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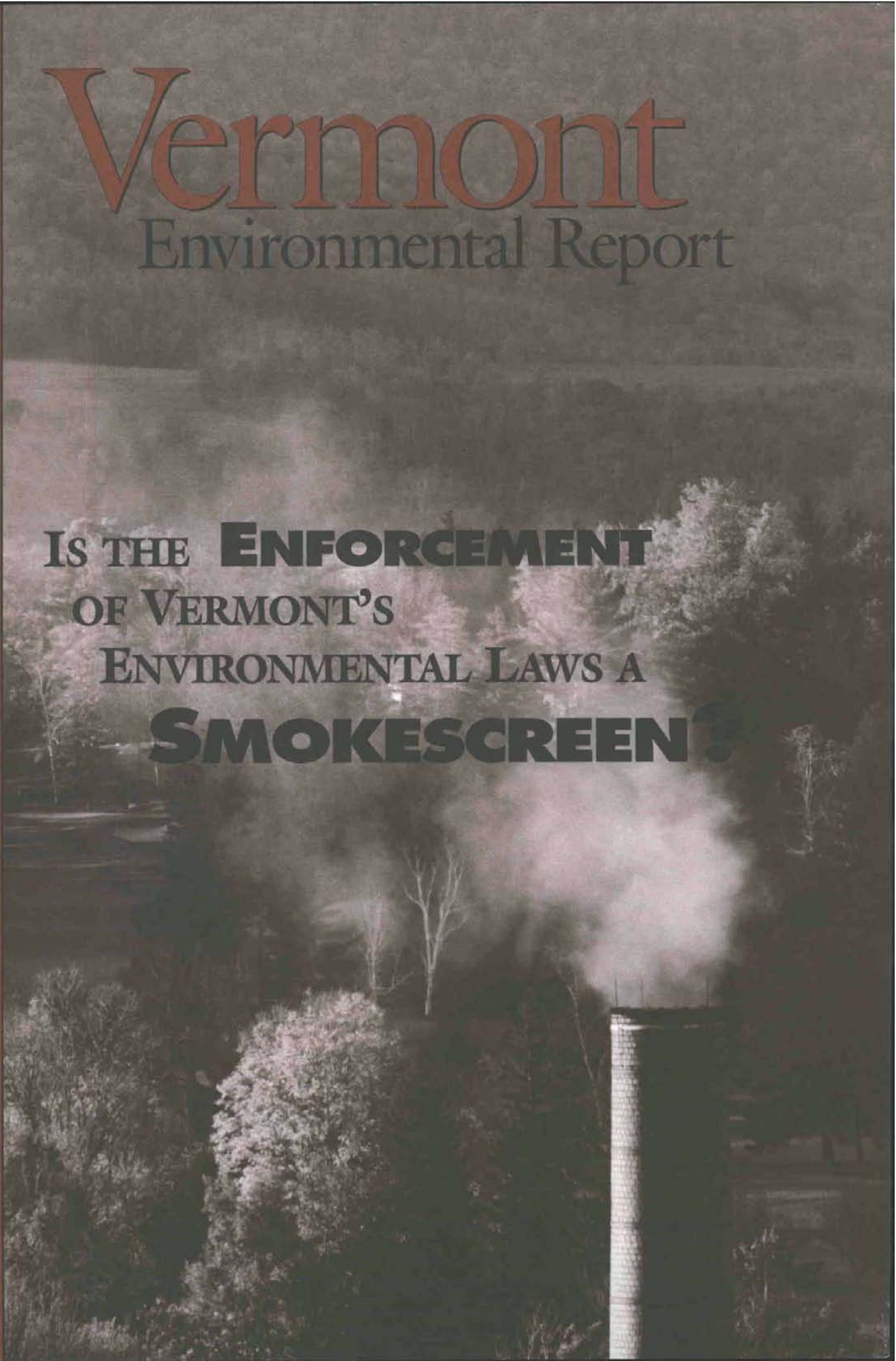
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# Vermont

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The Vermont Natural Resources Council, Inc., is a nonprofit environmental organization founded in 1963 to protect Vermont's natural resources and environment through research, education, and advocacy.

VNRC is the Vermont affiliate of the National Wildlife Federation.

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# Vermont Environmental Report

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**BLAKE GARDNER** has won national awards and has sixteen years of location experience photographing people, places, architecture, food, and products for annual reports, colleges, government, publishing, and non-profit use. Photography credits include national magazines, calendars, publishers, and regional clients. For assignments or stock, please contact Blake at 802-722-9801 or [abgphoto@sover.net](mailto:abgphoto@sover.net)





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# THE INSIDE WORD

## ARE VERMONTERS LETTING THE MOMENT GO BY?

BY ELIZABETH COURTNEY  
*Executive Director*



Sometimes I am struck by how close we are to letting the Vermont environment slip through our fingers because of sheer indifference and apathy. We are at a point in our state's history when letting the ripe moment go - by not reaffirming Vermonters historical commitment to respecting and safeguarding Vermont's environment - will have significant and irreversible consequences.

We should worry that Vermonters may let that moment pass. Many of us seem to be under a veil of influence called 'greenwashing'. 'Greenwashing' refers to a language in our culture that lulls us into believing that all's well with the status quo. It is a climate where many developers call themselves environmentalists but have little respect for Vermont's natural resources, and where perfectly clear environmental law is reinterpreted by regulators to mean something quite different from its original intent.

In this apathy many Vermonters are not concerned when large Skiing Companies proclaim themselves to be the "Environmental Stewards" of the Green Mountains. And many Vermonters are not alarmed as developers present plans for the equivalent of Wal\*Marts and a city's share of electrical power to serve a throng of transients, rivaling the population of Williston, to be built in the heart of the Green Mountains. Many Vermonters are not concerned and not alarmed, because after all, Act 250 exists and these are "Environmental Stewards" doing the developing.

We also have local planning and zoning. Yet the State of Vermont continues to welcome out-of-state industrial parks to plunk themselves down on acres of farmland in areas such as Chittenden County. This includes farmlands that were identified in the local and regional plans as conservation lands. And so towns don't hesitate to change local and regional plans to

accommodate these 'improvements' to the landscape, because, after all, these developers are 'environmentally friendly'.

This level of acceptance allows us to roll over as we roll out the carpet in the name of the economy. It belies the fact that we are precariously close to a moment ripe for action. And we will

totally miss that moment, if we don't wake up and do something right now.

Ironically, the year 2000 marks a banner year in the environmental movement—the 30th anniversary of the first Earth Day. And while this pervasive apathy now exists, there have been some great accomplishments during the last thirty years in creating protections for our country's tremendous natural resources and for the many treasures here in Vermont.

On the Federal level, we've seen the passage and implementation of the Clean Water Act, the Clean Air Act and the creation of the Environmental Protection Agency. Here at home, Vermonters have created the Agency of Natural Resources, The Vermont Water Quality Standards and enacted legislation to enable local and regional planning. In 1970, the year of the first Earth Day, the Vermont Legislature (with the help of Republican Governor Deane Davis and Senate Natural Resources Chair, Art Gibb, Republican from Addison County) passed into law what would become the nation's most progressive statewide land use development law, Act 250.

Sounds like a great track record. Sounds like a track record Vermonters could be proud of. And it is on a certain level. But if we take a closer look, we find a disturbing trend.

Many Vermonters know that Act 250 has played a key role in the past three decades in protecting Vermont's world class environment. It is also widely acknowledged that Act 250 has buffered Vermont against the agony of the boom

*continued on page 24*



# VERMONT'S ENVIRONMENTAL LAWS AND VERMONTERS' ACCOUNTABILITY

BY SCOTT JOHNSTONE

People who read the Vermont Environmental Report probably agree that as Vermonters we should protect, sustain, and enhance the quality of our environment. This is easy to say, but very complicated to do. As a society, how do we do it? We have laws, which result in rules and permits. We enforce all of those, to achieve compliance. This is the backbone of our approach, not only in Vermont, but across the country.

We at the Vermont Agency of Natural Resources enforce environmental laws in several ways. Our Enforcement Division is staffed by attorneys and investigators with extensive experience in criminal and civil law enforcement. We are proud of our staff's work, particularly given the annual budgetary constraints within the agency in general and in the Enforcement Division specifically. They know their jobs and they do them well. We also refer matters to the Attorney General's Office for civil and criminal enforcement, when warranted. These are typically egregious violations, such as the case last year involving drums of hazardous waste dumped into the Otter Creek.

Our Agency investigates hundreds of these cases — civil and criminal — every year. We not only achieve environmental benefits directly through these enforcement activities but also indirectly through the deterrent effect those cases have on would-be violators. It is certainly possible for reasonable people to criticize our approach in some of these cases, the strategies we employed, or the outcomes we achieved. When you work in law enforcement, it comes with the territory. Our approach must be to have conscientious people exercising sound, consistent, and fair judgment

based on the most complete information they can get. That's what we have.

But it is important to remember that enforcement is not an end in itself. The object of enforcement is compliance, always. And compliance is not always best achieved with a stick. That's why we use a carrot as well, as often as we can.

Whether it's through inspections of regulated facilities, monitoring and analysis of data filed with us under permit obligations, pollution prevention assistance, or special audits we perform via our Small Business Compliance Assistance Program, we encourage compliance by offering help. The vast majority of permittees in Vermont want to comply with the law. More encouragingly, many are interested in doing better than compliance — they want to reduce their toxic waste production, cut down on energy usage (and emissions), or manage the natural resources they rely upon in a more sustainable manner.

Enforcement of Vermont's environmental laws is important and satisfying work. But is it enough? Will it give us the high-quality environment we want? The answer is yes, if our enforcement efforts are supported by our elected officials and by the people of Vermont, through an ongoing commitment to fund the Agency's enforcement efforts.

But is compliance with our existing law enough? Consider that it is perfectly legal to drive a SUV, solo commute, waste water and churn out 5.5 pounds of solid waste per Vermonter per day (up from 4.5 just five years ago). With the necessary permits it's legal and easy to carve up previously unfragmented wildlife habitat and build houses where they shouldn't be.

It's not only legal but irresistible (to many) to shop at big boxes built in what used to be meadows, fueling a development pattern that degrades water quality, undermines biodiversity, and wastes our landscape.

These are our principal challenges today. Neither carrots nor sticks are sufficient to meet these challenges. What is required is the collective will to change the way we live. We need accountability, in the highest sense of the word. We are all responsible for this planet and must hold ourselves accountable for its fate.



Scott Johnstone is the newly appointed Secretary of the Vermont Agency of Natural Resources.

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## BRANDE EXEMPLIFIES SECRET OF VERMONT

By CARL REIDEL

*VNRC lost one of its oldest and best friends this spring with the passing of Justin Brande. A VNRC co-founder and early executive director, Justin's natural resource protection work knew no bounds; indeed, one colleague recently remarked that most professional environmentalists in Vermont owed thanks to Justin for founding their organizations. We will miss him, and thank former VNRC Board Chair Carl Reidel for allowing us to reprint, from the Sunday Rutland Herald-Times Argus, Reidel's memories of Justin.*

—Susan Clark, VNRC current Board Member and past Staff Member

"What's Vermont secret?" a friend in Minnesota asked after I gave a talk in 1975 about Vermont's innovative environmental laws. He couldn't understand how such a small state could be "so creative, even bold."

I replied that I didn't know. I had only lived in Vermont two years.

I'm confident now that I know the secret of Vermont. It's people like Justin Brande, who lived in Cornwall from 1951 until he died on April 11 at the age of 83. Like so many who come to live in Vermont from elsewhere, Justin and Susan Brande knew they were coming home when they moved here. And the Vermont Constitution asserts that they are real Vermonters. "Every person of good character, who comes to settle in this State...shall be deemed a free denizen thereof, and entitled to all rights of a natural born subject of this state..." (Chapter II, 66).

After graduating from Williams College and several years of legal studies, Justin married Susan Kennedy and moved to Vermont. They settled on a dairy farm in Cornwall, where they raised eight children. In the late 60's Justin sold their herd and enrolled at the University of Vermont, where he earned a master's degree in resource economics. He continued to work his land, honing the ability

to farm organically long before most people heard of "organic" agriculture. I can't guess how many people he taught over the years to make compost and garden in ways that made pesticides and chemical fertilizers unnecessary by drawing on the inherent health of the land.



*Justin Brande and Susan Clark.*

Early on Justin became involved in his community as a relentless advocate for the land – a free denizen who may have participated in the founding of more Vermont environmental institutions than anyone I have known. And always as a volunteer. He had been a delegate or alternate on the Addison County Regional Planning Commission since its founding. He helped establish the Lake Champlain Committee, and was a founder and the first director of the Vermont Natural Resources Council.

In recent years he co-founded the Smallholders Association, which advocates ownership of small, sustainable farms and businesses. Once again, he was ahead of

others in seeing the dangers of large enterprises out of scale with Vermont. Former Sen. Art Gibb recalls him as "a man ahead of his time; a voice crying in the wilderness" in his advocacy for land protection. Gov. Deane Davis who, with Gibb, crafted Act 250, said of him that "although a staunch environmentalist, he came to problems open-minded until all the evidence was in. Then he took his stand. Justin got me started, and kept after me until Act 250 was signed into law."

When he offered a course in "organic gardening" – the first at UVM – the dean of the College of Agriculture chided me for allowing such "nonsense" in a classroom. It wasn't the first or last time that Justin Brande defined conventional thinking.

The secret of Vermont exemplified in Justin Brande's life is not, however, to be found in this summary of his accomplishments. Rather, it is in the words of the Constitution, which define a free denizen of Vermont as a "person of good character." Justin passed the test in every way.

He was a person of unusual integrity – a man who lived his convictions, every day, in every place. Never a traitor to his beliefs, Justin taught me and many others by example the deeper meanings of personal integrity.

He was a man of courage who was himself in the presence of anyone, be it a fellow farmer, college president, governor or member of Congress. Friend or foe did not daunt him, because he always put principle above reputation.

He was a man who cared enormously, for family and friends, for Vermont, for Lake Champlain, for land and life itself. Justin and I enjoyed a good debate. We could disagree strongly, but never with an unkind word.

Once, at the end of a lively discussion, he said to me: "What I like about you, Reidel, is that you are often in error, but



never in doubt."

I have no doubts whatsoever that the secret of Vermont is people like Justin

Brande, the every-day denizens who are the real heroes of this state.

*Carl Reidel is a UVM professor of environment policy and former chair of VNRC Board.*

## VNRC WELCOMES NEW STAFF

**Jimmy Fordham** was born in Berlin, Vermont. Growing up, Jimmy worked on local farms and fished the Dog River. He has lived and worked in the Central Vermont area for years. Jimmy's an excellent addition to the VNRC office as Office Manager and Administrative Assistant to the Executive Director. Jimmy's great personality, good humor and energy keeps the VNRC office running smoothly. Please come by and meet the voice behind the phone!



*Tucker and Jimmy Fordham*

**Matthew Mortier** was born in Missoula, Montana and lived in California before coming to Vermont in 1987. Though not completely a native, his love for Vermont and the environment led him to Tufts University, where he received his Bachelors of Science in Geology and Environmental Policy. He is currently pursuing his Masters of Studies in



Environmental Law at Vermont Law School and serving as a reading tutor for the 1st grade at the

*Matthew Mortier*

South Royalton School. Matt has also spent the last 4 months interning with the VNRC and will continue to do so over the course of the summer. He is currently spearheading a comprehensive investigation/evaluation of Vermont's current Agriculture Nonpoint Source Pollution Reduction Program.

