

JANUARY 1976

# VERMONT ENVIRONMENTAL REPORT

Published monthly by The Vermont Natural Resources Council, a non-profit citizens' conservation organization supported by membership dues and contributions. 26 State Street, Montpelier, Vermont 05602 [802] 223-2328 Chairman, Jonathan Brownell Executive Director, Seward Weber, Editor, Nathaniel Frothingham

## 1976 GENERAL ASSEMBLY

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#### THE ENVIRONMENT: A POLL OF KEY LEGISLATORS

On the eve of the New Year and the commencement of the 1976 legislative session, the VERMONT ENVIRONMENTAL REPORT conducted a poll of five key legislators with important assignments on Natural Resources Committees of the Vermont House and Senate. These legislators responded to three questions about the environmental business coming before the 1976 General Assembly and the prevailing mood of the new session.

Those legislators who responded to the poll were: Representative Henry Carse (R. Hinesburg), Chairman of the House Natural Resources Committee; Representative John J. Mulligan (D. Rutland), Vice-Chairman of the House Natural Resources Committee; Representative Samuel Lloyd (D. Weston), member of the House Natural Resources Committee; Senator Arthur Gibb (R. Addison), Chairman of the Senate Natural Resources Committee; and Senator Edward Janeway (R. Windham) member of the Senate Natural Resources Committee.

#### QUESTION 1:

**WHAT DO YOU SEE AS THE MOST IMPORTANT LEGISLATIVE ITEMS ON THE ENVIRONMENTAL AGENDA IN THE 1976 SESSION?**

Rep. Carse: "We had a meeting with the Speaker," reported Carse. "He is going to try for a short session. The emphasis will be on budget matters." Rep. Carse discussed H. 383, a version of a state land use plan developed in the House Natural Resources Committee. Carse said that it was necessary to complete the schedule of Act 250. This schedule calls for adoption of a state land use plan. Carse indicated that success in getting a land use plan through the House Ways and Means Committee would depend on adoption of an appraisal bill to even out appraisals of land throughout the state and a land use tax. Rep. Carse discussed H. 436, a bill to provide equal treatment of all housing types, particularly mobile homes. "I think we will have hearings on it," he said. He also discussed S. 128, a bill that would ban phosphates in household detergents. Said Carse: "There is a lot of work to do on phosphates. This seems to be a regional concern. It doesn't seem to interest legislators on the eastern side of the state."

Rep. Mulligan: Rep. Mulligan had one clear reply to the question, two words, "Solid waste," Rep. Mulligan has introduced H. 248, a bill to provide a resource recovery tax on containers. "I think this is first and foremost," he said, referring to the solid waste bill. "We have got to get away from landfill operations. This is a particular problem in Rutland." Rep. Mulligan emphasized that the problem was pretty general. "We have a problem in four or five places (in the state) with ground water pollution from landfill operations," he reported. Rep. Mulligan has been a key member of a summer study committee on solid waste.

Rep. Lloyd: Rep. Lloyd assigned top priority to two bills. He felt that Rep. Norris Hoyt's proposal H. 134 for open land would be "a primary legislative item as far as future uses and maintenance of open space." He also referred to S. 128, a bill dealing with phosphates in Lake Champlain. "Maintaining clean water...that's an exceedingly important bill."



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## POLL-- Cont.

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Sen. Gibb: Sen. Gibb did not see "any one great environmental issue" emerging in the 1976 session. He saw the need for coping with some of the administrative problems of environmental measures that have become law in recent years. He thought it was important to iron out the "bugs" in Act 250, for example. He places a high priority on S. 128, a bill on phosphates and detergents. He discussed the fate of the land use plan. He praised the leadership of former Governor Davis in gaining passage of Act 250. He felt that a land use plan was destined to fail this time round again unless there was strong leadership from the Governor's office. He indicated his own willingness to make an effort. "I have a bill in my Committee," he said, referring to a land use bill, "and I will make every effort to bring a bill out."

Sen. Janeway: Sen. Janeway discussed the phosphate bill, "We have not made a decision on that," he observed. About a land use plan he said: "The land use plan is still there. But unless there is more pressure from the Executive Branch I do not think anything will be done."

