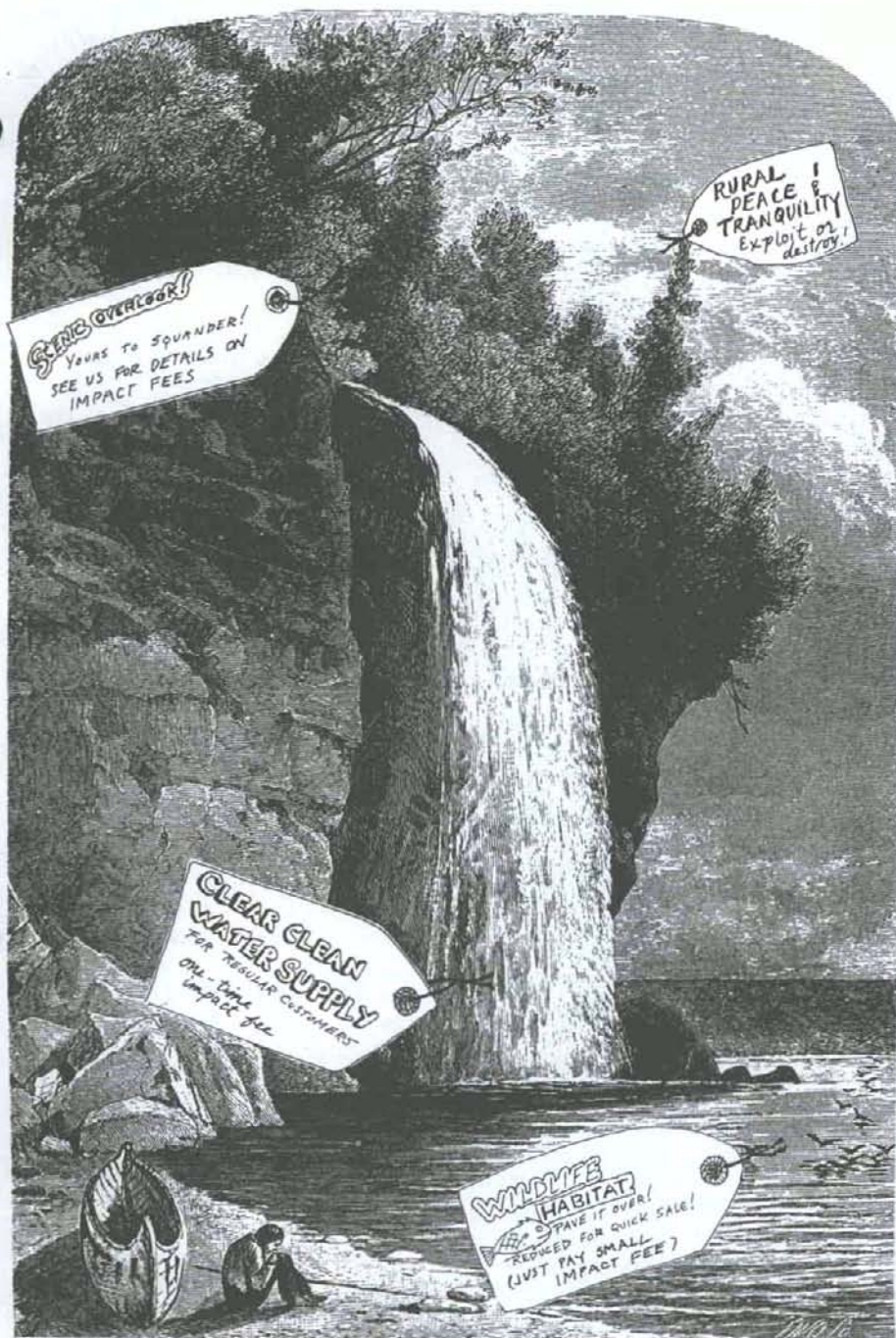
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Impact Fees in Vermont:

Does Everything Have Its Price?