**Patrick Berry** has joined VNRC as the new Communications Director. Patrick graduated from Middlebury College with a B.A. in 1991 and earned his Master's Degree in Environmental Science from the University of Montana in 1999. His work experience includes independent consulting with the Montana Department of Fish, Wildlife and Parks, Montana Trout Unlimited and the Clark Fork Coalition. He has taught Introductory Environmental Science at the University of Montana and served as a fly fishing guide in Wyoming, Montana and Idaho. Patrick's outdoor hobbies include biking, fishing and bird hunting. He and his wife Brooke currently live in Waterbury, VT.



*Patrick Berry*

## VNRC's SETTLES WITH STOWE MOUNTAIN RESORT

Last year, Stowe Mountain Resort proposed a significant new development on the slopes of Vermont's highest peak, Mount Mansfield. VNRC, RIPPLE, VPIRG and CLF— all parties in the Act 250 proceedings—negotiated modifications to the project that they, the Agency of Natural Resources and Stowe Mountain Resort found acceptable and believe are compliant with state law.

The agreement includes:

- a significant reduction of the size and concentration of the overall development
- a conservation easement for the Pinnacle Brook Area
- strict water quality standards for snowmaking withdrawals
- a water quality monitoring program
- limits on pesticide use and monitoring of pesticide management practices
- doubling the SMR contribution to the Stowe Trolley system
- continued traffic monitoring and potential additional trolley funding

"At risk was the enormous public investment Vermont has in Mount Mansfield, its Summit and associated ecological and scenic qualities. If Stowe Mountain Resort were permitted to overdevelop this area, the public's use and enjoyment of Mount Mansfield State Forest and Campgrounds, Smugglers' Notch Scenic Highway, and the Long Trail would have been severely diminished," remarked Elizabeth Courtney, VNRC Executive Director.

VNRC is involved in the Master Planning Process at the Killington and Stratton ski areas. It is doubtful that a settlement such as the one at Stowe will take place at either area.

# Too Much

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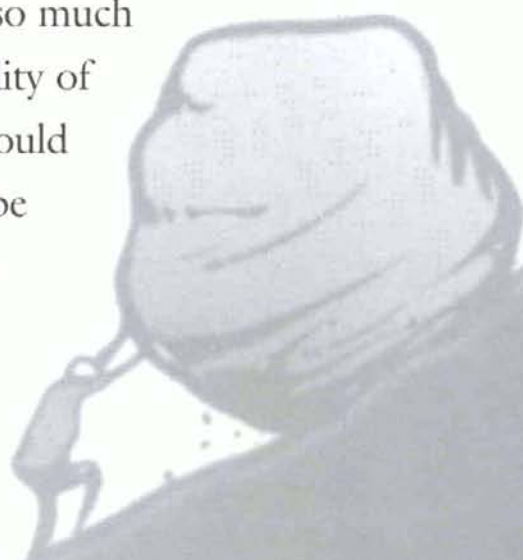
# Too Little?

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*Vermont Regulators Push The  
Enforcement Rock Uphill*

By WILL LINDNER

Talking to a biologist, you can come away with the impression that wetlands are the primordial source of life. Biologists love wetlands. Though vexing to the poorly shod pedestrian, these soggy, sometimes submersible tracts contribute so much to the stability of the environment that life could be imperiled were they to be blotted out of existence by human development.





And yet, like some mild-mannered Clark Kent, wetlands take the humble disguise of swamps and marshes—neither pond, lake nor forest, but something dankly in-between. You can't comfortably walk in wetlands, and most of the time you can't boat in wetlands. To the unappreciative eye, they are desolate places of stunted fir and rotting poplar, brightened only by yellow clumps of cowslips in the spring and the crimson epaulets of red-wing blackbirds swaying on cattail stalks.

Ah, but to the biologist, wetlands are systems. They swell to contain storm water, nature's way of preventing floods and preserving stream banks from erosion; they replenish aquifers; they safeguard water quality downstream by chemically removing nutrients and allowing sediments and organic matter to settle; they provide respite for migrating waterfowl, linking the world's arctic and equatorial habitats. Vermont wetlands moderate water temperatures to provide safe spawning and feeding grounds for northern pike and other fish. In fact, wetlands host a vast and interdependent community of mammals, insects, amphibians, reptiles, birds and fish, preserving the diversity so important to each species' survival.

That's why federal and state governments have laws to protect wetlands. And it's why it constitutes a serious breach of our laws and the laws of nature when someone comes along and "beautifies" a wetland by plopping a house down, bulldozing and filling a wetland to turn it into nice, civilized, dry ground or dredging the wetland to make a swimming or trout pond.

It happens. In 1995 a person who had purchased two lots in Jericho Center that included a Class Two wetland (protected under the Vermont Wetland Rules) began constructing a two-story house atop an elevated basement, with a pitched roof. An assistant wetlands coordinator for the Department of Environmental Conservation (DEC, located within the state Agency of Natural Resources) caught wind of the project, visited the site and concluded that the construction was taking place within the designated wetland. She notified the property owner, who sought to obtain a Conditional Use

*"The precedent  
shouldn't be set  
for developers  
to do what they  
want and  
then ask for  
permission later."*

Kim Kendall

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Determination (CUD) permit after the fact—applicants are supposed to apply before undertaking a project with potentially injurious environmental effects—but meanwhile continued construction through to completion.

The end product was a highly visible, starkly white, 30-foot tall human intrusion in an ostensibly protected natural area. Fill was imported and graded ("making it difficult to determine where the actual wetland and buffer zone used to exist," according to a Water Resources Board ruling on the project), and a deck was built overlooking the marsh.

Assessing its impact, the Board noted: "Domestic human activities such as opening and closing home and car doors, vehicle noise and movement, the presence of domestic animals and children playing . . . are incompatible with wildlife use of adjacent wetlands. Many species of birds and mammals are . . . sensitive to (or) intolerant of human activity during some period in their annual life cycles. This is the most important wildlife-based rationale for maintaining a suitable undisturbed buffer zone between residences and wetland habitat."

In another instance, in 1999, a landowner in Winhall diverted a small brook passing through his property, drained and graded a Class Two wetland, and used the excavated fill to transform

the parcel into a field for grazing a dozen or so head of cattle. (If the livestock operation can by some stretch be classified as "farming," the landowner, an executive in New York City, cannot be called a "farmer.") After the DEC ordered the landowner to halt work and begin restoring the wetland, he protested that he was only changing the property back to its former condition as a "working pasture." The case file contains a letter in which the property owner objected vehemently to the state's requirement that he re-establish the wetland, which he called an "overgrown beaver slum."

Historically, his claim regarding former use of the land was accurate. The DEC documented that it had "been part of a continuously operating dairy farm pasture from just after the Civil War until 1969," and that the past owner had cut the field annually until 1987. But nature took advantage of a decade's inattention and converted the frequently soggy meadow into an emergent wetland. Discussing the case, VNRC staff attorney Kelly Lowry dismissed the property owner's right to change it back again.

"Whether it has in living memory been a pasture or not is irrelevant," said Lowry. "The important thing is that it is a classified wetland, identified on the Vermont Significant Wetlands Inventory map, and before you take action that could change or violate that status you have to talk to the state first. Otherwise, it's against the law."

As in the Jericho incident, the Winhall landowner applied for a CUD after the fact. But though Lowry conceded that neither the harm nor the violation may have been intentional (there is abundant ignorance about wetland rules and permit procedures, and even about the environmental value of wetlands), he hoped the state would not too easily forgive and forget.

"The property owner destroyed an entire wetland," he pointed out. "That has egregious consequences for the watershed and ecosystem."

It was not an easy case for ANR officials. The landowner's outrage at being

*continued on next page*



subjected to rules that he claimed to have been told were not applicable to his wetland alteration was expressed in a personal letter to two state senators. Whether through their intervention or by some other means, the New York executive gained the state's attention. In a letter dated January 11, 2000, an official in the Water Quality Division laid out for him in meticulous detail the information he should provide in his after-the-fact application for a CUD.

That brought this written response to the state official from VNRC attorney Lowry and staff scientist Kim Kendall: "It is altogether unclear why your office essentially completed (the applicant's) CUD application. The implications of this inexplicable turnabout are troubling."

"Normally," Kendall explained later, "someone would have to hire a consultant—a wetlands expert—to do that work, and normally it would have to be approved before the project happened. The precedent shouldn't be set for developers to do what they want and then ask for permission later."

VNRC submitted written comments recommending that he be required to restore the wetland.

Fortunately, that's what happened. The latest development in the case was a formal decision rendered by the DEC on June 8 denying the petition for a CUD. It noted that the farming exemption to Vermont's wetlands rules applied only to lands in production when the rules became effective, on Feb. 23, 1990, while the applicant's property had last been cut in 1987. Furthermore, the department found that the alteration of the parcel had caused "undue adverse impacts" on nearly all of the crucial wetland values.

That was essentially the same conclusion the department had reached a year earlier regarding the house on the Jericho property. Applicants who are denied a CUD can appeal to the Vermont Water Resources Board, which is what the Jericho landowner did (and what the Winhall landowner may choose to do). But on March 15, 2000, the board affirmed the department's decision in Jericho and denied the CUD.



*Wetland property in Winhall before grading and filling.*

A potential implication of that ruling, though not the only conceivable outcome, is that the house will have to be dismantled and the land restored to its natural condition—a serious and costly consequence for the landowner. But the board noted, "it would be imprudent public policy . . . to afford any advantage to an applicant for an after-the-fact CUD. Such an approach would only serve to encourage developers to construct first and seek approval later."

That said, the fact is that the Water Resources Board has no enforcement power. Enforcement falls either to the ANR's Enforcement Division or the attorney general.

"The case landed on my desk a couple weeks after the appeal period had passed," said Salvatore Spinosa, director of the ANR's Enforcement Division, in May. "Right now we're at the stage where we're evaluating whether we should proceed with it or allow the attorney general to handle the case. Obviously, the Water Resources Board's ruling had a clarity about it that would limit the range of options, to say the least."

But until the other shoe drops, there remains—five years after it was built—an inappropriate, illegal house standing in the marsh in Jericho.

#### **WINNOWING COMMITMENT**

That house, however, and the converted pasture in Winhall, may be doomed. VNRC Executive Director Elizabeth Courtney believes the state could not send a more important message to developers in order to blunt the impulse to build now and apply for permits later.

"The agency is on the right track with the Winhall decision," Courtney said, "for discrediting the assumption, which is too prevalent in Vermont, that the cost of doing business any way you want is simply to pay a fine," said Courtney. "This decision drives it home that that you can't count on getting leverage for your project by getting your foot in the door first; and you can't count on getting the agency to allow you to mitigate your violation by contributing money to some other environmental project. Here, the applicant is being required to undo what he did —





*Wetland property in Winhall after wetland alteration.*

restore to their original condition the resources he disturbed.

"That's a very different message to be sending to potential developers."

However, Courtney said important concerns remained about enforcement of Vermont's environmental laws.

- Do the agencies charged with enforcement—primarily the ANR Enforcement Division, the Environmental Board, the Office of the Attorney General and the Department of Agriculture, Food and Markets (DAFM)—have the human and financial resources needed for the job?
- Is there sufficient political leadership to elevate the environment to the position it deserves in the pantheon of important state issues?

The latter concern is remedial to some extent in the voting booth.

"We live in a democracy," said Courtney, "and the only way we're going to have people in office who are committed to environmental stewardship is to elect them. We need to get voters thinking

about the connection between the health of their environment and who they vote for."

Courtney said she was disturbed by the paucity of environmental champions in statewide and local leadership arenas, especially during the greatest economic boom Vermont has seen in decades. Wealth is power—in this case, potentially, the power to protect the natural resources that sustain us.

"That our leaders are shirking the environment at this time reveals a kind of arrogance that I think is atypical of Vermont. The traditional Vermont ethic of caring for the land implies a level of humility, an acceptance that there is a force at work here that we need to respect. Vermonters have had that humility for generations."

While financial resources in government aren't bottomless, Courtney was also troubled by a pattern of shrinking commitment of money to the Agency of Natural Resources during the past decade.

"Ten years ago we saw 3 or 4 percent of the budget being spent by the agency," she said. "Now we see 2 percent. In absolute dollars, spending has increased,

but at a disproportionately low rate compared to other agencies."

That winnowing commitment has Courtney worried about a domino effect.

"If there are not enough financial resources to empower an agency to enforce the law equitably across the state, then that agency has to determine where to turn a blind eye and where to focus its attention. What's going to fall through the cracks?

"If people perceive that there are many projects, many violations of environmental laws, falling through the cracks, those laws will lose credibility. Then respect for the law will erode. Potentially, that's the beginning of a process of unraveling, where the Legislature starts repealing environmental laws because people have no respect for them anymore. And then our controls on development and environmental stewardship are lost."

## **'YOU DO THE BEST YOU CAN'**

The bureau chiefly charged with investigating violations of Vermont's environmental laws and assessing appropriate penalties is the ANR's Enforcement Division, under the leadership of Salvatore Spinosa. The division derives its authority from Act 98, the 1989 Uniform Environmental Law Enforcement Act, which includes in its statutory objectives "prevent(ing) the unfair economic advantage obtained by persons who operate in violation of environmental laws" and "provid(ing) for more even-handed enforcement of environmental laws" (10 V.S.A. Sec. 8001). Another objective is to "establish a fair and consistent system for assessing administrative penalties."

The division's purview extends to violations of some two dozen Vermont statutes and their pertinent regulations. They cover issues as varied as air quality and well drilling, low-level radioactive waste, provisions pertaining to mobile home parks, stream alterations and underground storage tanks. The first stages of enforcement include contact with the alleged violator and negotiations aimed at achieving an "Assurance of Discontinuance" of the

*continued on next page*



infraction. Cases that proceed beyond that stage are litigated in Vermont's Environmental Court (created under Act 98 in 1995).

"In all, the water medium is probably the most active for us," Spinosa said. "Violations associated with the state's waters, I would say, are predominant."

Water-quality violations related to farms sometimes fall to the Enforcement Division, although it is primarily the agriculture department's job to see that farmers comply with state and federal clean-water statutes. "Usually it comes down to how the (illegal) discharge is characterized," Spinosa explained. "If it's a point source discharge into the waters of the state, like a pipe running from the milk room into a stream, it's ours. If it's a non-point source discharge, it's theirs (the DAFM's)."

Enforcement Division efforts also overlap somewhat with those of the Vermont Environmental Board, which oversees Act 250. But it is a cooperative arrangement, formalized in a Memorandum of Understanding that calls on the division to devote up to 35 percent of its investigative efforts to alleged Act 250 permit violations. John Hasen, chief counsel for the Environmental Board, explained that an environmental faux pas that runs afoul of an Act 250 permit condition will often constitute a violation under ANR rules as well.

"We don't have an attorney at the Environmental Board just for enforcement," Hasen said. His legal staff is consumed mostly with appeals, declaratory rulings and jurisdictional decisions pertaining to cases from the district commission level. Hasen retains an interest in enforcement from his 13 years in the attorney general's office, and estimates that he spends about 10 percent of his time on enforcement. "We have the district coordinators prioritize their (violation) cases, and those are the ones I do."