### QUESTION 2:

**DO YOU ANTICIPATE AN EFFORT TO REVERSE THE ACTION THAT WAS TAKEN BY LAST YEAR'S ASSEMBLY WITH RESPECT TO THE STATE'S BOTTLE DEPOSIT LEGISLATION?**

Rep. Carse: "I have not heard about it. I suppose there are people who resist it. If it is a short session there will not be a move to repeal it."

Rep. Mulligan: "I think they will and I think they are justified in doing so. Go to the Tax Department and see what the losses in revenue have been. When people are over in New Hampshire they buy everything else. Just poll the merchants on the eastern side of the state."

Rep. Lloyd: "I do not see that there will be an effort to overturn the bottle deposit legislation. There may be an effort but I think that the legislature has spoken overwhelmingly."

Sen. Gibb: Senator Gibb cited a standing legislative rule that prohibits a sitting Legislature from overturning a bill it has passed in the same session. (The 1976 session is legally a continuation of the adjourned 1975 session.)

Sen. Janeway: "I really do not know. I think it is possible. I do not anticipate that any great drive will be made. The revisions of the law were pretty well established by the size of the margins."

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## General Assembly

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### QUESTION 3:

**DO YOU SENSE THAT THERE IS CONTINUING SUPPORT FOR ENVIRONMENTAL MEASURES?**

Rep. Carse: "Yes, I do, and we have had sizeable majorities. Act 250 requires a lot of red tape and there have been moves to speed up the bureaucracy."

Rep. Mulligan: "Definitely. But I think we have to approach the problem with some kind of balance and not be shooting for the stars. It's hard to shoot for the sky as a heavily-taxed state that has one of the lowest per capita incomes in the nation. How much of the environment can we afford to protect?"

Rep. Lloyd: "I think there is strong support for the maintenance of standards that we have achieved and even stronger public support. The legislature may not be in tune with the public."

Sen. Gibb: "Absolutely. Sure. We have got to get a balance. We are moving down to common sense. Environmental consciousness has grown during the last five years. You do not put in a development anymore without safeguards."

Sen. Janeway: "Yes, I do. It is not as marked as it was, not as marked as when things were rolling through in more prosperous days."



# S-A-L-T:

## Are We Using Too Much?

### 1. Can we afford the costs?

State Representative William Hunter (D. Weathersfield) has touched off an internal discussion within state transportation circles by asking if the state's current "bare roads" policy ought to be changed.

The State of Vermont spends in an average year something over two million dollars for all the costs associated with salting its 2,901 miles of two-land roads. (This 2,901 miles includes interstate highways.) Last winter the state used 79,718 tons of salt. That works out to a cost of \$608 per mile, and last winter was particularly mild. In a heavier winter, like 1973-74, the state used 86,674 tons of salt at a cost of approximately \$766 per mile. (These figures do not include the amount of salt or the cost of salt that is used by Vermont's cities and towns. In Montpelier alone the average use of salt is 2,505 tons annually.)

Hunter has suggested a winter road maintenance program that would be more modest in cost, what he calls a "safe roads" policy as opposed to a "bare roads" policy. Hunter is also interested in the "total costs of highway salting." This would include the obvious costs: purchasing salt, storing it, and spreading it. It would also include the less obvious, but nevertheless real costs associated with automobile corrosion, drinking water pollution, and the damage to roadside vegetation.

Hunter's inquiries have drawn a detailed reply in the form of a memorandum from Highway Department Maintenance Management Engineer, John A. Durkee. This memorandum is addressed to Highway Commissioner John Gray. It argues against major changes in the current winter road maintenance policy of the Department.

It is an illuminating memorandum.

With the cost of winter sand averaging out to \$1.50 a ton and the cost of salt averaging out to \$19.10 a ton, one might easily assume that sand is the cheap alternative to salt. "Not so," reports Durkee, and he marshals an impressive body of facts and figures to support his case.

### 2. What about sand?

Sand is NOT the cheap alternative to salt, according to Durkee, for these reasons:

- (1) You need much more sand per mile than salt;
- (2) You have to apply sand more times in every storm to achieve a satisfactory result; and
- (3) You can't use sand by itself; you have to use sand in combination with certain amounts of salt to keep the sand from freezing in the stockpiles or in the trucks.