By Deb Brighton

I am negotiating with an insurance company this month, trying to estimate the monetary value of the pain and suffering caused by a car which crossed into my lane. Of course the insurance will pay for the direct costs, such as medical bills and replacing my car; but because of the accident, I can no longer paddle a canoe. Is there any way to assign a dollar value to my inability to enjoy one of my favorite pastimes, canoeing? Or, more importantly, is there any way to buy it back?

Although the impacts of car accidents and land development are quite different, the problems of recognizing all the functions which will be affected, and the questions of assigning dollar values, are very similar. Municipal impact fees, authorized by Act 200, allow towns to charge developers for some of the costs the development would cause the community. Interestingly, in both the case of a car accident and development, there is the perception that the payment takes care of all the problems; but in reality, many of the problems simply cannot be cured by money.

Impact Fees: The Good News

Common examples of successful impact fees involve direct costs. For example, if a development creates the need for a new sewer line, a new road, or an addition to the school, the town may charge the developer an impact fee; the fee amount would be calculated by figuring what proportion of the capital costs could be attributed to the development. Or, the town may charge for repairs to roads or bridges damaged by the process of land development.

A town may also establish a "level of service" which it wishes to maintain, and impact fees may be charged to maintain that level. Most commonly, towns charge fees for new parks or recreation areas based on maintaining the current level of service per capita.

Without impact fees, the total costs of repairing the damaged roads, building the new parks and extending the sewer lines would

be shared by all property taxpayers. The impact fee offers opportunities to towns to shift some of the burden of new development from the property tax to a tax on the development itself.

They Can't Do It All

Although impact fees are certainly valuable for financing the infrastructure necessary for accommodating growth, they do not cure growing pains. First, impact fees do not pay for all the impacts. As in a car accident, some of the most important values in a town may be difficult or impossible to put a dollar figure on. What about the sense of community, changing the character of the town, aesthetics, air pollution, noise, more cars on a quiet road? In most cases, these impacts do not lend themselves to impact

fees unless the town can somehow devise a way to use the money to remedy the situation.

Even some of the impacts which could defensibly be assigned a dollar value may not legally be included in the fee. Act 200 specifically limits impact fees to pay for capital expenditures—not on-going annual operating expenses. Consider a housing development's effect on the school budget. By making estimates of the number of school-aged children likely to live in the houses, each new house can be charged an impact fee to pay for its share of a school addition. However, even though it can be shown that the house will generate only \$800 in school taxes per year, and that each child will cost \$3000 to educate per year, an impact fee cannot be charged to recoup any of the annual losses.

Perversely, the very existence of

an impact fee structure in a town may actually extinguish useful discussion on the ramifications of a project, by giving the impression that the fee will take care of the impacts. For example, a selectman in the next town over from me recently grew impatient with debate and deliberations over the approval of a proposed zoning change. Why worry about all this now, he asked. Why not just set up an impact fee and charge them for it?

The impact fee also raises more philosophical questions about equal taxation. Most of the facilities for which an impact fee is charged are also partially funded by the property tax. For example, current residents would pay for a new school through the property tax, while new residents would pay their "fair share" through an impact fee. The share that current residents pay is proportional to the value of their property; the share that new residents pay is proportional to an estimate of the number of school-aged children the house is likely to hold. This means that neighbors living in identical houses could pay very different amounts if one house was built before the fee structure was adopted, and the other was built later.

Imbalances In The System

"I'm not a big developer from Long Island coming in for quick profits—I was born here," says Ed Pomainville, a Pittsford farmer. Pomainville is preparing to retire from farming, and is considering selling some of his land. "I hate to think of all the taxes I've paid on my farm over the years to build the Otter Valley High School," he says. "I paid, not based on the amount that I'd use the school, but on what they call the fair market value of my farm. Now, when I would like to sell a few lots, they could charge me impact fees to pay for the school based on how much they think each house will use the school. At the same time, I have to keep paying for the school based on the fair market value of the rest of my farm."

What Are Impact Fees?

Impact fees, recently authorized by Vermont's new growth law Act 200, would allow towns to charge developers for some of the direct costs of development. For example, a town could estimate the "impact" that a new housing development would have on the town's road and school systems, and stipulate that if these homes are to be approved, the developer must first agree to help offset these costs.