"But," he observed, "Act 250 rarely gets criticized for enforcement. A lot of what the Legislature is concerned about is the time and expense it takes (applicants) to go through the Act 250 process, and a part of that time is the time a case is

*"We forwarded six or eight referrals last year to FERC, and the responses were all let-them-off-the-hook-type responses. It's very discouraging when you know there's environmental damage and somebody's not operating the way they're supposed to."*

before the Environmental Board. The Legislature has made it clear they want the process to move quickly, and we move it quickly. As a result, there's less time to do enforcement. That's the reality, so you do the best you can."

Hasen therefore relies on the Enforcement Division to pick up the slack, as well as the attorney general's office, to which he turns for the larger cases where more is at stake both for the state and the alleged violator.

"Sal has been really good," Hasen said. "When I've got a case, and it's a mixed case between Environmental Board and ANR jurisdiction, I say 'Great, let Sal take it.'"

For his part, Spinosa said that the Enforcement Division was adequately staffed for the job. The division employs eight field officers and a chief of investigations; the legal staff consists of three attorneys, including Spinosa.

"Right now I would say, within the confines of this division, presently we do have the resources that we require to do the job," said Spinosa. "I expect us to remain strong for the purpose of continuing with enforcement of environmental violations, no matter what they are or where they occur."

## GMP's FREE RIDE

Not everyone shares Spinosa's confidence. There are many in the state who believe both the permitting and enforcement processes in Vermont are too subject to political and economic influences (see "The Jury Is Out", page 12). If you're Husky Ltd., or the Mt. Mansfield Co.—a large industrialist and a major destination resort, respectively—state officials tend to lose their objectivity, these critics say, and become facilitators, overt or covert, of your projects.

And in other regulatory realms, people are less confident that critical laws are being enforced and environmental resources protected. There is little effective oversight, for example, of Vermont's licensed hydroelectric dams. They are regulated by the Federal Energy Regulatory Commission (FERC), because politicians in the early twentieth century considered the public's interest in hydropower to be so overriding that they usurped state control over the generating stations.

But FERC has grown distant, like an absentee landlord. It's hard to get the agency's attention. State hydrologist Jeff Cueto's office issues the water quality certificates that power companies need to qualify their dams for FERC licenses. Cueto believes the legal authority exists for the state to pursue remedies when companies damage riverine conditions by mismanaging their dams, but the resources aren't available.

"This is Vermont," he said. "It's not like we have a humongous staff here. It's just basically me and one other person, and we're very busy issuing permits."

Cueto experienced the limitations of this arrangement during the spring and summer of 1999, when Green Mountain Power Corp. violated its federal license by repeatedly reducing the volume of the Winooski River below minimum-flow conditions at the company's Essex 19 power station—once even drying the riverbed completely. The federal agency seemed unmoved by the problem.

"We were disappointed . . . because those were obvious and significant violations," said Cueto. "We sent them a fairly comprehensive review of our take of the



reasons behind the violations. We felt this was not a trivial case. Real environmental damage was done."

Prodded by Cueto, FERC renewed its investigation of GMP's performance in the Winooski, and as it happened, more violations occurred while the feds were watching. In the end FERC found GMP responsible and indicated that the violations would go on the company's record.

"They ended up with a reasonable technical review and a good understanding of the violation," Cueto said of FERC, "but there wasn't any penalty involved, and I think that was unfortunate."

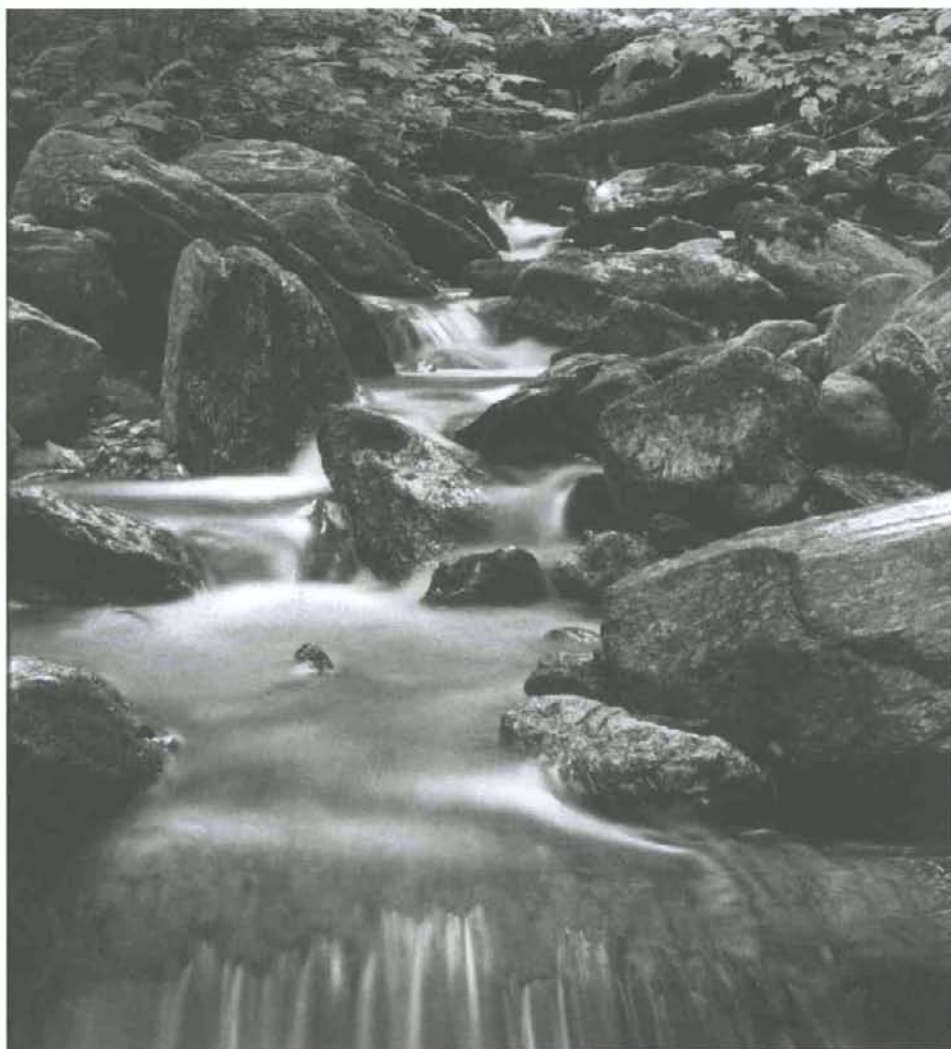
Said Cueto, "We forwarded six or eight referrals last year to FERC, and the responses were all let-them-off-the-hook-type responses. It's very discouraging when you know there's environmental damage and somebody's not operating the way they're supposed to. You think there ought to be some kind of punishment here."

### **SURPRISE! IT'S THE MANURE!**

Perhaps no other economic endeavor in Vermont, however, presents as great an enforcement challenge—nor poses such extensive and complex environmental hazards—as agriculture. As VNRC reported in its Summer 1999 issue of the *Vermont Environmental Report*, Vermont agriculture, and dairy farming in particular, is the single greatest cause of chemical and biological pollution of Lake Champlain.

Contaminants, including phosphorous and *e.coli* bacteria, enter the lake through its tributaries, which in turn are polluted by their tributaries and by indirect (non-point source) discharges through groundwater.

And the main cause of it all is manure. The DAFM, in its 1999 End Of Year Report on its Non-Point Source Pollution Reduction Program, said its personnel had performed 70 investigations of suspected violations and confirmed 20 violations of Vermont's mandatory Accepted Agricultural Practices. The most common offense (13 incidents) was violation of the ban on land application—spreading manure on frozen fields—during the winter months. Other activities, whether purposeful or incidental, also allowed for dis-



charges of contaminated water.

Of greatest concern to the environmental community is that the number of large farming operations, with dairy herds numbering 700 cows and more concentrated on land perhaps without sufficient acreage to safely handle their waste, are increasing in Vermont, even while the DAFM seems to be struggling with its current enforcement responsibilities. VNRC staff scientist Kim Kendall was involved with a case earlier this year in Richford where, responding to calls from concerned citizens, she took water samples from a ditch near a farmyard by the Mississquoi River.

"I took the samples to a lab and found high levels of bacteria—off the charts, really, too high for the lab people to count,

with high nutrients and high turbidity readings as well," said Kendall. "This stuff ends up in Lake Champlain."

Kendall felt that the DAFM's response was defensive ("In working with the ANR at least there is a respectful relationship; we talk scientist-to-scientist, and get something done"), and in the end disappointing.

"They determined there was absolutely no problem. What I was talking about was a direct discharge. The farmer would need a permit to do that. (The DAFM) ignored it. They said I shouldn't be sampling after a rainstorm. Either they don't have people who understand what a discharge is, or they are ignoring problems."

The case gained some notoriety, and



the DAFM eventually required the farmer to install a lining in his manure pit. But even then, Kendall said, the department okayed a clay liner rather than a synthetic one which the Natural Resources Conservation Service (NRCS) had recommended.

"The department thinks it is protecting farmers from people like VNRC, but in the long run they are hurting farmers," said Kendall. "There are stringent rules on water protection coming down the pike at the federal level. I would rather see Vermont's farmers prepared and getting help from the state, rather than being forced to clean up their operations at their own expense in a year or two, and possibly being driven out of business."

Matt Mortier, an intern conducting research on agricultural contamination for

VNRC, believes DAFM programs are lacking in outreach, education and enforcement. He has also found widespread opinion that the Accepted Agricultural Practices (AAPs), on which farmers hang their hats to prove compliance with state water quality standards, are not stringent enough, implemented properly, and often simply are not understood for them to be effective.

Still, the environmental community sympathizes with a department (the DAFM) which has enormous enforcement responsibilities and inadequate resources to carry them out.

"Somehow, the state needs to fund the department's effort to administer and enforce the AAPs," said Mortier. "Fund it; give it the resources to do the job right,

and then see if they work."

## A CHOICE

The same could be said in general about all environmental enforcement efforts in Vermont. The people who are confident that regulators have what they need to carry out their enforcement duties are few and far between. More common is the impression that investigators are being asked to do too much with too little.

And it's important to note that in a time of supposedly unprecedented wealth, shortchanging enforcement efforts represents a political choice that is being made. When people are denied the resources they need to do a job, they are tacitly being instructed to fail.

# THE JURY Is OUT

BY WILL LINDNER

**T**here is an adage, brimming with cynicism about journalistic ethics, that says, "Never let the facts get in the way of a good story." I pondered that adage with a troubled conscience as I studied the interview notes and documents I had assembled for a story VNRC asked me to do on the state of environmental enforcement in Vermont. Rigid adherence to "the facts"—on-the-record comments and formal reports—would compel me to deliver a congratulatory slap on the back for the state's enforcement efforts. Certainly there were people working hard at their jobs, dedicated to protecting the environment. But to write the story that way seemed misleading at best, deceptive at worst. For I was, at the same time, just a few for-attribution comments away from what seemed to me a truer, more complex story. But those comments eluded my grasp.

What to do? As I gnawed on this dilemma, my mind kept wandering to an image. I imagined...

... a security officer, at his post outside the jury room, who hears a knock from within and opens the door. Facing him is the foreman, white hair mussed and tie loosened, and in the background the rest

of the jury members sit around an aged oak table littered with papers. Some have pushed their chairs back and have their hands folded in their laps. One woman, leaning her elbow on the table, supports her head with a hand at her temple. She stares at the scratched wood surface, holding her glasses limply in her fingers.

The loud voices the officer had heard earlier are now stilled. Fatigue has entered the room.

"Can I help you?" he asks.

"We don't seem to have the tables and summaries from the agency's reports to the Legislature," the foreman says.

"Would you mind getting them for us?"

"Not at all," says the officer. "Is there anything else?"

"Yes," answers the foreman. "We'd like to see the Act 250 Enforcement Tracking Report again, please."

"Certainly." The officer closes the door and returns to the courtroom, quiet now that the arguments have ceased and the attorneys and witnesses have withdrawn to the local pubs and eateries. He gathers the documents off the evidence table and carries them back to the jury room. There, he sets them on the table and withdraws, closing the door behind him.

The jurors then begin again the task of sorting through all the he-said/she-said and trying to figure out where the truth lies:

Do the agents who are sworn to enforce Vermont's natural resource protection laws faithfully and equitably carry out their duties? Do they track down every reported violation of land-use permits, discharge into the waterways, unauthorized construction and other abuses?

And if so, what becomes of their reports? Are they wielded aggressively by department superiors bent on enforcing compliance by developers?

Or, somewhere along the line, does the steam run out? Do the reports become just so much paperwork stuffed into file cabinets? Do Vermont's environmental foot soldiers get the message, directly or indirectly from above, that the business of Vermont is business, and that their job is to facilitate the greenbacking, more than the greening, of Vermont?

## NUMBERS

The annual "Report To The Legislature Regarding Act 98—The Uniform Environmental Enforcement Act Of 1989" runs about seven pages long. A



provision in the act requires the secretary of the Agency of Natural Resources to compile the yearly report, replete with statistics on compliance and enforcement.

The jurors spread three of these annual reports on the table and study them—1997, 1998 and 1999. They can see that the agency's Enforcement Division, with its eight investigative officers, keeps busy. Look at Table B, "Summary of Citizen Complaints": 1,411 complaints to the division in 1997; 1,652 complaints in 1998, and 1,478 in 1999.

(Most environmental investigations derive from citizen complaints. And yet, says VNRC staff scientist Kim Kendall, "People with concerns about farm pollution often call VNRC because they don't want to call the agriculture department. The first thing the department asks is 'What is your name and address?' People in small towns don't want to give their names; they don't want to be seen as ratting on their neighbors. And they think investigations are the responsibility of the department. So they call people like me." And it's not just agriculture. Citizen complaints pertaining to ANR and Environmental Board issues also find their way to VNRC and other advocacy groups. Therefore, the complaint lists in the Enforcement Division reports are not conclusive.)

The complaints allege Act 250 permit violations, air pollution events, hazardous material spills, wastewater mismanagement, stream alterations, illegal discharges, erosion caused by poor logging practices, and other deeds that alarmed citizens enough to inspire them to call.

The reports also indicate, in general terms, the outcomes of the division's enforcement efforts. In 1999, the division entered into 44 Assurances of Discontinuance—negotiated agreements by which respondents agree to stop doing what they shouldn't be doing. (Vermont's Environmental Court is the forum for disputing allegations.) These AODs can include fines. The 1999 report lists

"Penalties Assessed" for the 44 AODs at \$169,280, and "Penalties Collected" at \$154,305, although the latter included an undefined amount collected from previous years. There were three Emergency Orders issued in 1999 for violations posing immediate threats. No penalties were assessed for two of these emergency orders, while in the third case a \$10,000 penalty was put in an escrow account.

The division also referred 11 environmental investigations to the attorney general for civil or criminal prosecution.

The patterns seem roughly similar from year to year: The 1998 annual report, for example, showed 50 AODs issued, \$216,700 assessed in penalties and \$130,590 collected, and two Emergency Orders issued with no penalties assessed or collected. ("Respondents"—a.k.a. "violators"—can also contribute money to environmental projects in lieu of paying fines.)