When Durkee finishes working out a comparison between the costs of salt and the costs of sand he is able to demonstrate that despite the large difference in the initial unit cost per ton it would actually cost the State of Vermont more to shift to sand than continuing with salt. Last winter, the materials' cost of salt and sand was \$1,339,379. To get a satisfactory result with sand on the same roads (and with the salt necessary to keep the sand from freezing) it would cost \$1,486,259.

Durkee's memorandum continues. He reports that sand in Vermont is in short supply. He predicts that a shift to sand would deplete supplies and drive up the cost. He points out that trucks



## salt.. continued

applying sand would have to make more applications on the state's roads in every storm. He estimates that these trucks would have to travel an additional 91,103 miles and use a total of 14,872 additional gallons of fuel each year. According to Durkee, sand has one more disadvantage. Roads would not clean up down to the pavement and Vermont motorists would wind up increasing their fuel consumption by as much as 50%.

Durkee devotes about one page of his five-page memorandum to answering the many questions that have been raised about the "hidden costs" of highway salting and about the environmental consequences of applying an average of 86,000 tons of salt on the state's roads.

### 3. Are the hidden costs real?

About the corrosion of roadway structures, such as bridges, Durkee has this to say: "At the present time it is not possible to assess the rate of decomposition of salt-exposed roadway structures nor is it possible to introduce a calculated risk factor into structural design life to accommodate such decay; however, it is felt that our present policy of washing all structures annually and applying water repellents to all exposed structural concrete surfaces has significantly retarded this rate of deterioration."

About the costs associated with automobile corrosion, Durkee says: "With regard to the destructive effects of salt upon automotive vehicles, there is no way known to us to estimate the financial loss which this might cause; however, this must be considered a consumer problem."

About the effects of salt on drinking water supplies, Durkee draws on Highway Department samples. The Highway Department has been sampling water from two test sections of Vermont Route 108. One section receives no salting; the other is salted. In a comparative laboratory analysis the Department found "very similar concentration of like ions in each test section, and varying in concentration from one to nine parts per million, depending upon the season of the year when sampled." Durkee adds this remark: "Such minimal concentrations are nothing to get choked up about considering that 250 parts per million of chloride are allowed in federal health requirements for potable water."

On a final point of inquiry, the effect of highway salt on roadside vegetation, Durkee offers this statement: "Many allegations have been made concerning the roadside effects of highway salting, a large portion of which must be considered hyperemotional and subject to disregard." Durkee makes this comment about two noted plant pathologists. "Among the many researchers in this field, there are two plant pathologists of unquestioned preeminence, Professor Hutchinson of the University of Maine and Professor Banfield of the University of Massachusetts, whose findings and conclusions are frequently in direct contradiction."

In his final statement Durkee characterizes a sharp reduction in the use of salt on Vermont's roads or a shift to sand as "a maintenance policy of deliberate regression" and he warns of the dire consequences that will flow from the adoption of such a policy.

### 4. Some very bad results predicted.

These are the results he predicts from such a change:

- (1) A sharp increase in the number of accidents and a corresponding rise in insurance rates;
- (2) An almost certain end to the winter tourist and skiing industries;
- (3) A general economic slump arising from the failure of the winter ski and tourist industries;
- (4) Delay in the delivery time of consumer goods leading to higher prices for the general public; and
- (5) Additional travel time for all vehicles with higher resulting costs and increased fuel consumption.

Durkee's memorandum might appear to be the final and unequivocal response to the questions raised by Representative Hunter were it not for the fact that a commitment to a "bare roads" policy and to the use of salt in large quantities is coming under increasing attack, both here in Vermont and in other states.



## 5. What is happening nationally?

Many people are unaware that the use of salt in large quantities is a comparatively recent phenomenon. The State of Wisconsin has been keeping records of salt purchases since the winter of 1955-56 when 5,797 tons of salt were purchased. Since then, purchases of salt have steadily grown. Motorists have become used to salt. Purchases in Wisconsin peaked in the winter of 1970-71 when 275,000 tons of salt, approximately 23.1 tons per mile were spread on the state's highways. There has been a similar upward trend of salt purchases in the nation-at-large. In 1960, the use of rock salt for deicing was estimated at two million tons; at four million tons in 1965. The use of salt peaked in 1970-71 to 9.6 million tons nationwide and was down to 8.9 million tons in the winter of 1973-74. This almost nine million tons of salt carries a price tag of \$140,000,000.

In the past five years critics of highway salting have grown more vocal and they are getting results.