During the Act 200 legislative debate concerning impact fees, opponents claimed that authorizing the fees would amount to legalizing municipal extortion. The rumor was that towns would set arbitrary fees which would effectively prohibit development.

But in fact, in order to meet the requirements of the law, the design of an impact fee structure is anything but arbitrary. The impact fee may only be charged to cover the following impacts of new development:

- the development's fair share of the costs of a capital project that will benefit or is attributable to the users of the development;

and • the actual costs incurred by the municipality as a result of construction (for example, bridge or road repairs).

A town's capital plan, program and budget form the basis for calculating the actual amount of the impact fees. During the capital planning process, towns will determine the levels of service that they wish to maintain for various facilities, (roads, schools, water and sewer, recreation areas, etc.) and then estimate the cost of capital improvements which will be needed to maintain those levels of service as the population grows.

A reasonable formula must then be developed which determines each development's proportionate share of that cost. This usually involves an easily verified yet related characteristic. For example, the calculation of the impact fee to cover an addition to the school might be based on the number of bedrooms in new homes.

Very careful accounting is required, not only in assessing the impact fee, but also in demonstrating that the money was used within six years on the capital project for which it was intended.

When comparing the two methods for funding town facilities, a tax which is related to the use of land appears to be eminently more logical than a tax which is proportional to the market value of someone's real estate. This argument of use value versus market value is a primary issue behind Vermont's debate over the property tax. In a way, the impact fees are a stop-gap measure to make up for failures in our property tax system. However, the stop-gap must not create imbalances, where we use one logic for some taxpayers and a different logic for others.

At one point in our history, we sought to base our taxes on the ability to pay. The education of our children, in particular, was deemed to benefit all society and not just those who had children, and so we believed that education should be "public" and funded by society at large. While the property tax no longer reflects the ability to pay, it does at least represent an attempt to fund education by all of society. Impact fees, by charging an amount based on projected use, violate that principle.

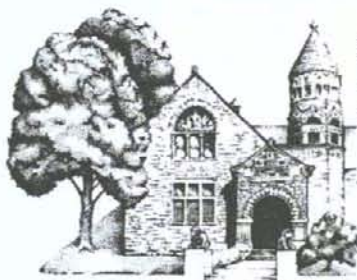
Another obvious problem with the impact fee is that it can make housing even more expensive. The Vermont legislation allows towns to waive the fee for certain types of development (such as affordable housing) which further an objective stated in the town plan. In practice, however, it may be difficult to draw the line between those projects which qualify for the exemption and those which do not.

To many people, the authorization to charge impact fees is the most enticing part of Act 200. However, creating a fee structure which is legally defensible as well as socially and environmentally responsible will be challenging. Perhaps the process will stir up, rather than resolve, discussions about the less tangible impacts of developments, and about fair taxation and the public purpose.

Deb Brighton is an environmental consultant in Salisbury, Vermont.

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Farewell to Monty

VNRC Executive Director R. Montgomery Fischer is going to be a tough act to follow. But VNRC will have to manage somehow, as Monty moves on in January to Washington D.C. to work as Legislative Director to newly-elected U.S. Representative Peter Smith.

The past three years have been extremely exciting and dynamic for the Council, and Monty's management work and creativity have paid off in a number of projects. For example, after over two decades of renting various office spaces in Montpelier, in 1986 VNRC was able to purchase our headquarters building in Montpelier. Also under Monty's guidance, VNRC entered into an exciting working relationship in 1988 with the Conservation Law Foundation of New England, with an environmental lawyer based in our Montpelier office. And the two new landmark projects detailed in this issue—the opening of a long-awaited VNRC Southern Vermont Office and the creation of a new VNRC environmental Action Center—were kicked off thanks to Monty's grantsmanship and careful shepherding.

Monty was well known to many Council members when he took the VNRC reins in October, 1985; he had served on the VNRC Board for six years, and had done contractual work for the Council as well. But he was also known by many conservationists for his work as Chair of the Lake Champlain Committee, and co-organizer of the Lake Champlain Islands Trust, the Vermont Geological Society, and the Champlain Maritime Society. He has also served on the faculty of the University of Vermont, and worked as both a private and government consultant in natural resource areas.