Sitting in the jury room, the men and women wonder what all this proves. Consider 1999: those 1,478 citizen complaints appeared to yield 44 AODs, three Emergency Orders and 11 referrals to the Attorney General (or were some of those 11 cases holdovers from 1998?). Doing the math, that implies that one case in 25 was valid (or enforceable—though maybe some people just said, "Okay, I'll quit doing that"), and that the average penalty assessed was about \$3,800, with far less collected. In his written summary, however, ANR Secretary John Kassel drew these

optimistic conclusions: "Our relationship with the Department of Forests, Parks and Recreation, for whom we handle both Acceptable Management Practices and 'Heavy Cut' cases, continues to develop soundly... Although we received fewer complaints this year than last, more were closed and fewer are pending... We believe that our work meaningfully advances the interests of environmental and public protection and expect to further expand and refine our operations..."

"Well, let's look at the Act 250 Enforcement Tracking Report," the foreman says.

What stories would it tell? They know the Environmental Board is too busy expediting permit cases to undertake significant investigations, and that the board gets help from ANR enforcement officers.

The jurors look at 1999. The report lists 12 enforcement cases. Largely, the violators were companies or business, not individuals. Of the eight cases handled within Act 250, most were settled with Assurances of Discontinuance. Fines were levied and collected in three cases, totaling \$6,875. Four violators agreed to contribute money to other environmental projects.

Numbers... But what do the numbers mean?

Clearly they refute charges anyone might make that Vermont's environmental enforcement personnel don't do anything.

The jurors are inclined to believe that the officers in the field go about their work with conviction.

But it's harder to prove a negative. The numbers don't explain the investigations that didn't have an enforcement result.

And the jurors are troubled by some of the things the judge had told them to forget.

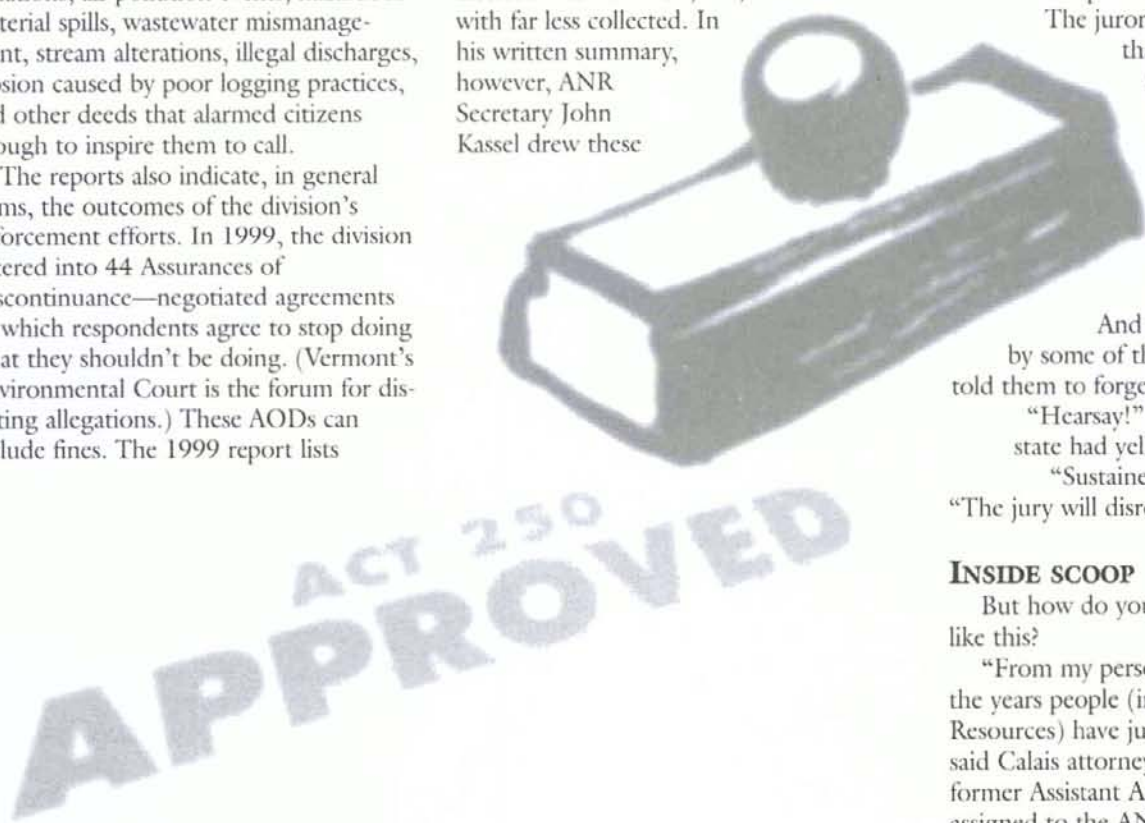
"Hearsay!" the attorney for the state had yelled more than once.

"Sustained," the judge had said. "The jury will disregard."

## INSIDE SCOOP

But how do you disregard comments like this?

"From my personal point of view, over the years people (in the Agency of Natural Resources) have just basically given up," said Calais attorney Stephanie Kaplan, a former Assistant Attorney General assigned to the ANR (1982-1986) and





executive officer of the Environmental Board from 1986-1994. "The agency has changed, from where it originally tried to protect the environment to (now) issuing permits. That's what they do. They issue permits and make things as easy as possible for developers. The Environmental Board has done the same. It's turned into an economic development agency. It's heartbreaking."

In her practice, Kaplan often represents individuals and citizens groups in Act 250 proceedings and zoning cases.

"The main thing, from my perspective, is that there's interference from the administration," she said. "People who know that first-hand would never talk about it publicly. One thing people say is there is interference and telephone calls: 'Don't go too heavy on so-and-so, go light on so-and-so.'"

"Most of the (district) commissions rarely say no (to an Act 250 applicant). There's an atmosphere, created by the governor publicly and I expect privately, that they are not expected to obstruct business. That's the sense you get."

Hearsay, yes.

But others say the same thing ("All we do is catalogue the development of Vermont"), though they refuse to be identified because "there's no belief that talking to the press changes anything." A former chair of the District 5 Environmental Commission, Rick Yeiser, agrees at least to this much: "Environmental administration and enforcement is far too politically charged."

And there was this implication, somehow more nefarious, of lukewarm enforcement: that district commissions will omit conditions on an Act 250 permit that ought to be included, because they know the conditions will not be enforced. Why cheapen the process by adding terms they are certain will be violated?

The jury wonders if the process isn't cheapened already, if the very concern about lack of enforcement colors permit decisions.

However, Darlene Palola of Winhall, chair of the Stratton Area Citizens Committee, said her objection is not that there is no enforcement, but that it is ineffectual against wealthy violators who barely notice the penalties they pay. For 15 years, SACC has fought vigilantly to protect upland streams and rivers from degradation caused by expansion of the Stratton Mountain ski area. The group has been famously successful. But one

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It's heartbreaking."*

Stephanie Kaplan

infraction by Intrawest Corp., which owns the resort, still eats at her.

In 1996 Intrawest was allowed under its Act 250 permit to construct a bridge over a tributary to the North Branch, providing access for construction and marketing purposes to an area under development.

"It was supposed to be an expansion bridge, so there would be no abutments within 25 feet of the edge of the stream bank," Palola said. "But they didn't get the 100-foot span they needed. Instead, they got something shorter, so the construction crew put a pier in the stream to support the span. They had to alter their permit for the bridge to allow for this, so they went back (after the fact) to the district commission."

"The hydrologist and the fisheries people from the state were very upset. But the district commission gave Stratton the permit, saying that although they had done these terrible things there wasn't much they could do about it now."

SACC appealed to the Environmental Board, and won. Intrawest was ordered to remove the bridge and pay a fine. But the

pier still stands — though Stratton uses a different access to the development — because it was determined that removing it would only further the damage done to the stream.

What angers Palola is that the company was able to continue using the bridge all through the commission and Environmental Board deliberations. "We asked for a stay to prevent their using it, but it was denied," she said. And SACC, despite its standing in local environmental issues, found itself excluded from the Enforcement Division's process.

"The problem is the principle of the thing," said Palola. "If you just let (violators) keep what they've done and fine them, it's a message to all the developers: 'Go ahead and do what you will; we'll fine you, but what you gain will far outweigh the costs.'"

Peter Strong, president of the Conservation Society of Southern Vermont, wrote Gov. Dean in May 1998, expressing dismay over the Stratton bridge resolution. "There are lots of reasons to encourage the right kind of development in Vermont," said Strong. "Obviously, the 'right' kind should (practice) ... respect for the law and ... the environment. We are losing ours here at Stratton and have been for years. The fact that we also have to contend with ... governmental 'winks' makes our efforts to preserve Vermont's natural treasure difficult indeed."

As they ponder, the jurors remember something else they had heard: enforcement agents might levy and collect a fine, but few violators pay the ultimate penalty. As one person had said: "It's rare that they shut someone down."

Wearily, the jurors push their chairs back and look at each other, again.

"What do we make of this?" asks the foreman. "Are the stewards of the environment trying to enforce the law in Vermont? Or do they crucify a few little guys for show and let the powerful companies mold Vermont's landscape to their own will and purposes?"

No one says anything. Instead, they sigh and look out the windows, as if acknowledging that the real answers lay out there, in Vermont's woods and valleys, in its towns and on its mountains. And maybe no one will know for quite some time—until they see what will come to pass in those woods, in the rivers and lakes, on the shorelines and ridges.

Outside the room, in the quiet corridor, the security officer waits, and waits.



# CITIZEN ACTION FOR ENFORCEMENT

BY WILL LINDER

If it weren't for everyday citizens, the state agencies charged with enforcing Vermont's conservation statutes wouldn't have much to do. All of the enforcement authorities credit "citizen complaints" for the majority of the tips they receive about environmental violations.

Citizens have also proved to be effective advocates in violation cases. Since 1984, the Stratton Area Citizens Committee has worked to protect the upland waters of Winhall and Stratton against unsound development plans and permit infractions at the Stratton Mountain ski area. SACC has many victories, and the respect of the state's environmental community, to show for its diligence.

In Hyde Park, the Friends of the Green River Reservoir has worked hard to protect the newly established state forest there. The organization took an active role, first as peacemaker but later as an advocate for the wilderness area, in the fray that ensued when a landowner cut down trees on state-owned property to provide himself a view of the reservoir and an unauthorized boat launch. The case eventually went to the Attorney General's office, which on April 17 announced that the offender had pleaded no contest to criminal charges and was ordered to make full restitution. The plan calls for him to perform community service and to replant trees, at a cost of approximately \$36,000.

In Orange, a group of neighbors who live near the Bull's Eye Shooting Range provided photographs and testimony this spring when the Environmental Board conducted hearings on revoking the facility's Act 250 permit. The board had rescinded Bull's Eye's permit in December 1999 in response to the owners' alleged logging of trees in a 200-foot-wide buffer zone that was meant to protect neighbors

from noise and other hazards and nuisances of the operation. The owners appealed the revocation, but the residents, complaining of nerve-racking clatter and cacophony from the shooting range, made tough sledding for the appeal. The board's decision is pending.

Clearly, then, citizens are the driving engine behind many if not most environmental enforcement actions in Vermont.

But they do not have access to one of the most effective and direct means that citizens elsewhere employ for protecting the environment and their own interests. Vermont statutes do not provide for citizen lawsuits for environmental infractions.

"Citizen suits would be great for Vermont," said VNRC staff attorney Kelly Lowry. "As it stands, citizens don't have any private right of action in enforcement for violations of state environmental laws. If the state doesn't pursue an enforcement action against a party in violation, it's tough luck. VNRC can't take direct action, and neither can the neighbors. The state has all the discretion."

"I don't know when we'll ever get citizen suits," said Stephen Holmes, VNRC deputy director for policy. "We have unsuccessfully tried, over the years, to get citizen suits implemented in Vermont. The administration has been adamantly opposed, primarily because they think they're doing a good job and don't need any help from the public. We take a slightly different view of that."

Many other states provide people the right to sue for environmental infractions that personally affect them. And even in Vermont, citizens have access to a provision of the Clean Water Act that enables them to sue the Environmental Protection Agency for violations of the act, or to get the EPA to implement requirements of the act if the state has failed to comply with them—which, in some cases (com-



prehensive basin planning) it has.

But that's an avenue that thus far has gone largely unnoticed and unused in Vermont.

"Certain people who are opposed to the idea of citizen suits have blown the dangers out of proportion," said one attorney who asked not to be identified. "People think that if citizen suits are permitted you'll find citizens walking through the forest with a clipboard, seeking violations."

"The truth is, though, (suits) are not cheap to bring. I think the history has been, in the federal world where citizen suits can be brought under the Clean Water Act and the Clean Air Act, that suits aren't being filed willy nilly, with businesses going under from the cost of defending themselves."

If citizen suits aren't on the horizon, another means for pressing enforcement of environmental violations might be. VNRC attorney Lowry said the organization is in the early stages of a program designed to provide the information needed to get a better reading on enforcement efforts in Vermont.

"We plan to survey the state's permits under all the major acts—Clean Air Act permits, Clean Water Act permits, RCRA (Resource Conservation and Recovery Act) permits—and compare the existing permits with what's going on on the ground," said Lowry. "If we see significant non-compliance, then we'll decide what avenues to take."

It's a grandiose program, we know."

But with doubts in the air about the state of enforcement in Vermont, Lowry says, you've got to start somewhere.





# PUBLIC HEALTH ISSUES IN VERMONT

## *Sources, Repercussions... Solutions?*

By SHAY TOTTEN AND  
VNRC STAFF

When Jacques Beliveau notified state officials about a pollution problem in Lake Salem in Derby, he expected results. Two years after he filed his complaint, he is far from satisfied with the result, or with the way state officials handled the problem.

Lake Salem's water quality woes partly stemmed from manure runoff originating from a nearby farm. The neighboring farm responsible for the effluent was

owned by one of Vermont's largest dairy farm operators, Doug Nelson. Nelson had openly flaunted Vermont's new Large Farm Operation (LFO) laws in the past, specifically regarding several of his other operations. His unwillingness to adhere to state regulations forced the Vermont Department of Agriculture, Food, and Markets (DAFM) to seek compliance through court intervention.

DAFM also insist that farm runoff was not the only culprit contaminating the lake with an excessive nutrient load. According to DAFM, it was possible that

camp septic systems and a nearby trailer park were also contributing to lake's declining water quality. In the end, DAFM was forced to punt on the pollution problems in Lake Salem: regulatory control over a bevy of potential offenders fell under the jurisdiction of other state agencies. In the end, Jacques Beliveau vacated his camp on Lake Salem after 44 summers and doesn't plan to return.

Beliveau's dilemma underscores just how roughly Vermont's enforcement engine seems to be running-- even when public health is at stake. Nutrients from





farming operations, septic systems, wastewater treatment plants, and commercial and domestic pesticide application contaminate Vermont's lakes and streams with nutrients like E. coli and fecal coliform. In high enough concentrations, these contaminants become toxic and can be potentially fatal to humans. Unfortunately, as in the case with Lake Salem, the labyrinth of agency jurisdiction can confound efforts to effectively reach the ultimate goals of cleaning up sources of pollution and properly protecting public health.