In Minnesota, the State Legislature enacted a law in 1971 that severely restricted the use of salt. The Minnesota law calls for the use of salt or other chemicals "only at such places as upon hills, at intersections, or upon high speed or arterial roadways where vehicle traction is particularly critical, and only if, in the opinion of the road authorities, removal of snow and ice or reduction of hazardous conditions by blading, plowing, sanding, including chemicals needed for the free flow of sand, or natural elements cannot be accomplished within a reasonable time."

In the State of Maine, Director of Environmental Services, William F. Reid, Jr., reports an effort to hold down the use of salt. Reid says: "We would most happily embrace any feasible alternatives to the use of road salt that did the job and had a lesser potential for adverse environmental effects. To date we haven't found anything else acceptable. We have, however, instituted a salt management program involving proper storage and application methods and technology which has reduced our total appli-

cation of salt from a high of about 110,000 tons to about 68,000 tons. While application totals will undoubtedly fluctuate somewhat with varying weather conditions, the trend downwards is encouraging."

In Colorado, a mountain state with an important winter tourist and ski industry, the approach to the use of salt is described by Robert W. Patton, an official in the office of the Chief Engineer of the Division of Highways. According to Patton, Colorado uses very little salt compared to Vermont. Patton explains it this way: "We are still using sand, cinder or gravel as an abrasive. What little salt we use is mixed with the abrasive. In the Denver Metro area the percentage of salt with the abrasive may be as high as 15%. In other areas at the lower elevations we add approximately 5% salt. In the mountains and on the high mountain passes we only add about 2% salt. For this present winter (1975-76) we have purchased approximately 13,000 tons of salt to be used on the state highway system which includes 9,200 miles."

## 6. Contradictions in Wisconsin...

In the State of Wisconsin an intense effort has been underway since 1972 to get a law passed in the Legislature to curtail the use of salt and to monitor salt management and its environmental effects. This legislative effort has been spearheaded by Assistant Majority Leader, Representative James Wahner of Milwaukee. Representative Wahner is Vice-Chairman of the Assembly's Committee on Environmental Quality.

Under the provisions of a Resolution passed in 1972 the Legislative Council of the State of Wisconsin was asked to inquire into the "environmental effects of the thousands of tons of road salt applied to Wisconsin's roads each year. The Council was specifically requested not only to review existing research, but to exercise an inter-disciplinary approach to the problem." When the report came out, it was a whitewash, prepared, not by the Legislative Council, but assembled under the auspices of the State's Highway Advisory Committee.



## Salt... continued

Wahner looked at the Highway Advisory Committee report and decided to take the bull by the horns. In March, 1973, the Committee on Environmental Quality held its own hearings. In a strongly-worded introduction to the summary of those hearings, Wahner denounces the Highway Advisory Committee report. This is how he describes the contents of that report. "Briefly, (the report) said that bare pavement maintenance is good for the State of Wisconsin no matter what the cost and that salt is the only way to go. The report did not review existing scientific research nor did it examine alternatives to salt or modifications to present practice. It did not give time or consideration to the long-range impact of salt on the ecosystem."

### 7. Findings of the Wahner hearings

The testimony at the hearings of Representative Wahner's Committee runs to 541 pages. In it are represented the findings and judgements of scientists and engineers with practical experience in the field. The findings of the Wahner Committee are in sharp contrast to many of the statements in the memorandum of Vermont's Maintenance Management Engineer, John A. Durkee.

These are some of the findings of the Wisconsin hearings.

About the corrosion of roadway structures. Senator LaFollette who testified at the Madison hearings estimated a cost of roughly between \$500 and \$600 million per year in the cost of repair, prevention and maintenance of bridges, pipelines and other roadside structures that suffer damage from the use of salt. The point is that this deterioration is taking place; it is caused by salt; it shortens the life of roadside structures; it is costing money; and the public is paying for it. No one disputes this.

About the costs associated with automobile corrosion. Testimony before the Wahner Committee indicated that \$100 a year can be assigned as the cost to individual car owners from corrosion damage due to salt. A 1968 study for the Society of Automotive Engineers confirms this estimate: "The private car owner pays for rust destruction at the rate of about \$100 a year." These are conservative estimates based on 1968 figures. There are 60 million cars in the snow-belt states. The cost of salt-induced corrosion runs into the billions of dollars.