We wish Monty the best in



Above: A rare occurrence worth photographing: nearly all of the VNRC staff members standing still in the same place! From left to right, back row: Deb Crespin, Seth Bongartz, Marcy Mahr, Pam Fowler; front row: Monty Fischer, Susan Clark, Ned Farquhar.

Washington. His creative leadership, friendly management style and well-known laughter will be missed by VNRC Board, staff and members.

Welcome to New Staff

VNRC welcomed several new staff members this summer and fall, all of whom have already made their enthusiasm and expertise invaluable to the Council.

VNRC's new **Associate Director Ned Farquhar** began work with VNRC this summer; Ned takes over from Eric Palola, who left VNRC to attend graduate school. Ned's responsibilities include directing VNRC's lobbying efforts

during the legislative session, as well as coordinating the Council's Act 250 work and other advocacy projects in Vermont's eight northern counties.

Ned comes to us with a strong natural resource, legislative and policy background; he worked in Alaska for several years as Special Assistant to the Commissioner of the Department of Natural Resources and later as Aide to the House Committee on Natural Resources. No stranger to the Green Mountains, Ned graduated from Vermont's Middlebury College. He also holds a Master's from Cambridge University in England.

Many members have already gotten to know Ned through the conservation workshops he held around the state this fall. You will be hearing more from him

THE COUNCIL

often through other workshops as well as Bulletins and other issues updates.

Development Director Deb Crespin began work with us this fall on a variety of challenging membership and fundraising projects, not the least of which has been taming our petulant computerized membership record-keeping system. With a BA from the University of California at Berkeley and an MA from Goddard College, Deb is the former Director of Gifts and Alumnae/i Relations at Goddard. Deb's strong background in development work is complemented by an avid interest in hiking Vermont's mountains. Deb is also a skilled musician and a founding member of Matrix, a women's chorus.

Membership Coordinator Rebecca Sheppard of Worcester also started with us early this winter. With a background in publications and a way with computers, Rebecca will be maintaining membership records and assisting Deb in development work.

VNRC is delighted to have a skilled and energetic staff team joining us in our newly created Southern Vermont Office in Manchester. **Southern Vermont Associate Director Seth Bongartz** is heading up VNRC's advocacy and outreach efforts in the four southern counties. A Manchester native, Seth served in the Vermont House of Representatives from 1981-1985, and in the State Senate since 1986. A graduate of Skidmore College and Case Western Reserve University School of Law, Seth is a member of the Vermont bar.

Assisting Seth in Manchester is **Research and Administration Coordinator Marcy Mahr**. VNRC members may remember Marcy's name as VNRC's 1988 Red Arnold legislative intern, and also as the chief researcher of VNRC's popular *Vermont Environmental Directory*. Marcy's knowledge of Vermont's conservation organizations and issues are a great asset to the Manchester office.



VNRC Selected National Wildlife Federation Affiliate of the Year

VNRC was honored this fall to be chosen as Affiliate of the Year by the National Wildlife Federation. VNRC has acted as Vermont affiliate to NWF since 1969, working as part of a conservation advocacy and information network nation-wide.

"By unanimous consent, it was agreed that the overall leadership, accomplishments and effectiveness of the Vermont Natural Resources Council merit the Federation's highest form of recognition," wrote National Wildlife Federation President Jay D. Hair in a congratulatory letter to VNRC.

The award will be presented at the NWF Annual Meeting this March in Virginia.



We Couldn't Do It Without Them

VNRC thrives on fresh ideas and new energy, and our interns, special project staff and volunteers provide them.

Intern **Diane deConick** came to us from the University of Vermont, where she had developed an extensive background in solid waste issues through the Environmental Program. Her research in the area of packaging and recycling this summer was helpful both to VNRC and to the Conservation Law Foundation of New England.