Many citizens like Beliveau are keen to report potential environmental threats to

public health, but are often not entirely sure to whom they should turn. Each state agency has an area of jurisdiction and expertise. More than a half dozen agencies and departments handle the enforcement of air, soil and water pollution regulations, from the Attorney General's office to the Environmental Board.

If the nutrients originate from a farm, DAFM has the regulatory authority. If the contaminants come from other sources, the Agency of Natural Resources can step in. If the contamination affects public beaches, a third agency, the Department of Health has jurisdiction.

Here's a basic primer of agency jurisdiction when public health issues are at stake:

- **The Agency of Natural Resources (ANR):** The ANR monitors compliance for the majority of state laws and permits concerned with air and water quality, solid waste disposal, and forestry. The ANR often works in conjunction with lawyers from the Attorney General's (AG) office when pursuing enforcement actions. Lawyers from the AG's office also act on the behalf of Vermonters when lawsuits are filed at the federal level.
- **The Department of Health (DoH):** The DoH oversees human health regulations throughout Vermont, which include responding and preventing epidemiological outbreaks of disease, notifying the public of contamination from mercury and lead, and monitoring the water quality at public beaches
- **The Department of Agriculture, Food and Markets (DAFM):** The DAFM regulate all farming operations, including the use of pesticides and spreading of manure throughout the agriculture industry. In 1995, the legislature adopted enforceable Acceptable Agricultural Practices and in 1998 the Large Farm Operation law was passed to address the problems presented by industrial agricultural practices.
- **The Vermont Environmental Board (VEB):** The VEB is charged with both the oversight and enforcement of Act 250, Vermont's development and land use law. The board has an agreement with ANR to jointly enforce some regulations and to perform some site inspections.

Vermont's public health enforcement system, aside from occasional overlap in

jurisdiction, suffers from other maladies as well. There is a lack of solid coordination, most agencies are noticeably understaffed, and monitoring for compliance is poorly funded. "We simply lack the resources to do it all, but we must do it all," says John Kassel, former Secretary of the Agency of Natural Resources.

As in many states, the financial resources to monitor rivers, lakes, soils and forests for contamination by man-made sources are scarce. Kassel also noted that in the past lawmakers had been more willing to set aside money for major marquee programs, such as those inspired by the Clean Air and the Clean Water Act. It is much more difficult to entice those same legislators to fund data collection needed to sustain such programs today. Mr. Kassel also stated, "We don't have the resources to do all we would like, I will admit. And the area that is our biggest challenge is in monitoring . . . The nature of impairment is a hugely data intensive process. There are some waters that are impaired where you can tell pretty easily what the source of the pollution is. A lot of other waters are not so easy, and identifying the problem is only the first step."

Although we often like to think that Vermont affords us a perfectly pristine environment, sources of contamination that directly effect public health are far and wide. Three of the most pervasive threats to public health revolve around water quality, mercury contamination of fish and wildlife, and the continued long-range transportation of airborne pollutants from out of state.

## WATER QUALITY

Many Vermonters will forever remember the headlines of last summer. Excessive nutrient loads in Lake Champlain caused massive algae blooms that led to beach closures and dog fatalities. Lake Champlain's chronic pollution problems had finally threatened public health to the point of wide-spread public awareness—awareness that the fastest growing threat to our lakes and streams doesn't necessarily come from pipes dumping toxic effluent into our waters.

Diffuse non-point pollution emanating from farms and urban and suburban sprawl is the leading cause of concern regarding Vermont's water quality and environmental threats to public health. Some state programs are in place, and others are on the way, to combat the threat of non-point pollution, but it is



clear that efforts on this front need to be stepped up soon.

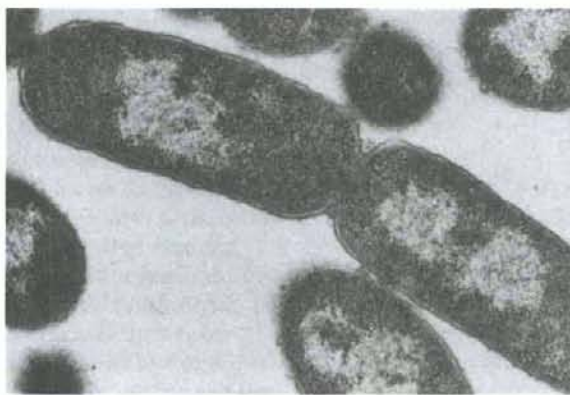
Vermont continues to struggle with sources of point pollution too. In July 27 miles of the White River were closed from Bethel to White River Junction when the Bethel waste-water treatment plant pumped raw sewage into the river. Only the solids were filtered out, and E coli levels were found far beyond the acceptable range. On the grounds that public health was at stake, the state advised all towns along the effected stretch to shut down the river to recreational use. Many Vermonters had assumed that such sources of pollution would have been abayed years ago.

The Department of Health has also closed Blanchard Beach, a once popular destination in Burlington, to public swimming for the past decade. Public health concerns precipitated by excessive toxic contamination ultimately led to its permanent closure, and it is suspected that nearby industrial operations was the source of the problems. Even when our own public health depends on the effectiveness of the state to prevent and clean up our waters, it seems like we go one step backward for every two steps forward.

## MERCURY

Mercury and other heavy metals continue to be found in ever increasing concentrations in a variety of fish throughout Vermont. A host of state agencies are looking into the problems including the Department of Fish and Wildlife (DFW), the Water Quality Division at the Department of Environmental Conservation and the Department of Health, the agency responsible for issuing all public health advisories.

As the level of mercury builds up over time in fish, or what is commonly referred to as bioaccumulation, the public health concerns increase as well. "Vermont did a comprehensive study of mercury levels in fish in 1970," reported Dr. Bill Bress, State Toxicologist with the DoH, "and studies since then have not shown any increase in the amounts of mercury in the fish." It's difficult to find comfort in this finding, however, when the



*e.coli bacteria*

DoH also issues annual widespread fish consumption advisories. Apparently, just because the problem hasn't been exacerbated, doesn't mean that Vermonters are safe to eat Vermont's fish.

The general advisory covers almost all species of fish throughout Vermont. It's even recommended that certain segments of the population, including young children and expecting and breastfeeding mothers, do not consume any walleye, any

Lake Champlain lake trout over 25", and any fish of any species in the chain of lakes along the Deerfield River. And it might take as long as 30 years before any significant drop in mercury levels in Vermont's fish might be detected with current environmental controls in place.

What's even more frightening is that fish in the chain of impoundments along both the Connecticut and Deerfield Rivers have recently been found to have up to twice the concentrations of mercury as fish in the rest of the state. It's believed that the drastic fluctuations in reservoir levels caused by peaking hydroelectric facilities account for the increased mercury. The Fifteen Miles Falls hydroelectric project on the Connecticut River, which includes three dams, is currently undergoing relicensing. And because of public health concerns regarding mercury contamination in fish in the reservoir, at least 8 separate state and federal agencies are now involved.

There is a debate as to where exactly the sources of mercury can be traced, but it's clear that there are a number of possibilities. The common assumption is that the mercury comes solely from sources outside of the state. However, Dr. Bress cites studies done by his department that reveal that "40% to 50% of the mercury in Vermont comes from sources within Vermont." Studies have shown that the major sources of mercury in the past were medical and municipal waste incinerators, but no such facilities currently operate in Vermont.

According to the DoH, other possible in-state sources of mercury include fluorescent light bulbs, high school chemistry supplies, and farm manometers-devices used to weigh milk. Vermont attempted to pass a law requiring mandatory labeling of fluorescent bulbs to inform consumers that such bulbs contained mercury, and must be disposed of properly. The lighting industry has filed suit against the state to prevent the implementation of such a law, and the matter is still in litigation.

There has been great success in removing mercury from schools,

## WHO TO CONTACT

*The following is a list of state agencies to call with prevention and enforcement questions concerning Vermont's environmental laws:*

**Department of Health 863-7598**

**Department of Agriculture, Food and Markets 828-2500**

**Attorney General's Office 828-3171**

**Agency of Natural Resources**

Secretary's office 241-3600

Agency Permits 476-0195

Enforcement Division 241-3770

Fish and Wildlife Enforcement 241-3727

Forest, Parks and Recreation Division 241-3670

Planning Division 241-3620

Pollution Prevention Hotline 1-800-974-9559

Waste Management Division 241-3888

Water Quality Division 241-3770

**Environmental Board 828-3309**

**Water Resources Board 828-2871**

**Governor's Office 828-3333**

**Hon. James Jeffords 223-5273**

**Hon. Patrick Leahy 229-0569**

**Hon. Bernard Sanders 862-0697**

**Sargent at Arms at the State House 828-2228**

*To contact your nearest environmental enforcement officer to report a possible violation call 241-3820.*

*If you are unsure of who to call or have additional questions, please call VNRC at 223-2328.*



and the DAFM is currently pursuing a grant-funded program to buy back the milk-weighing manometers, some of which contain as much as 10 to 12 pounds of mercury each.

## AIR POLLUTANTS

Despite 1990 amendments to the national Clean Air Act, (CAA) new research demonstrates that the CAA has not stopped the impacts of air pollution to public health. The Northeast is among the most vulnerable regions of the country to such impacts as it is downwind of the largest air pollution sources. It has been well documented that there is a direct link between the amount and toxicity of the emissions coming out of the stacks of the mid-west power plants, and the air quality in New England. The power and manufacturing plants responsible for the pollution that leads to such rain still pump thousands of tons of pollutants out of their stacks every year. This is a concern to both the ANR and the DoH, and is just one more example of the apparent overlap in regulation within the state of Vermont.

In addition to the problems caused by the consumption of fish contaminated with high amounts of mercury, scientists are saying that air pollution is causing an increase in: asthma attacks; premature deaths due to fine particulate air pollution or soot; and a change in our climate which could reduce agricultural production and increase the spread of tropical diseases.

The General Accounting Office in Washington D.C., issued a report which found that the so-called "cap-and-trade system" – a system that allows power plants to achieve regulatory goals by buying and selling "emission credits" – is not working to the benefit of Vermont and other Northeastern states. For example, Midwestern utilities continue to buy up and bank far more credits to discharge pollutants into the air than the power companies located here in the Northeast. This continuing net flow of emissions credits to the inland states does little to help the already damaged ecosystems of the east, such as the Adirondacks. It is difficult to find a solution when the air currents carrying the pollution simply keep drifting Northeast with the jet stream. Both the ANR and the DoH often find themselves with their hands tied to when it comes to dealing with an envi-

ronmental threat so difficult to tackle.

Earlier this year Vermont joined the other New England states in filing a lawsuit against several companies that own these highly polluting power plants. Even with such a lawsuit which recognizes out-of-state activity, it is important to again note that about 50% of the top ten toxic emissions (such as nitrogen oxide from cars and airplanes) come from in-state sources. Citizens and lawmakers need to invest in areas such as alternative transportation methods for the level of toxic emissions to decrease.

## PUT CITIZENS IN CHARGE?

While mercury and other pollutants from other states are difficult to regulate, in Vermont, changes could be made to ensure significant improvement. The state's public health laws might not be as weak if citizens could sue potential polluters.

If citizens were able to act on the behalf of the state to ensure individuals and corporations were abiding by public health laws, John Hasen, general counsel for the Environmental Board, believes he would

have much more time to spend handling enforcement cases. "Citizen suits," as they are called, are allowed in numerous federal laws and have proven to be effective. Such legislation has been discussed in Vermont, and introduced in almost each of the past five sessions, yet it has never been approved by lawmakers.

"I think it is something the legislature ought to look at," says Hasen. "While many critics of citizen suit [legislation] think it would open the floodgate of lawsuits, the fact is it won't. These types of lawsuits are simply too expensive to mount, but sometimes even the threat of a lawsuit can force a polluter into compliance."

As public health issues continue to escalate in Vermont, and people's awareness of problems because of blatant cases such as beach closings and dog deaths increases, hopefully public outrage will change the current status quo. The air we breathe, the water we drink and the food we eat are affected by toxic contaminants. It's time for a change.

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# 2000 LEGISLATIVE WRAP-UP

BY STEPHEN J. HOLMES AND KELLY LOWRY

## STORMWATER RUNOFF

The stormwater bill provided some light in an otherwise dark legislative session for environmental issues. The Vermont Natural Resources Council succeeded in its quest to see passage of legislation aimed at addressing the problems resulting from unmanaged stormwater runoff. A bill (which VNRC helped to research and draft) introduced by Senator Elizabeth Ready, Chair of the Senate Natural Resources and Energy Committee, made it through the legislature this session at the last minute tacked on to a house bill (H. 316) dealing with emergency procedures for gravel removal from streams to prevent flooding.

As the face of Vermont's landscape changes, VNRC has continued to help Vermonters meet the challenges that come with it. Polluted runoff from urban and suburban sprawl, considered by many to be one of the nation's greatest threats to water quality, has come to the forefront as a pressing issue that requires immediate attention. In fact, the Director of Vermont's Water Quality Division at the Agency of Natural Resources (ANR) described the problem clearly in his 1998 report to the U.S. Environmental Protection Agency on "Significant Nonpoint Source Pollution Issues:"

"Population projections [in Vermont] indicate that our developed areas will grow in size and, most likely, become more numerous as the traditional rural landscape is converted to urban/suburban uses. There is also growing concern over

cumulative effects of development in certain headwater areas. To address these circumstances, improved storm water management (i.e. practices and programs) and implementation by the state and municipalities are critical. The present day level of management devoted to this issue is not sufficient."

Historically, stormwater runoff has been managed in Vermont under the

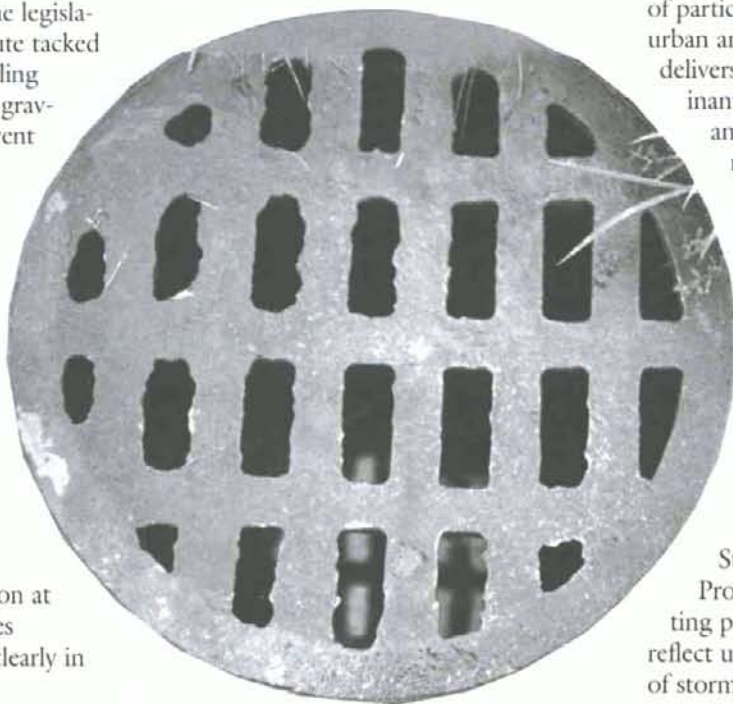
necessary to effectively manage stormwater. While the federal program now reaches development and land disturbance on sites over one acre, it only regulates stormwater runoff from urban and suburban areas with a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile. Thus, the NPDES program has little effect in Vermont: the Rutland area and the Burlington area are the only areas captured. Urban and suburban areas are of particular importance, however, as urban and suburban stormwater runoff delivers up to 3 1/2 times more contaminants per acre than agricultural runoff and up to 18 times more contaminants than forested land.