About the effects of salt on drinking water supplies. What alarmed the Wisconsin legislators was that no agency of Wisconsin government was monitoring the salinity of drinking water supplies on a systematic basis. It was revealed in the Wisconsin hearings that the high sodium content of drinking water supplies constitutes a potential health hazard to 57% of those citizens in Wisconsin who are suffering from heart disease.

This hazard is causing concern to environmental officials in New England. Stephen Lathrop, Water Resources Biologist at the Environmental Protection Agency (EPA) in Boston, says: "EPA is very concerned about the rapid rise of sodium and chloride levels over the last 20 years in water supply sources throughout New England. Considerable thought has been given to developing a drinking water standard for sodium under the Safe Drinking Water Act of 1974 because of the key role that element plays in causing or aggravating several forms of disease. It is very likely that all public water systems will eventually be required to monitor for sodium and report the levels they find to customers on a regular basis. This is particularly important to individuals on sodium-restricted diets, who may be pregnant or have high blood pressure or some other coronary or kidney disease."

About the effect of salt on roadside vegetation. Here the testimony before the Wahner Committee was again emphatic. All the scientists testifying described plant damage of severe degrees along right-of-way corridors. Trees were burned by wind-drift aerosols as far as 360 feet from the roadside. A Salt Institute publication representing the salt industry confirms this occurrence, saying: "Salt in large quantities can interfere with the plant's absorption of moisture from the soil and by browning or burning leaves." The remedy suggested for such salt damage is to



find salt resistant species and to avoid planting such salt-intolerant species as sugar and red maples.

A final, somewhat ironic statement from the Wahner Committee hearings relates to the use of salt and highway safety. It has long been assumed that the use of salt promotes highway safety. Highway maintenance people and salt industry officials invariably testified in Wisconsin that "salt was essential in maintaining safe roads for the public." But they submitted "no verifiable, substantive evidence to show this." The Wahner Committee learned that in results of a National Safety Council study undertaken between 1956 and 1970 there was no change that could be observed in the proportion of auto crashes that occurred on ice and snow-covered roads despite the fact that in that period of time salting had increased about six or seven times.

Here in Vermont, Dr. Julian Waller of UVM, has conducted studies on road salting and highway safety. All that Dr. Waller can conclude is this: "Any assumption that salting increases safety in winter driving is a highly premature assumption."

In Wisconsin, all attempts to push through a strong salt control measure in the legislature have been opposed by highway department people. Representative Wahner is still working at it. In a bill he offered to the 1975 Assembly, Wahner calls for some tough controls. He is asking for a strict monitoring program of a representative sample of the soils and waters of the state for sodium and chloride content. He is asking for more careful monitoring of the use of salt; he is asking for a reduction in the total use of chemical deicing compounds.

## 8. What action is Vt. prepared to take?

The last action on the use of salt taken by the Vermont General Assembly was in 1971. In a joint resolution the Assembly called upon the Highway Department and the Agency of Environmental Conservation to work together to discover methods of obtaining bare or safe roads which will be "economically feasible and least harmful to the environment."

Since that time the use of salt on Vermont's roads has continued at levels on average that are equal to or exceed the 83,000 tons of salt recorded for the winter of 1970-71.

## 9. Comm. Gray's response

Since that time we have learned about the experience of a group of scientists and administrators. This was approximately two years ago. This group met with Environmental Secretary Martin Johnson and Highway Commissioner Gray. At issue was a petition from the Environmental Protection Agency to Johnson asking the Highway Department and municipalities in Vermont to prepare environmental impact statements on the effects of salt. The group asked Commissioner Gray if the Highway Department would be willing to assist in a study of the effects of different amounts of salt on highway safety. This was not a request to stop using salt but rather to compare the effects of different amounts of salt. It is reported that Gray declined to cooperate.

When asked if a group had requested him to study the effects of different amounts of salt on highway safety, Gray replied: "I have not heard about it. I do not recollect this request." He did say that the Highway Department had been conducting studies on salt. And he did refer to a recent study that had come to his attention from the Pennsylvania Highway Department comparing the merits of salt vs. sand. Gray reports that salt was found to be quicker, less costly and more effective in promoting highway safety.