Many members will be reaping the fruits of **John Lingelbach's** labors later this winter, when

VNRC publishes *A Citizen's Guide to Vermont's Environmental Laws*. A graduate of the University of Vermont and the University of Virginia Law School, John has used his research and writing skills to make sure that the *Guide* provides a comprehensive understanding of Vermont's many natural resource laws in a readable, non-"legalese" style.

Robin Dion, a business and environmental science student at Goddard College in the Single Parent Project, interned this fall with VNRC working on water issues. Robin's research on non-point source pollution and wetlands has been helpful in the Council's work in the rule-making process in these areas.

VNRC is celebrating its 25th Anniversary year by hosting twenty-five different events statewide, and so far, the success of the events has largely been due to the organizational talents of intern **Lesa Berns**. A graduate in natural resources from the University of Michigan, Lesa is also a part-time educator, and moves on from VNRC this winter to complete a Master's in Education.

The upcoming *Vermont Environmental Report*, a special issue celebrating VNRC's 25th Anniversary, will feature the research and writing skills of **Kimberly Hagen**. A professional writer and Middlesex resident active in local planning, Kimberly has been working with Editor Susan Clark this fall on research and interviews for the special issue focusing on the past twenty-five years of environmental conservation in Vermont.

A special thank-you to generous friends who have contributed time and talent to the Council recently. VNRC's new display, used to highlight Council work at a variety of conferences, was skillfully constructed by **Hans Nielsen** of Morrisville; photo mounting was donated by **AfterImage Photography** of Montpelier. And visitors to VNRC's Montpelier office this

VNRC Southern Vermont Office

Off and Running

VNRC's Southern Vermont office has been up and running since the beginning of September, and now it's hard to imagine how we got along without it. By the end of our first month, we had already litigated the Lake Bomoseen drawdown, held several meetings with our Salmon Hole experts, travelled around the four southern Vermont counties meeting with regional commission staffs, and begun a major outreach effort to bring us closer to our membership. And we have since begun additional projects such as the monitoring of the proposed Rutland Mall and the designation of the Battenkill as an Outstanding Resource Water. (See "Vermont Perspectives" in this issue for updates on these projects.)

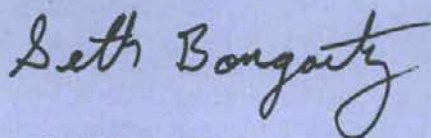
Special thanks to the *Manchester Journal* for pre-opening coverage that helped bring out sixty people to our October Open House gathering, to meet and discuss southern Vermont issues with VNRC staff and Board members. Now that we are officially open for business, a real sense of permanence and purpose settles over the office.

VNRC has embarked on a high-energy effort to reach out to all of our members and others interested in conservation issues. Twelve conservation workshops, devoted to explaining VNRC's agenda and gaining insight from Vermonters on issues of local concern, are planned and already ongoing in southern Vermont. Ned Farquhar of the Montpelier office has an equally ambitious schedule for the northern sector.

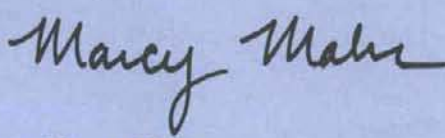
In addition to education and outreach, a top VNRC priority is helping to implement our myriad new environmental laws. The Southern Vermont Office is working with local planning commissions, serving as panelists at regional commission workshops and sponsoring our own workshops aimed at helping people to get involved in environmental action.

From the small contractor building individual houses on speculation to the massive 435-unit Salmon Hole resort, the growth pressures facing Southern Vermont are acute—and many southern Vermonters feel they are under siege. It seems that the opening of our Manchester office could not be more timely. We receive calls daily from people concerned about the future of their area. We want VNRC to be a resource for area residents, whether they are dealing with ongoing development, working for better planning in their communities, or creating a local conservation commission.

We are here and we are ready to help.



Seth Bongartz
Southern Vermont
Associate Director



Marcy Mahr
Southern Vermont Research
and Administration Coordinator

fall have admired the hardy perennials and landscaping work of Don and Lela Avery from Cady's Falls Nursery in Morrisville.

Coming Soon to A Mailbox Near You...