The state's water pollution control statute also did not provide the authority needed to reach all necessary sources. Under the old statute, the definition of "stormwater runoff" was exceedingly narrow, limiting ANR to regulate only "collected discharges from large scale developments to sensitive water quality areas."

ANR generated a set of Stormwater Management

Procedures to facilitate the permitting process, but the procedures do not reflect up-to-date scientific understanding of stormwater management and arguably extended the agency beyond its statutory powers. The old statute also did not contain any provisions regarding public education about stormwater, and did not provide for technical assistance to towns, villages, or municipalities.

The bill improves the management of stormwater in Vermont in several ways. First, H. 316 expands the definition of



federal Clean Water Act permitting program, called the National Pollutant Discharge Elimination System ("NPDES"), and under the state water pollution control statute. Unfortunately, neither the federal or state authority allowed ANR to reach all the sources



"stormwater runoff" more accurately and expansively. Second, it uses the current Stormwater Management Procedures as a floor for permitting, but allows the agency to develop updated standards incorporating the most recent scientific information and studies of stormwater management. Third, it improves upon the agency's current program by encouraging public participation, providing technical assistance for local governments and organizations, and requiring a technical guidance manual for stormwater control. Fourth, it clarifies the proper use of general permits, establishes permitting restrictions in impaired waters, and makes the stormwater program consistent with the requirements of the Federal Clean Water Act. Finally, the bill revives the basin planning process, and requires ANR to incorporate stormwater solutions into the process.

#### **VERMONT HOUSING AND CONSERVATION TRUST FUND**

The Housing and Conservation Trust Fund (HCTF) helps preserve agricultural and forest land, and contributes to the creation of affordable housing for Vermonters through grants to non-profit organizations and communities. The fund is administered by the Vermont Housing and Conservation Board (VHCB).

For Fiscal Year 2001 the VHCB will receive over \$11.5 million, an increase of more than \$1.7 million over last year's appropriation. The VHCB will also receive \$4 million in one-time surplus appropriations for emergency housing activities and an additional \$500,000 for home access improvements.

#### **MUNICIPAL AND REGIONAL PLANNING FUND**

In FY 2001, communities and regional planning commissions will receive over \$3.4 million. This amount is close to 20% higher than the FY 2000 appropriation.

Municipal planning grants, to be distributed under a competitive program, total \$764,000 compared to \$608,000 last year. Regional planning commissions will receive \$2.67 million, compared to \$2.3 million in FY 2000.

Additionally, \$382,000 will go to the Vermont Center for Geographic Information for enhancing statewide GIS capability.

#### **FUNDING FOR AGENCY OF NATURAL RESOURCES, ENVIRONMENTAL BOARD & WATER RESOURCES BOARD**

The Agency of Natural Resources had total expenditures of \$56.6 million in Fiscal Year 2000.

ANR will receive from all sources slightly more than \$57.4 million in Fiscal Year 2001, approximately \$200,000 less than requested. The Agency had requested \$11.07 million of this total in state General Fund appropriations, and will receive around \$10.82 million, an increase from the \$10.24 million it received in 2000.

VNRC was pleased to see the Agency receive an extra appropriation of \$250,000 to boost watershed planning initiatives around the state.

The Environmental Board and Water Resources Board will see slight increases in their budgets for next year. The Environmental Board requested, and received, \$2.14 million for FY 2001, up from \$2.01 million in 2000. The Water Resources Board's appropriation for next year is \$300,000, compared to \$256,000 in 2000.

#### **ACT 250**

The 30th anniversary of Act 250, the state's land use and development law, was marked by a major attack in the Vermont House of Representatives on the citizen-friendly process and substance of the law. To its credit, the Vermont Senate declined to take up the House-passed bill, and it died in committee.

The House Natural Resources and Energy Committee spent a significant part of the session reviewing Act 250 after a House summer study committee recommended a number of changes aimed at the perceived problem of permit appeals. VNRC presented research and testimony to both committees indicating that citizen appeals and appeals in general were not a problem in Act 250. Statewide environmental groups were involved in only three appeals between 1990 and 1998, and permitted parties like nearby property owners appealed, on the average, 3.5 times per year. Moreover, rates for all appeals have dropped significantly to around 3% of all permits in recent years.

Nonetheless, the House forged ahead with proposals to limit citizen access to the law. The most misguided of these was a proposal to make appeals to the environmental board subject to review "on the record". Under a system of appeals "on the record", hearings at the district commission level would become mired in a courtroom-like atmosphere that would only serve to alienate and intimidate Vermonters who wish to participate. Parties involved would have to more aggressively seek to employ rules of evidence and other formal legal devices to ensure the record is fully developed. This would make Act 250 less open, more formal and legalistic, more complicated and expensive for the average citizen and applicant, and could increase the time for getting a permit.

The bill (H. 784) proposed in the House would have placed more hurdles in front of citizens by making it more difficult in the Act 250 hearings to challenge permits granted by the state and municipalities. These permits, which are already given presumptions of compliance with some of the Act 250 criteria, could have only been rebutted with "clear and convincing" evidence, a much higher standard than the current rule – a "preponderance of the evidence."

The bill turned from bad to worse on the House floor. One amendment to the bill would have required that organizations applying for party status divulge personal information, including names and addresses of members. It is doubtful that this would have withstood a legal challenge, since membership lists are protected by the 14th amendment to the U.S. Constitution, upholding the rights of citizens to freely associate. Nonetheless, it was seen as an attempt to set up a dynamic for discouraging or intimidating would be challengers to development.

Another amendment proposed by Rep. Bob Helm would have virtually gutted the aesthetic criterion of Act 250 by exempting painting, landscaping, parking improvements, and snowmobile use.

Unfortunately, the legislature did not deal with any amendments which are needed to strengthen the law, such as review of cumulative impacts of development and full appeal rights for permitted parties.



Currently, Act 250 does not provide for review of the cumulative impacts of large-scale developments, particularly where there are two (or more) development projects in close proximity to each other which are going forward at the same time. Act 250 still is set up to review projects only on a case-by-case basis, rather than being able to look at the "big picture". This is a major shortcoming in the law.

At present there are two general classes of parties who may participate in Act 250 proceedings: statutory and permitted. Statutory parties include the applicant, state, municipality, and regional planning commission. Permitted parties include neighbors, local and statewide organizations and others who may be affected by the project or who may be able to assist the District Environmental Commission or Environmental Board.

Statutory parties may appeal Act 250 decisions to the Vermont Supreme Court. Permitted parties may only appeal to the Environmental Board.

Act 250 is an anomaly in this respect, since all other similar quasi-judicial boards like the Public Service Board, Water Resources Board, and even the Waste Facility Panel of the Environmental Board offer recourse to judicial review to parties with legitimate interests. All Act 250 parties should be granted the same appeal rights, and Act 250 should be on par with other similar boards with respect to appeals.

### ON-SITE SEWAGE DISPOSAL

After a 1999 summer study committee looked at the environmental and land use impacts associated with alternative technologies for on-site disposal of wastewater, there was hope that the legislature would enact comprehensive reform of Vermont's approach to managing on-site

septic systems. Once again, they fell short of the mark.

The study committee recommended, among other things: 1) Closing the 10-acre loophole in state subdivision regulations that allows lots over 10 acres in size to be developed without any state or local review of sewage disposal; and 2) Enhancing planning efforts at the local level to prepare towns for the impact of increased developable land with a 2-3 year lead time before implementing new rules for alternative on-site sewage disposal systems.

However, the House voted to proceed with the alternative systems without closing the 10-acre loophole and enhancing



planning. Alternative systems provisions were tacked onto a bill addressing failed potable water supply and wastewater systems in mobile home parks which had already passed the Senate. In the end, the conference committee decided to approve remedial language for failed systems in mobile home parks, limited exemption of accessory ("mother-in-law") apartments from certain permit requirements, and provisions for municipalities to allow density bonuses for affordable housing.

### CONSERVATION LICENSE PLATES

The conservation license plate program was scheduled to sunset by December 31, 2000. The legislature extended the program until December 31, 2005.

### DOWNTOWN BILL

An initiative to assist downtowns and slow sprawl was defeated in the House, as business and development interests fought against efforts to address sprawl. The Senate Natural Resources and Energy Committee spent a good deal of the session on a bill (H. 408) that originated in the House and dealt with increasing incentives to develop in designated downtowns. The Committee coupled the downtown incentives with provisions to reduce sprawl outside of downtowns.

The bill would have provided a number of additional incentives to develop in designated downtowns including tax credits for rehabilitation of historic buildings,

loan priority for sewer and water grants, and exemption from Act 250 fees. To protect the countryside, the bill sought measures to limit development around expressway interchanges and on ridgelines and to place higher priority on sewer and water projects that would not promote scattered, low-density growth and inefficient use of land.

The bill also contained a study committee to address the land use issues related to interchanges and

bypasses and to make recommendations on state and federal tax policies, budget expenditures and fees that could enhance downtowns and reduce sprawl.

### DOWNTOWN APPROPRIATIONS

Although the downtown bill did not pass, additional funding to assist designated downtowns was appropriated. Next year, \$1 million will be made available in grants and loans to municipalities and non-profit organizations to enhance downtown revitalization efforts. The money is to be targeted at physical improvements including public parking facilities, pedestrian access and mobility, property acquisition, rehabilitation of commercial and mixed-use properties, and streetscape and public art improvements.



Also, \$800,000 was added to the downtown transportation and capital improvement fund. Half of this amount will go to ongoing projects in Burlington, Brattleboro and St. Johnsbury, and the other half will go to eligible communities on a one-time basis, with a \$75,000 cap per community.

### DEVELOPMENT CABINET

Another consolation for the loss of the "downtown bill" was passage of a bill which formalizes the Governor's Development Cabinet. H. 209 officially creates the development cabinet comprised of the secretaries of administration, natural resources, commerce and community development, transportation, and the commissioner of agriculture. Reinforcing state planning and development law, the cabinet's purpose is to collaborate in support of Vermont's economic development in a way that conserves and promotes our traditional settlement patterns, working and rural landscape, strong communities, and healthy environment.

The legislation could breathe some new life into the state's planning law. The cabinet is instructed to work with all state agencies that have programs or take actions affecting land use to, among other things: encourage development in existing village and urban centers; administer tax credits, loans, and grants for water, sewer, housing, schools, transportation and other infrastructure and make expenditure of state appropriations consistent with the purpose outlined in the bill. The cabinet must also report annually on the activities of the Council of Regional Commissions, a body charged with overseeing implementation and coordination of state, regional, and local plans.

### TAX SHIFTING

The House Ways and Means Committee gave the tax shifting issue some consideration this year. However, because of partisan bickering in the House, neither a tax shifting study, nor a proposal to remove the sales tax exemption for non-agricultural pesticides, advanced.

However, a letter from the chairs of the House Natural Resources, Transportation, and Ways and Means Committee, requesting the Dean adminis-

tration to review existing government fiscal policies and make recommendations for changes in state tax policies, budget expenditures, subsidies, and fees that could be used to relieve environmental problems, received a favorable response. The Governor has directed the Development Cabinet to work with the legislature to coordinate research and move forward toward achieving these goals. The enactment of legislation formally creating the Development Cabinet should facilitate progress on this front.

### TRANSPORTATION

Toward the end of the session, a compromise was reached on the use of large trucks on Vermont roads. In H.188, the large truck issue was hitched on to the diesel fuel tax bill.

Essentially, the bill allows 72'-long trucks to use a designated system of roads without state permits that includes routes: 7, 9, 103, 105, 253, 289, 302, and sections of 2, 4, 5, 18, 22A, and 104. Trucks using a 30-mile section of route 4, in the White River-Woodstock-Rutland County area, places which have been at the center of the large truck controversy, will be required to get state permits.

The bill also calls for more funding for state and municipal enforcement, higher fines for speeding violations, and additional money for road improvements in this existing network.

Business interests had attempted to lower the diesel fuel tax, but in the end the legislature chose not to reduce it. One improvement will be in the way the tax is collected. Now trucks and buses report and remit purchases in Vermont on a quarterly basis, a system that has resulted in revenue losses estimated at over \$1 million annually. Under the bill, these diesel fuel users will have to pay at the pump the way individuals do already, leading to increased collection of this tax.

### LARGE FARM OPERATIONS

This year the legislature took steps to improve the regulation of large-scale factory farms that can cause water and air pollution and other public health and safety problems if not properly sited and designed.

H. 849 reauthorized the large farm operation permit program by removing



the July 1, 2000, repeal date set when the law originally passed five years ago. The law now will require the commissioner of agriculture to complete permit reviews for all large farm operations by January 1, 2002. The commissioner is to focus first on large farm operations in the most sensitive watersheds and those with a history of failure to comply with regulations. The law also instructs the commissioner to beef up permit information for applicants and expands the requirements of informational meetings to include written responses to questions raised during such meetings. In addition, the commissioner may assess higher penalties for violating the law.

### PESTICIDES

The Vermont Pesticide Advisory Council has operated within the Department of Agriculture for several years with a mandate to advise the state on sound pest management policies that would lead to an overall reduction in pesticide use. VPAC has been relatively ineffective in meeting this mandate, routinely and quietly approving most applications with little or no public input.

Bill H.851 requires VPAC to report back to the legislature each year on progress toward pesticide use reduction with respect to specific benchmarks, such as acreage treated with pesticides and reduction in toxicity of pesticides used. The bill also enhances public access by directing the Commissioner of Agriculture to make pesticide use information available on the Internet.



**THE INSIDE WORD**  
*continued from page 2*

and bust real estate cycles through which other states have suffered.

Yet, the perennial attack on Act 250 was again under way in the year 2000 Legislature. At risk was the very core of Vermont's land use development law—citizen participation. Last winter, our elected representatives voted overwhelmingly to seriously restrict the voice of Vermonters in the Act 250 process. Fortunately the bill died in the Senate Natural Resources Committee, thanks to Senator Elizabeth Ready, Chair of the Committee. We are anticipating another attempt to silence the voice of Act 250 in January 2001.

And during the past 30 years, 245 new road miles, not including the interstate, have been built in Chittenden County alone. 80% of those roads have been built outside of traditional town centers. This is a direct contradiction of the State's #1 planning goal—to foster development that focuses growth in concentrated town centers, leaving the countryside open. These

roads serve sprawl development and contribute to loss of farmland and polluted stormwater runoff. As a result, today Vermont has over 36 waterbodies that do not meet Vermont water quality standards because of pollution from suburban stormwater runoff.

In spite of the Governor's efforts to purchase land in order to protect Vermont's environment, there is no amount of land acquisition that can compensate for the erosion of Vermont's environmental legacies.