Since the General Assembly resolution of 1971 there has been an increased awareness nationally about the problems of using salt. We can see this awareness in the action of states such as Minnesota and Maine. There is a stirring in Wisconsin. In 1974, the U. S. Environmental Protection Agency published two manuals on deicing chemicals. One manual addresses the problems of storing and handling salt; the other discusses the important question of application procedures. Both manuals have the avowed objective of "minimizing the amount of chemicals used in controlling snow and ice on highways."



## MORE "SALT"...

In the Durkee memorandum it states: "A particularly conscious effort has been made during the last five winters to control the use of salt and to develop the best winter maintenance program at the most reasonable cost. This has been accomplished by stress upon spreader calibration, timely

application, driver awareness and accountability, and material reporting."

It seems clear that Representative William Hunter has raised important questions, and that in a time of financial austerity, these questions of cost, obvious and hidden, are not likely to go away.

## VNRC ANNUAL MEETING-- DEC. 6, 1975

Over 100 members attended the December 6th Annual Meeting of the Vermont Natural Resources Council at the Old Board Restaurant in Burlington.

Members of the Council spent the morning session hearing a report of VNRC's work in 1975, electing new Directors and deliberating over changes in the Council's Bylaws.

Out-going Chairman of the Council, Jonathan Brownell, delivered a report of the Council's work in 1975. Brownell touched briefly on the many activities of the Council but held up two projects for special recognition. He called on Robert Klein and Darby Bradley to explain these projects to the membership.

Klein told the membership about his work with Phase II of the Vermont Natural Areas Project. He has been engaged in identifying from the 1,000 natural areas in the state the 50 or 60 most deserving of preservation and protection. Now Klein looks forward to the possibility of continuing his work by actually finding ways to acquire or protect some of these natural sites.

Darby Bradley, Assistant Director of VNRC, explained the nature of his work with the Hartland Open Space Project. This is an effort in co-operation with government officials and planners in the Town of Hartland to formulate alternative agreements for stabilizing taxes on open land. Bradley explained the four alternatives that will be offered to voters this spring in the Town of Hartland.

After the report of 1975 activities the Annual Meeting turned to the election of new Directors. Elected as at-large Directors were: Anthony Adams of Burlington; Stanton Allaben of Londonderry; Armand Beliveau of St. George;

Serge Gagarin of Peru; Hugo Meyer of Woodbury and William Jacobus, Jr. of Essex Junction. David B. Firestone of Barnard and Charles W. Johnson of Stowe were elected from a field of four member organization nominations to represent the Vermont Law School and the Central Vermont Audubon Society respectively.

This was the action taken by the VNRC membership on three proposed changes in the Council's Bylaws: The membership approved an increase in the annual membership dues for individual members, from \$7.50 to \$10.00, and for family memberships, from \$10.00 to \$12.50. The membership voted not to approve a change in the quorum requirements for meetings of the Council's Board of Directors. Twelve members will still be required to make a quorum at Board meetings. The membership voted overwhelmingly to approve a change in the tax status of the Council from the present 501(c)(3) to 501(c)(4). This change means that the Council will be able to engage in legislative activities and lobbying provided the IRS approves. It also means that the first \$10.00 of membership dues will not be tax-deductible. But any contributions beyond that amount will be tax-deductible and will be placed in an Education Fund to support the traditional activities of the Council.

Council member Justin Brande of Cornwall, suggested that VNRC's standing committee on the Green Mountain National Forest be expanded to become a standing committee on public lands. This suggestion will be considered by the VNRC Board.

The morning session closed with the presentation of two Regional Directors' Affiliate awards of the National Wildlife Federation to past VNRC Board Chairman, Margaret Garland and to outgoing Chairman, Jonathan Brownell.



David Marvin, Vice-Chairman of the Council read a tribute to retiring Chairman Brownell. This tribute was followed by a rising vote of thanks.

During the afternoon session Council members heard a panel discussion on "Vermont's Woodland Resource: The Task Force Report and Beyond." VNRC members heard four presentations by Representative

Samuel Lloyd, Chairman of the Governor's Task Force on Wood as a Source of Energy; Dr. William Beardsley, Assistant to the President of Green Mountain Power Corporation; Leo Laferriere, General Manager of the Ward Lumber Company in Waterbury and John Farmer, Vermont's Commissioner of Economic Development.