We hope you enjoy your issues of the *Vermont Environmental Report*. And we're hoping that soon, you'll have reason to enjoy them even more.

You'll see some changes in upcoming issues of the *V.E.R.*, not the least of which will be a striking new cover design by Laughing Bear Associates of Montpelier. And of course, the next issue will feature special articles celebrating VNRC's 25th Anniversary and the past twenty-five years of environmental protection in Vermont.

Look forward to the same thorough and thought-provoking coverage of Vermont's conservation issues—in an even more attractive and readable format. We hope you'll like it! SC

Annual Meeting Notes

A crisp fall day beckoned members to field trips and workshops at VNRC's September 10 Annual Meeting in Stowe, to explore issues involving "Vermont's Forests, Development and Growth." Members also honored two key Vermont conservationists with special awards.

Harvey Carter, former Vermont senator from Bennington, received VNRC's 1988 Merit Award. Carter was lauded for his years of dedicated conservation work both in the Vermont legislature and in private law practice.

VNRC awarded its 1988 Achievement Award to Joy Green of Dorset; she has been active in the southern Vermont conserva-

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tion community for many years, is president of the Merck Forest and Farmland Foundation, and was instrumental in the start-up of VNRC's new Southern Vermont Office.

VNRC members also elected nine directors to the VNRC Board; their terms begin January 1, 1989.

VNRC welcomes **Scudder Parker**, who is familiar to many members through his years of work on economic, environmental and social issues as Vermont senator from Caledonia County. A Protestant minister, Scudder now directs the Community Planning Program at Woodbury College.

And VNRC welcomes back former Board member **Karen Meyer**. Karen is the Executive Director of the Vermont State Medical Society. The former Vermont Commissioner of Housing and Community Affairs, Karen was special Legislative Liaison for

the Governor on Act 200.

Chair of VNRC's Energy Committee, **Leigh Seddon** also became an organizational Board member representing the Vermont Public Interest Research Group. Leigh is president of Solar Works of Vermont, a solar design and contracting firm.

Returning to the Board are incumbents **Joy Green, John Nutting, Mark Schroeder, Peter B. Smith, Alan Turner**, and (representing the Lake Champlain Committee) **Mark Roberts**.

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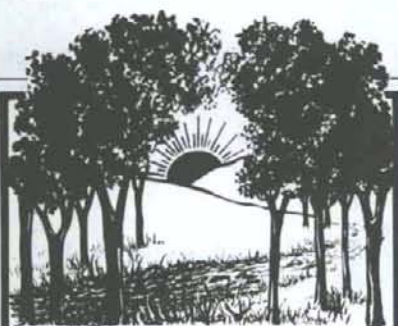
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New Members

VNRC is pleased to welcome the following new members who joined us between August 1 through December 1: David and Jean Aldrich; Joan Allan Aleshire; Mr. and Mrs. Peter W. Arnold; Sylvia G. Blanchet; Katherine Borchert and John Roe; Margot and Bradford Craig; Debra Crespian; Lauren-Glenn Davitian; Matthew N. Dix; Christine T. Donovan; Charles Eichel; Linda Garrett; Shirley and Robert Gillis; Kimberly Hagen; Christopher C. Hamilton; George Hamilton; Polly Harris; Brian Hehir; John Herrington; Catherine Kashanski and Eric Sorenson; Bill and Kathy Kehoe; Charles Kireker; Heidi Krantz; Cameron McCormack; Dorothy C. Nelson; Mary Wade and Priscilla Newell; Cynthia and Rodbard Payne-Meyer; John T.R. Pierson; Julia Randall; Andrew Raubvogel; Betsy Rosenbluth; Tim San Jule; Paul Schelrel; William R. Scott; Peter Shaw; Barry Shaw; Wendy Slater; Ruth Steiner; Glenn and Sally Stephenson; David Stewart; Michaela Stickney; Rich and Peggy Svec; Katherine Teetor; A. Lindsay Thomson; Mr. and Mrs. Von Frank; Denny Wilkins; Douglas U. Wilson; Chris Wood; Fred Emigh and Merideth Wright; Steven J. Zajchowski.