Adequate funding for good planning continues to elude us. Fifteen years ago Vermonters spent 4% of the State's annual budget for the support of programs at the Agency of Natural Resources. Today that figure is less than 2%. The Agency of Natural Resources remains notably understaffed in the enforcement division. The lack of enforcement of our state and federal environmental laws and the lack of political leadership on environmental issues in Vermont has now seemingly brought the Green Mountain State to a low point in environmental consciousness.

This is an especially sobering realization when we consider that we are experiencing very high levels of employment and prosperity here in Vermont.

Today, VNRC and our friends will need to inspire individuals and groups who never before knew that they were environmentalists to act in positive ways to keep our Green Mountain State healthy. It is clear that we need to bring the broadest cross-section of citizens back into the discussion about the environmental health of Vermont. We all must actively take responsibility for the vitality of Vermont's environmental quality. We need not only to elect law makers to the Statehouse who support funding for planning, growth management and the enforcement of our existing environmental laws, but we need to keep those representatives informed and supporting new initiatives to regain what we have lost. In this way, we will help to ensure an environmental legacy that our children can be proud of.



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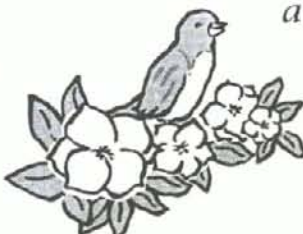
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# WHOSE PHOSPHOROUS

## is it anyway?

BY MATT MORTIER

Vermont has long drawn visitors from all over the world with the promise of beautiful landscapes, pristine waters, and picturesque dairy farms. Unfortunately, some of Vermont's waterways are threatened by pollution and have been for quite some time. The most heated discussion that arises is not about who is at fault, but rather what steps should be taken to improve and protect water quality and Vermont's celebrated agrarian way of life.

The family farm epitomizes the rural character of Vermont. Much of the tourist industry upon which Vermont depends comes from the promotion of this pastoral ideal. It is unfortunate that agriculture, the industry that has given Vermont its unique place in the world, is the single greatest source in the continuing impairment, by nutrients, of Vermont's rivers and streams.

Although agriculture has the greatest direct impact on water quality in the state, it must be said that farms are not solely to blame. Increasing suburban and urban development also contributes to the phosphorous problem. There is a direct correlation between increased phosphorous loads and changing land uses, but unlike agriculture, there is little process-oriented change that can be adopted once pavement takes over. Runoff from these impervious surfaces contributes to the increasing number of flood events and adds many petroleum and residential-related wastes to local and regional water bodies.

Nutrients and agricultural chemicals end up in Vermont's waterways due to runoff from fields, barnyards, and manure storage facilities. Most of this runoff is directly related to waste storage and utilization. To achieve the desired nutrient balance in their soils, farmers spread animal waste. Unfortunately spreading that manure results in phosphorous over-enrichment of the soil, which in turn con-

tributes to the phosphorous pollution of the state's waters. The question is not whether phosphorous pollution can be eliminated, but rather, what steps need to be taken to reduce that pollution to compliance levels, and who would best implement those needed changes.

Many in the agricultural field believe that the farmers would do best regulating themselves. It is hoped that many farmers would take advantage of the assistance and education available that is needed to implement more sustainable practices. Unfortunately many of these farmers are either unaware of such assistance programs, or are unaware of the regulations currently in place to improve and protect water quality. Large farm operations, held to a higher degree of regulation, also present a greater risk to water quality as the number of animals per farm continues to rise.

Are the farmers at fault? Vermont farmers have not necessarily received the amount of assistance and information they need to make better agricultural choices to improve water quality.

The Department of Agriculture, Food and Markets (DAFM) has been given the task of regulating non-point source (NPS) agricultural pollution in Vermont. The paradox of this regulatory assignment is that the DAFM is also tasked with promoting and protecting the very same farms they regulate. This makes for curious conflicts of interest.

To help reduce NPS pollution, the DAFM has implemented the Accepted Agricultural Practices (AAP) and Best Management Practices (BMP) program. The AAP program is the most widely followed and most well known. Whereas the BMP program involves cost-sharing and applies to farmers who meet minimum standards and wish to go above and beyond those standards, the AAP program sets the baseline minimum for compliance.

The AAP program was designed for

easily achievable compliance and to be easily regulated. The AAPs seem to be simply common sense regulation. The current ban on winter spreading and the prohibition of stacking manure above a neighbor's water well are just two examples of this approach. All of these regulations are designed so that an agent of the DAFM should be able to determine compliance by a simple roadside observation. These regulations, though they make sense, have few teeth, as exhibited by the low number of enforcement actions taken since the implementation of the program in 1995. Of the approximately 1700 farms in Vermont, only 162 findings of violation have occurred through 1999. Of those 162 violations, only 14 resulted in any action beyond a corrective action letter (CAL). If so few violations are occurring the question must be raised: "why are phosphorous loads not decreasing?" It is also assumed that a farmer in compliance with the AAP's is also in compliance with state water quality standards. This may further serve to decrease the possibility of an investigation finding a farmer in violation.

Another key issue surrounds the definition for "Concentrated Overland Flow" (COF). COF includes manure runoff, silage runoff, and milkhouse runoff. However, if rain or snowmelt primarily causes the runoff, it doesn't qualify as COF. What's left to cause runoff if not rain or snowmelt? Must a farmer flush his barn with a hose and rinse it all the way to the river to meet this COF requirement before the DAFM takes any action? It is the concentrated overland flow that moves the phosphorous-laden soil from the field to the stream.

Education and outreach provide the most "bang for the buck." Information on the importance of vegetative buffer strips between fields and streams, the development of nutrient management and nutrient balancing plans, and promoting



farm practices that reduce erosion and increase crop health would all have greatest impact per dollar spent. Studies done by the Lake Champlain Basin Program have shown that an adequately sized river bank buffer strip can reduce phosphorous contamination by as much as 80%.

Similar steps were taken in the Chesapeake Bay watershed resulting in greatly improved water quality and greatly reduced phosphorous loading. Vermont farmers must get the assistance and education they need to better protect the land and the water they steward.

To date, the funded focus of the BMP program has been on the construction of manure storage pits. This focus is somewhat misguided. Having a storage infrastruc-

ture is important, but unless the size, nature of the farm, and the surrounding landscape are taken into account, a manure pit alone will probably not be the best and most cost effective solution to current water quality problems.

The DAFM labels this program a success in the fight to reduce phosphorous loads in Vermont waterways. If the program has been so successful, and if so many farmers are in compliance, and if so few enforcement and corrective actions have been taken, why is it that phosphorous levels attributed to NPS runoff have barely moved? A report released in May 2000 by the Lake Champlain Basin Program stated that, if current practices are left unchanged, the phosphorous levels

in Lake Champlain will never meet target goals. Something needs to change.

So is phosphorous NPS pollution the responsibility of the Department of Agriculture, Food and Markets? The program lacks the people and funding to fully and effectively carry out the task they were given. An effective education and outreach program, implementation of nutrient management, and buffer conservation should be priorities. The DAFM should proactively inspect farms for compliance with AAPs rather than rely on complaints from neighbors. With sufficient funding and a more proactive agenda, the AAP program might just make the impact on NPS nutrient pollution for which it was designed.

## VERMONT PERSPECTIVE

# VERMONT'S CONSERVED LANDS

*An in-depth analysis of protected land parcels*

By JANET HURLEY

More than one million acres of the land area of Vermont are now protected from development. A computer-based mapping project of conserved lands in Vermont reveals that 19.2% of the state, 1,148,265 acres, is conserved by a variety of agencies and organizations (Fig. 1). Protective mechanisms range from natural areas owned in fee to working farms and forests conserved through easements. Federal agencies now manage 434,719 acres (7.3% of the state); state agencies protect 380,294 acres (6.4%), and private organizations account for 293,412 acres (4.9%) of conserved land. Information on more than 1400 conserved properties comprises the database.

The Vermont Conserved Lands Database is a geographic information systems (GIS) database of land parcels that are protected from development. The database was designed to facilitate natural resource and land conservation planning in the state. The Vermont Conserved Lands Database is a project of the University of Vermont's Spatial Analysis

Lab working in cooperation with the Vermont Agency of Natural Resources, the Vermont Housing and Conservation Board, the Vermont Land Trust, The Nature Conservancy, Green Mountain National Forest, regional planning commissions, and land trusts throughout the state. In addition to these cooperators, support for compiling the database has come from the Orton Family Foundation and the Gap Analysis Program of the USGS.

Despite the substantial proportion of the state that is now protected from development, a detailed analysis of the database reveals a number of biases in the distribution of conserved land in the state. About 85% of land above 2500 feet elevation is conserved, reflecting the biological and recreational importance of this zone.

Likewise, about 50% of the 1750 to 2500-foot zone is conserved, predominately by the national forest and state forests and parks. But, more than three-quarters of the state is less than 1700 feet elevation, and only about 10% of this area is protected as conserved lands. Many of the state's unique biological resources and most productive landscapes fall in these regions.

A similar analysis shows the percentages of eight biophysical regions of the state that are conserved (Fig 2). Clearly Vermont's Northeastern Highlands have received relatively high conservation attention, with about 43 % of this bio-

Figure 1

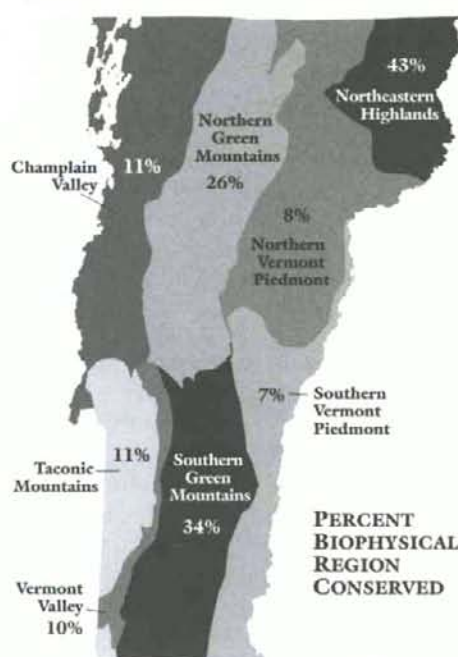
Protecting Agency	Fee (acres)	Non-fee (acres)	Total (acres)	% of State
Federal	433,382	1,338	434,719	7.3
State	342,728	37,566	380,294	6.4
Municipal	39,660	180	39,840	0.7
Private	62,484	230,928	293,412	4.9
Total	878,254	270,012	1,148,265	19.2



physical region being conserved. Thirty percent of the Northern and Southern Green Mountain regions are conserved, but conserved land accounts for only about 9% of the remaining five biophysical regions.

The database includes codes for management practices that reflect the degree to which areas are managed in their natural state, with an emphasis on biological diversity. Status 1 lands are managed in their natural state (e.g., nature preserves, wilderness); only 6% of conserved lands fall in this category. Status 2 lands are managed for their natural values but may support other uses (e.g., wildlife refuges, trail corridors), and 10% of conserved lands are assigned to this class. Status 3 lands are protected from permanent conversion, but allow harvest of renewable resources; 68% of conserved lands is assigned to this class. Status 4 lands account for the remaining 15% and are those places, such as working farms, that are protected from future development but may not be managed to protect natural plant and animal assemblages.

Figure 2



The Vermont Nongame and Natural Heritage Program maintains a spatial database of occurrences of rare, threatened, and endangered species and natural com-

munities. A GIS overlay of the maps of conserved lands with maps from the Natural Heritage database shows that 928 rare species and 299 special communities occur on conserved lands, accounting for about 30% of the occurrences in the Natural Heritage database.

These analyses suggest targeting conservation attention on lower elevation lands in the state's Champlain Valley, Northern and Southern Vermont Piedmont, Taconic Mountains, and Vermont Valley regions. An effort might be made to increase the biological protection level on conserved lands within these biophysical regions. Alternatively, acquisition by conservation agencies might be targeted to these areas. In addition, conservation planners may need to pay particular attention to Heritage occurrences on these lands. A public lands extract of the conserved lands database is available in GIS format from the Vermont Center for Geographic Information (<http://geo-vt.uvm.edu>). The private lands portion of the database is available by request from the Spatial Analysis Lab (<http://www.snr.uvm.edu>).

## VERMONT'S REGISTERED LOBBYISTS 1999-2000

**34:** Representing **environmental organizations**

**116:** Representing **business and development interests**

**91:** Other (eg. municipalities, health care, etc.)

*Note: The actual number of lobbyists working in the state house on a day-to-day basis is smaller in all three categories and is difficult to quantify.*

1999 reported lobbying compensation paid by top ten businesses, industries or trade organizations: \$892,974

1999 reported lobbying compensation paid by top ten environmental organizations: \$105,817

1999 reported lobbying compensation paid by top two chambers of commerce: \$119,440

Ratio of business to environmental lobbyist compensation: 8.5 to 1

*Sources: Vermont Registered Lobbyists - 1999-2000-as of January 31, 1999, published by the Vermont Secretary of State; VNRC*



# Lawnmowers!

*Don't Pull the Plug!*

BY NOEL PERRIN

Most environmental behavior is either expensive or a bother. Recycling doesn't cost much, but it's a bother. Buying eggs from free-range hens is easy enough, but they cost more.

There are a few things people can do, though, that are no trouble at all, are environmentally benign—and cost no more than the harmful stuff. A small example would be the organic coffee beans grown by farmers' cooperatives in Central America and available in numerous Vermont supermarkets. I recently checked prices in the two stores where I most commonly go. A pound of select coffee costs approximately between 8 and 9 dollars. I'm referring to typical whole-bean prices.

But guess what. You can also get organic Nicaraguan coffee beans for \$7.49. You're helping the environment and you're saving fifty cents.

For a much larger example, look at lawnmowers. American homeowners possess an enormous variety of these machines, from the simple reel mower that runs on human sweat to the big riding mower that can handle a five-acre lawn and that can easily cost three thousand dollars.

Look particularly at what is by far the commonest type of mower around here. It has a motor that you start with a pull-cord. Once it fires, (say, on the fifth pull), you walk behind and push the thing along. Some, of course, are self-propelled, and you merely steer.

In terms of power source, this commonest of mowers comes in three forms. All three are readily available in Vermont.

The majority of those sold around here

have four-stroke engines and run on gasoline. A smaller but still substantial number have two-stroke engines and burn the same mixture of oil and gas that chainsaws and weed whackers use. A still smaller number have no-stroke motors and run on...well, I'll tell you in a minute. All will mow your lawn. But only one will avoid fouling the air as it does so.

Two-strokes do the most harm. They are one of the most polluting devices known to man or woman. Four strokes are much cleaner, but still spill out a lot of gunk. No-strokes emit nothing. How come? Wait. There's a little more to say about two and four strokes.

I mentioned that two-strokes burn a

mixture of oil and gasoline. More accurately, they burn some of it.

Twenty to thirty percent of the mix goes right on through the machine and out into the air, even when you're not seeing clouds of blue smoke. It's sort of like the undigested corn that goes right through a horse and out into the manure.

What's my authority for this claim?

The EPA. That statistic about unburned fuel comes straight from an EPA study, the same one that says a two-stroker pollutes five to ten times as much as a car, per gallon of fuel used. The study says nothing about horses and corn—that's my own observation, based on years of shoveling manure.

But there's another EPA study that deserves to be mentioned. This one determined that 7 percent of the oil-gas mixture never even made it into the engine. It got spilled in refueling. In short, the two-stroker is a wicked machine.