## EDITORIAL

Many VNRC members who attended the Council's annual meeting last month found their thinking stimulated, even provoked, by what they heard and saw. Three members of the Governor's Wood Energy Task Force told the Council that 25% of Vermont's power and home heating needs could be generated by using the "junk" wood in our forests. Moreover, if proper forest management practices are followed in weeding out these cull trees, Vermont's forests could become four or five times more productive.

One reason why wood has apparently become an economically viable source of energy on a large scale is the arrival of the latest technological marvel, the whole-tree chipper. This machine can double the amount of useable wood derived from each acre and can put it into a readily transportable form. Those members who stayed late to watch a film were treated to the awesome sight of trees, up to 22 inches in diameter, being chewed up in 30 seconds.

One question that needs answering is whether the whole-tree chipper can be used for selective cutting, or whether the pressure to realize a return on an initial \$100,000 investment will make clearcutting inevitable. The expected development of smaller chippers costing only \$20,000 - \$25,000 may relieve some of this pressure. We are not opposed to clear-cuts per se, provided they are properly designed and carried out on a small scale. Clear-cuts can improve both wildlife habitat and the production of shade-intolerant trees, such as yellow birch. Nevertheless, for aesthetic reasons, most Vermont landowners would probably not permit timber harvesting in their forests unless it could be done on a selective basis.

The arrival of the chipper in Vermont (four are already in operating in northern New Hamp-

shire and Vermont) and the prospects of a new pulp mill and wood-burning generating plants requiring vast amounts of Vermont's wood resources, raise the further question of the need for regulation of logging practices. At the present time, Vermont has virtually no laws regulating timber harvesting, relying instead upon education programs and the good sense

of landowners and loggers. While this has been adequate in the past, the very capacity of the new chipper to consume acres of woodlands in a short time indicates that a minimum of regulation may be necessary.

What those regulations should be must still be worked out. We see regulation as a last resort. Educational programs should be continued and even intensified. VNRC itself, working through the Tree Farm Committee, which it has cosponsored for several years, should undertake a series of forest management seminars for private landowners throughout the state. Tax incentives, such as those offered in Representative Norris Hoyt's bill H-134, should be given for managed forestlands and tree farms. Nevertheless, when education and incentives fail, the state must be in a position to demand the correction of logging operations whenever they threaten to cause excessive erosion or other environmental damage, or even to stop the cutting completely.

Darby Bradley  
Assistant Director

(Readers of the VER may obtain a copy of a report that was prepared for the annual meeting, VERMONT'S FOREST RESOURCES by Richard Cowart, by writing VNRC. The VNRC Board of Directors will be considering the whole question of forest practices regulations at its upcoming winter meeting in mid-January.)



## ENVIRONMENTAL BILLS

The following are new pieces of legislation that have been introduced since the completion of the 1975 session. These bills may be added to the list of environmental bills that was printed in the December, 1975 VER.

NO. AND  
SPONSOR

## PURPOSE

S. 177  
Grady

To prohibit any electric utility from charging a municipality more than any other user of electrical energy.

S. 185  
Morse, Cummings  
and O'Brien

To continue the study committee on municipal condemnation for one year and to suspend authority of the Town of Springfield to institute any condemnation proceedings.

S. 192  
O'Brien

To create an advisory committee on waste reduction and utilization, and to provide that municipalities may utilize refuse through other environmentally-acceptable methods like composting.

H. 485  
Candon  
and others

To provide that a municipality may be a party to a permit for a development which affects its watershed and to strengthen the criteria for developments which affects municipal watersheds.

H. 490  
Carse

To provide for the identification and designation of natural areas; to provide for the creation of a seven-member natural areas advisory committee.

H. 491  
Mulligan  
and Kinsey

To provide for a graduated levy on containers, the funds of which are to be used to assist municipalities in solid waste management.

H. 492  
Tudhope

To provide a comprehensive framework to improve and protect the quality of the waters of Lake Champlain.

H. 498  
Poquette

To require that a non-resident obtain a liability insurance policy against damages to persons or property in Vermont resulting from hunting accidents.

## Update...

● THE STATE OF VERMONT acting through the Attorney General's Office has joined nine other states in filing a petition with the Federal Consumer Product Safety Commission (CPSC) to ban certain aerosol containers as hazardous products. The combined population of the ten states that have banded together to bring this petition amounts to 53 million people. In a statement dated December 23, 1975, the State of Vermont declares "that the evidence on the fluorocarbons issue is now overwhelming." Fluorocarbons used as propellants in aerosol containers are thought to attack the earth's protective ozone layer.