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VNRC events this winter and spring include:

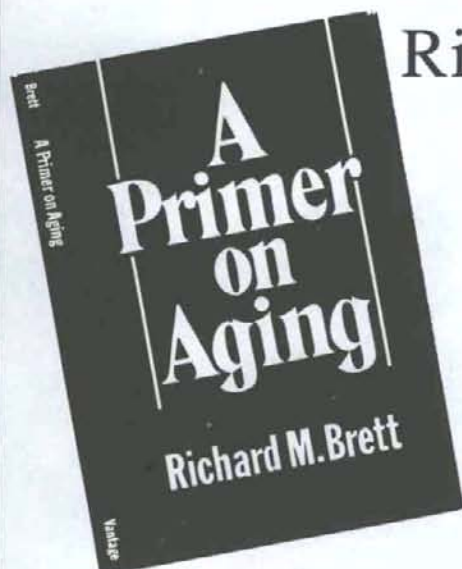
- **Cross-Country Skiing** *Saturday, February 4.* VNRC members ski free today on the beautiful cross-country trails at the Highland Lodge, Greensboro, VT. Skiing starts at 9:00 and ends at 4:00.
- **Black Bear Habitat Workshop** *Thursday, February 9 at Noble Hall, Vermont College, Montpelier; 7:00 pm.* Slide show and discussion of the development threats to critical Vermont black bear habitat, with well-known wildlife and land use activists.
- **White Rocks National Recreation Area: Management for Recreation** *Morning workshops meet at Wallingford Town Hall, with afternoon field trips following. Saturday, February 11, 9:00 am-4:00 pm.* Join forest service experts and recreation group leaders for lectures and panel discussions, then choose from two tours of Wallingford Pond on skis, snowmobile, or foot. Co-sponsored by VNRC and Vermont Association of Snow Travelers (VAST).
- **Forest Land: Everyone's Resource to Manage** *Saturday, February 25, 9 am-4 pm, Bennington County site to be announced.* How does having a national forest in town affect local and regional citizens? Explore this and other management questions with forestry professionals and local leaders and planners in this full-day conference.
- **Sugaring and Maple Decline: Tour and Discussion** *Saturday, April 1, 9:00-12:00, Butternut Mountain Farm, Johnson.* Tour Dave Marvin's sugarhouse and hear how sugar maple decline is threatening Vermont's maple sugar industry.
- **Controversy in the Classroom: Teaching About Environmental Issues** *Saturday, April 15, 9:30-1:30 in Woodstock.* Educators, parents and all others interested in conservation education are invited to learn about innovative teaching materials and techniques on a variety of environmental issues. Co-sponsored by VNRC and StateWide Environmental Education Programs (SWEEP).

Other upcoming Vermont and New England events:

- **Groundwater Quality Seminar** Co-sponsored by VNRC, the VT Dept. of Environmental Conservation, the VT Dept. of Health, and the Vermont Association of REALTORS, this seminar will give an overview of groundwater science and protection strategies, as well as useful information on the Well-head Protection Program, radon, and more. Seminar will be repeated five times statewide: Jan. 30, Manchester; Feb. 6, Putney; Feb. 27, Newport; Mar. 6, Randolph; Mar. 13, Burlington. Fee: \$10.00/person. Call VNRC for more info.
- **National Wildlife Week, March 19-25** "Predators! They're Part of the Picture" is the theme of this year's National Wildlife Week. As the Vermont affiliate of the National Wildlife Federation, VNRC will provide Vermont teachers with NWF's educational packets, including colorful posters and activity ideas, as well as a special Vermont resource list of speakers and field trips. Contact VNRC for a free packet.
- **11th Annual New England Environmental Conference** *March 18-19 at Tufts University.* Co-sponsored by over 200 environmental groups, with dozens of workshops on a variety of New England, national and international issues. Contact the Lincoln Filene Ctr. At Tufts, Medford MA 02155 (617) 381-3451 for more information.