So is the four stroker, but less. It only puts out two or three times as much pollution as a car, per gallon of fuel used.

Now for the good news. The gassers have a family of virtuous cousins. These are the cordless electric lawnmowers. They pollute very, very little. And if you look around you can find them for much the same price as the better-quality gassers.

I'm not saying that cordless electric's are inexpensive. Far from it. Six of the eight dealers I checked with

offer them for sale, along with the gassers. Many charge stiff prices.

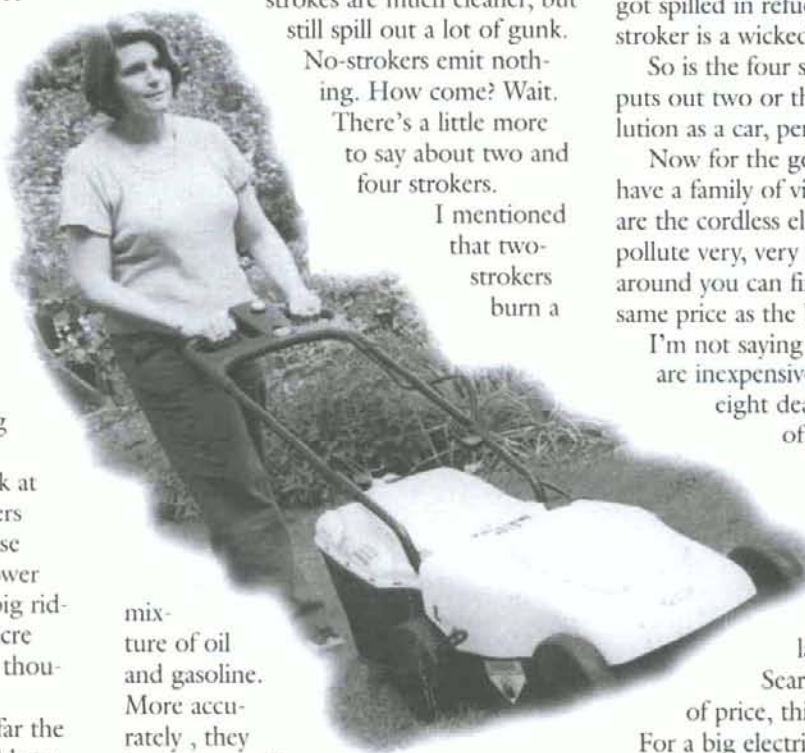
Consider Wal-Mart. It offers a five horsepower mulching electric lawnmower for \$380.

Sears is even worse. In terms of price, this is. They want \$399.

For a big electric. It's true that in return you get a very good machine.

It cuts a relatively wide swath; it mulches beautifully, so that you needn't worry about bagging; it never emits blue smoke; it always starts instantly.

By now skeptics may be thinking where's the catch, thinking if these things are so good, why haven't I heard more about them? So let me admit that there





are indeed two catches.

The first is that while an electric cordless pollutes not all in your yard, it does get its power from a set of power plants, many of which pollute all over the Northeast. Response: Yes, but power plants pollute a lot less per unit of power than the gas hog in your tool shed does.

By my calculation, about 90 percent less. By contrast, an electric car in Vermont (yes, the state has about 20), getting its power from those very same power plants, pollutes only about 35 percent less than a gasoline car. (Figure from the Northeast Sustainable Energy Association, Greenfield, MA).

Why the big difference? Because cars already have much cleaner engines than gasoline lawnmowers, come equipped with catalytic converters—which often work well for several years—and so on.

Second catch. These things run on batteries. What happens when you've used up the charge? Answer: You have to recharge. A full charge will take a full day. But since any well-made electric cordless is good for about 45 minutes of mowing on one charge, people with small yards have no problem.

People with larger yards can either learn patience or consider a kind of cordless electric that's made right here in Vermont, the DR Whisper Lite from Country Home Products in Vergennes. That has a battery that easily lifts in and out—no wires to connect. If you want to mow longer than 45 minutes at a time, you simply pop in a second battery. It might take 20 seconds to lift out the drained battery, start it charging, and set the fresh one in. It will cost you. The DR with one battery is \$369. A spare battery costs another \$69.95.

That price is not out of line with some of the electrics now being made by the big companies. One local Toro dealer has a 24-volt model for \$370 and a 36-volt for \$450. There's a nearby Lawn Boy dealer who has a no-polluter for \$439. I think the DR may be superior to both.

But cheap it's not.

You want cheap? Then it's back to Sears. You can get an electric mower there for \$179. But unless you have a miniscule lawn with few trees and flowerbeds, I don't recommend it. This little guy does have a cord, and that cord is second only

to a cat who is determined to sit in your lap while you're trying to read the paper for getting in the way.

Forget the corded mower. Instead do a little cost/benefit analysis, as any good environmentalist should. Initially a cordless electric is going to cost you more than any but the top grade gassers would. But what is maintenance going to cost? Well, I've had a cordless electric for six years now, and so far my total maintenance costs have been zero dollars and zero cents. Can any owner of a gasser say the same?

Well, maybe one or two genius home mechanics.

Maybe also you don't quite entirely trust what I say, because maybe you have sensed that I am some sort of electrical fanatic. That's true. I am. Besides my e-mower, I have an electric car and an electric chainsaw. I look forward eagerly to having a four-wheel-drive hybrid pickup when my present gasser gives out. So

never mind what I say; listen to my neighbors Mark and Nancy Schindler, who've had a cordless for going on two years. Here's Mark: "The old mower was a two-stroke. It was loud, it was smelly. If you went into the house to get a drink of water, it wouldn't start when you came back."

Nancy: "They are so much easier to start."

Mark: "We don't need to wear ear protection any longer."

Nancy: "It always starts. And there's no cord to pull—and pull and pull."

Emma (their 12-year old) "With the old mower, Dad would come in from mowing, and Mom would say, 'Go take a shower—you stink.'"

All the Schindlers (Mark, Nancy, Emma, Sarah): "We love it."

So does earth's atmosphere.

*Noel Perrin is a professor of environmental studies at Dartmouth University.*



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# EARTH DAY 2000 — A GREAT SUCCESS!

On April 22, VNRC sponsored Earth Day 2000 at the Waterfront Park in Burlington. Although the weather was blustery and rainy, over 1000 people showed up at the event to learn more about clean energy and to enjoy the day's festivities. VNRC teamed with non-profits, government agencies, educators, local businesses and others to present music, demonstrations, speakers, food, fun and more.

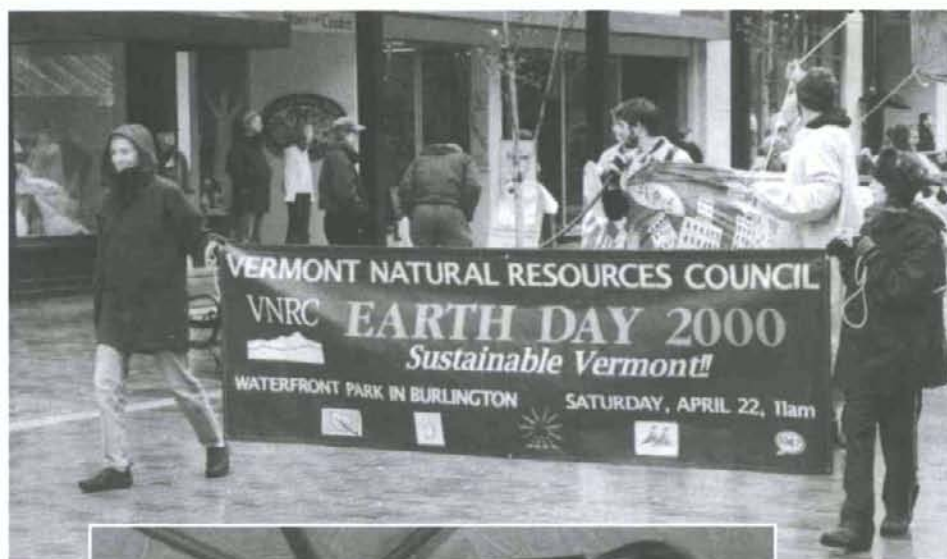
Bread and Puppet kicked off the event, leading a parade down Church and College Street which included dancing grasshoppers, beavers, a giant "mother earth ship", as well as solar, electric and hybrid vehicles, and a car which ran on vegetable oil. The band Sambatucada! accompanied the parade, and many spectators joined in the fun.

Exhibitors' presentations ranged from demonstrating the long-term savings in the installation of solar power in the average home, to the reduction of harmful emissions from a hybrid car running on electricity and gas. VNRC Earth Day 2000 promoted new technologies involving sustainable, efficient energy production that saves money, promotes economic growth and protects humans' and other species' health.

Representative Bernie Sanders, Senator Jim Jeffords, and Lieutenant Governor Doug Racine talked about their energy policies in the upcoming year, and other speakers such as Jeffrey Hollander, founder and president of Seventh Generation, talked about the importance of business leaders' commitment to conservation issues. The speeches, as well as

the live music, were solar powered using photovoltaics.

VNRC Earth Day 2000 was a day for many to reflect on their personal use of energy. It demonstrated to people that there are easy, cost-efficient ways to significantly decrease the amount of energy we use on a daily basis—practices which could often save them money, and help the earth.



*Clockwise from top right: Representative Bernie Sanders and Lieutenant Governor Doug Racine discuss their energy policies, Senator Jim Jeffords presents Peter Ziliacus (VNRC Board Member) with environmental stewardship award, Earth Day parade continues down Church Street.*





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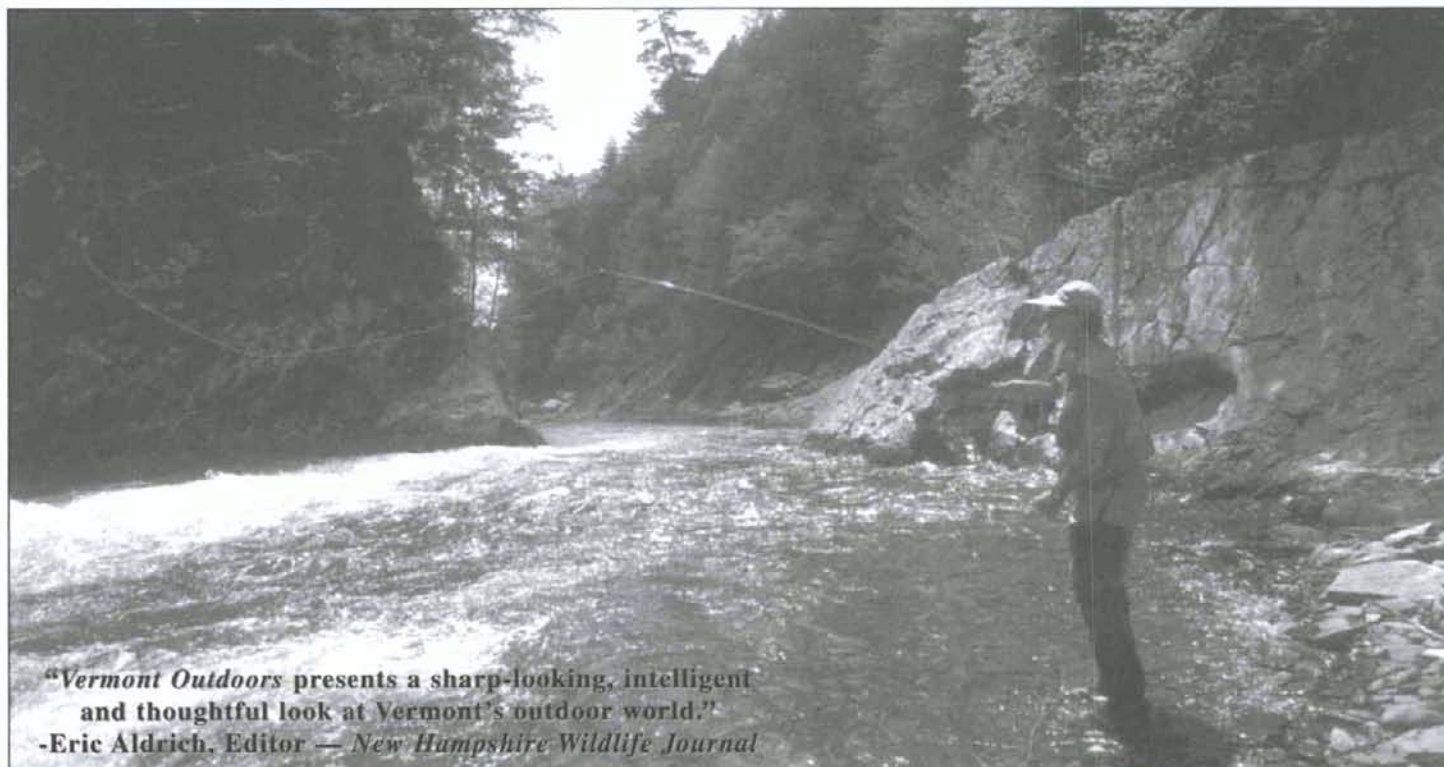
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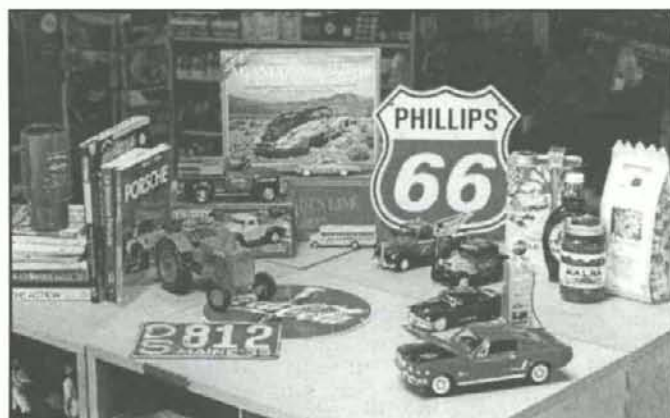
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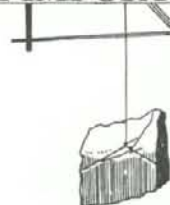


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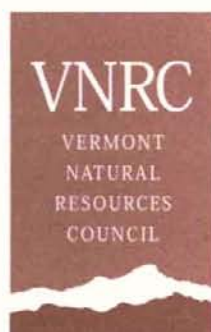
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Join us on Thursday, September 21 for the VNRC annual meeting and gubernatorial debate. The annual meeting will take place from 5:00 to 7:00 p.m. in the Governor's Ballroom at the Capital Plaza in Montpelier. Come and meet the VNRC staff and learn more about the land use, forestry and water issues VNRC is working on. Cocktails and light hors d'oeuvre will be served.

Then join VNRC from 7:00 to 9:00 p.m. for a gubernatorial candidate forum on Vermont's hot environmental issues. Anthony Pollina, Ruth Dwyer or William Meub\* and

Governor Howard Dean have agreed to participate in what is sure to be a lively and informative discussion. A half-hour question and answer period will follow. All VNRC members will be sent invitations but the evening will be available to the public. Bring friends and family!

For more questions, call Stephanie Mueller at VNRC (223-2328).

*\*Republican candidates Ruth Dwyer and William Meub have been invited but have not yet responded at time of publication.*