VNRC EXECUTIVE DIRECTOR CHAIRS AIR  
QUALITY STUDY COMMITTEE

Seward Weber, Executive Director of the Vermont Natural Resources Council, has been appointed by Environmental Secretary Martin Johnson to chair a citizens' committee to study air pollution problems in Vermont and to evaluate the state's air pollution abatement program.

The committee, which includes a physician, a meteorologist, a chemist, an engineer, an industrial association representative and a member of the General Assembly, will make recommendations to the Secretary of Environmental Conservation as to how the state's air pollution program can be improved. The citizens' committee is expected to complete its work in the spring.



## ENVIRONMENTAL LAW MANUAL AVAILABLE

The VNRC Environmental Law Manual will be reprinted in February. First published last winter, the law manual summarizes Vermont's environmental control laws. It has proven to be a valuable tool for planners, town officials, attorneys, developers and others. Some 475 individuals and organizations purchased the Manual and subscribed to the updating service in 1975.

The usual cost of the Law Manual is \$7.50 with a \$5.00 charge annually for the updating service. VNRC members in good standing may purchase both the Law Manual and its current update at a special price of \$10.00. Checks should be made payable to "VNRC -- Law Manual."

## Letters:

To the Editor:

As Coordinator for the Vermont Open Space Tax Coalition, I was delighted to see that VNRC is keeping its members informed about the activities of our group. But, I'd like to correct a possible misunderstanding of our position and to try to explain more clearly what we are trying to do.

The December VERMONT ENVIRONMENTAL REPORT states: "The intention of H-134 is to provide a measure of tax relief to owners of farm and forest land..." The expression "tax relief" can be harmful to our cause -- unless

it is fully explained. At the present time we feel that owners of developed properties are getting a tax break without realizing it. They often receive more in services (road maintenance, education, sewage treatment) than they, in fact, pay for. Recent research by the Ottauquechee Regional Planning and Development Commission, for example, indicates that the average home in Hartland requires \$280.00 more per year in services than it pays in taxes to support those services. Look at it this way: in the Town of Plainfield the average homeowner pays taxes for 37 years just to pay for the education of his own children.

Owners of open farm or forest land are now paying high taxes but getting little in return for their tax dollar. In a very real sense the costs of development (schools, roads, sewage) are being paid for by farmers and foresters. The Vermont Open Space Tax Coalition supports a slight shift in the tax burden to bring about more equitable taxation for different types of land.

Open lands provide benefits to villagers and city dwellers for which they do not pay. Vermont's farms and forests are indispensable to the preservation of environmental quality. They provide raw materials and jobs on which a large proportion of Vermont's economy is based. They provide opportunities for recreational use to hunters, fishermen, snowmobilers and hikers. In short, what would the rural character of Vermont be like without its farms and forests.

Taxes are presently based on a system of "fair market value," the value of land in a transaction between a "willing buyer" and a "willing seller." Originally this basis for taxation seemed fair because the selling price of land related directly to its value for farming or forestry. Now,

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## LETTERS

however, the real estate market has changed. Prices have risen because of development and speculative pressure. "Fair market value" as a simple basis for taxation is clearly outmoded.

Since the earning potential of land in farming or forestry is modest, modest at least in comparison to the gains that can be achieved if land is held for speculation or taken for development, and since the services received in return for tax payments are also modest, there is no justification for the kinds of tax increases that owners of open land are being asked to pay. No justification unless we want to force these people out of business and see their lands developed. Many owners of open land have already sold all or part of their acreage to a developer to get out from under this tax burden.

The Vermont Open Space Tax Coalition represents groups of farmers, foresters, sportsmen, snowmobilers and maple sugar makers -- both owners and users of open land. We are supporting a bill expected to receive attention in the Legislature early this session -- H-134. It is the only bill addressing the land tax problem that appears feasible to administer and to finance at this time.

I hope that VER readers who are interested in the land tax issue will contact us. We can provide copies of H. 134 and other related materials and will be happy to do so.

Very sincerely,

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# VNRC

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ADDRESS CORRECTION REQUESTED

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