A Primer on Aging

Richard M. Brett



A Primer on Aging is a humorous, irreverent, thought-provoking series of essays on growing older. In his eighties, Mr. Brett approaches all manner of topics – politics, the economy, religion, relations and relationships, cooking, gardening, and recreation – with an endearing combination of amusement, curiosity, and caution.

Richard Brett...

On Aging in New England

"When the United States was largely an agricultural culture, the aging problem could be managed at home. Three-generation households were common and expected.

"It is said that a Vermont solution was to put aging auntie and uncle into hibernation on the north side of the barn in winter to save on fuel and food, often in short supply. In the spring, the story goes, they were gently awakened from their long winter nap so that auntie could tend and uncle hoe. Probably, this tale was made out of moonlight or the fumes of hard cider...."

On Laundry

"I have never been shown how to fold laundry. It is an art form. I have cut, split, and stacked endless cords of stove wood. I have gardened, made ponds and roads in the forest. I can even do rough carpentry, but fold laundry? It is a delicate operation, requiring judgement and dexterity, not main strength and awkwardness...."

On The Comics

"From long experience and observation of the general public as a banker, publisher, speaker,

lobbyist, soldier and forester I have come to the conclusion that many of our solid citizens rely on prejudice and emotion as appropriate guides to decision making in all sort of social and economic situations....

"The comics speak to current problems. Tracy is for law and order. Mrs. Worth tries to be the ombudswoman for many social ills. Hagar the Horrible speaks to the macho. Landers and her sister tell us that they receive in their respective mills anything from acne, the right way to hang a roll of toilet paper, to incest and sodomy and almost anything else that may fill the human breast with enough anguish to write.

"By reading the comics and the sisters and throwing in the *Reader's Digest*, I think that I can better understand why we consistently leap before we look and why things seldom work out the way we want them to. This exercise might even make me reasonably understanding and humble, maybe."

Richard M. Brett, formerly of Woodstock, Vermont, was a founder, officer and trustee of several of Vermont's conservation organizations; he was a VNRC founder and the Council's first Board Chair.

A Primer on Aging Publisher: Vantage Press Inc., 516 West 34th Street, New York, NY 10001 Price: \$7.95

VNRC LEGISLATIVE MEETINGS, 1989

You're a VNRC member, and you want to know what's going on in the State House. Here's your chance.

To start, "**Monday Night Policy**" will take up where the National Football League leaves off. Our legislative lobbyist will present a conservation update for VNRC members and other concerned Vermonters. The time and place of each meeting will be announced to VNRC members by postcard about two weeks ahead of time. Call us for information!

January 23 - **Bennington**
January 30 - **St. Albans**
February 6 - **Rutland**
February 13 - **Norwich**
(conservation workshop)
February 20 - **Middlebury**
February 27 - **Morrisville**

March 6 - **Barton**
March 13 - **Newfane**
(conservation workshop)
March 20 - **Burlington**
March 27 - **Hardwick**
April 3 - **Brookfield**

"**Thursday night in Montpelier**" will be a different sort of event. We'll have issues discussion at the VNRC Main Office (9 Bailey Avenue, Montpelier) from 7:00-8:00 every other Thursday evening, with the following scheduled speakers from 8:00-9:00 p.m.

January 19 - Secretary Jonathan Lash, Commissioner Patrick Parenteau, Commissioner Mollie Beattie and Commissioner Stephen Wright from the Agency of Natural Resources.

February 2 - State Senator John McClaughry, Caledonia County

February 16 - Chair, Senate Natural Resources Committee (we hope)

March 2 - Chris Barbieri, Vermont State Chamber of Commerce; Gar Anderson, Vermont REALTORS Association

March 16 - Chair, House Natural Resources Committee (we hope)

March 30 - Steven Jeffrey and Karen Horn, Vt. League of Cities and Towns

April 13 - Len Wilson, Chair, and Stephanie Kaplan of the Vermont Environmental Board

PARTICIPATE IN THE POLICYMAKING THAT AFFECTS YOU AS A VERMONT. PLEASE JOIN US FOR THESE MEETINGS.

Vermont Natural Resources Council

9 Bailey Avenue
Montpelier, VT 05602

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