

VERMONT ENVIRONMENTAL BOARD
10 V.S.A. Chapter 151

RE: New England Land Associates
Land Use Permit Application #5W1046-EB

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER

This decision, dated October 1, 1991, pertains to an appeal filed with the Environmental Board on May 15, 1990, by New England Land Associates (NELA) from Land Use Permit #5W1046 and the accompanying Findings of Fact and Conclusions of Law issued by the District #5 Environmental Commission on February 16, 1990. For the reasons explained below, the Board concludes that the proposed project, consisting of the subdivision of a 3,915-acre tract of land into 33 lots in Duxbury, Vermont, does not comply with 10 V.S.A. chapter 151 (Act 250) because NELA provided insufficient information for the Board to make affirmative findings. Accordingly, the Board denies a permit.

I. SUMMARY OF PROCEEDINGS

On May 15, 1991, NELA filed an appeal of Land Use Permit #5W1046, claiming that the District Commission did not have the authority to impose conditions relating to potential future development of the land when its proposal consists only of drawing lot lines but not development. NELA objects to the District Commission's findings and conclusions under 10 V.S.A. § 6086(a)1(A) (headwaters), 1(B) (waste disposal), 1(E) (streams), 1(F) (shorelines), 3 (existing water supply), 4 (soil erosion), 8 (aesthetics and scenic and natural beauty, historic sites, and rare and irreplaceable natural areas), 8(A) (wildlife habitat), 9(C) (forestry soils), 9(K) (public investments), and 10 (municipal and regional plans) and to the imposition of certain conditions. NELA is willing to accept a condition requiring further review of any proposed changes in use or construction of improvements but contends that because no adverse impacts will result from the creation of lots, no conditions may be imposed at this time.

On April 6, 1990, the State of Vermont Agency of Natural Resources (ANR) filed a cross-appeal on Criterion 9(H) (costs of scattered development).

A prehearing conference was convened on April 3, 1990. Hearings were convened on July 25, July 26, and October 30, 1990, and February 6, 1991. The following persons participated in the hearings:

472.

NELA by Charles J. Adams, Esq., George K. Stearns,
Esq., and Brian Sweet
ANR by Mark A. Sinclair, Esq.
Duxbury Planning Commission by Audrey Quackenbush
Central Vermont Regional Planning Commission by
Christopher Walsh
Maury Shor by John R. Ponsetto, Esq.
Frederick Pratt
Jodee E. B. Anderson and Townsend Anderson
David Patterson

The final hearing was recessed pending the filing of proposed findings and conclusions by the parties and deliberation by the Board. Proposed findings were filed by Frederick Pratt on March 27, 1991, ANR and **Jodee** Anderson on March 28, Maury Shor on March 29, and **NELA** on April 2. The Board deliberated on April 4, 1991, April 18, June 27, August 22, September 4, and September 18, 1991. On September 18, following a review of the record, the Board declared the record complete and adjourned the hearing. This matter is now ready for decision. To the extent any proposed findings of fact and conclusions of law are included below, they are granted; otherwise, they are denied.

II. ISSUES IN THE APPEAL

A. Party Status

Party status was granted to the following adjoining **property** owners: Maury Shor on Criteria 1(B) and 3 pursuant to Rule-14 (A); **Jodee** and Townsend Anderson on Criteria 3, 4, and 8; David Patterson on Criteria 3 and a pursuant to Rule 14(A); and Frederick Pratt on Criteria 8, and 9(C) pursuant to Rule 14(B) (1)(b).

B. Substantive Issues

Whether the project as proposed will conform with the following criteria of Act 250: 1(A) (headwaters), 1 (B) (waste disposal) 1(E) (streams), 1(F) (shorelines), 3 (existing water supply), 4 (soil erosion), 8 (aesthetics and scenic and natural beauty, historic sites, and rare and irreplaceable natural areas), 8(A) (wildlife habitat), 9(C) (forestry soils), 9 (H) (costs of scattered development), 9 (K) (public investments), and 10 (municipal **and regional plans**).

III. FINDINGS OF FACT

A. Project Description

1. The project consists of the subdivision of a **3,915-acre** tract of land into 33 lots, ranging in size from **28** to **1,787** acres. The tract of land is located in the southerly part of the Town of Duxbury adjacent to and northerly of the Fayston-Duxbury town line. **Lot 6A**, consisting of **1,787** acres, and **Lot 6A/1**, consisting of 375 acres, abut Camel's Hump State Park on the northwestern boundary. The Big Basin Trust owns the land to the west of the tract. Vermont Route 100 runs along the eastern boundary.
2. The NELA property is located near Route 100, a heavily travelled tourist road, and is less than 25 miles from a major ski resort in Stowe, 15 miles from the Sugarbush Ski Area, 20 miles from Montpelier, the capital of Vermont, and seven miles from Interstate 89.
3. Access to all the lots will be provided either by a town highway known as the Dowsville and Ward Hill Road which loops through the tract, or by other class 3 and class 4 town roads leading off of the Dowsville/Ward Hill Road or by legal trails or existing rights-of-way. Thirty of the proposed lots have frontage on a town road or legal trail. The remaining three parcels will gain access to a town road over rights-of-way.
4. The topography of the tract is hilly upland and mountainous terrain. The westerly portion of the land is rugged mountains while the easterly portion is more gently sloping. Elevations range from a low of 860 feet in the southwesterly corner of Lot #7D/3 near Route 100 to a high of approximately 3,000 feet in the northwesterly corner of parcel 6A near the Beaver Meadow area. Most of the property elevations range between 1,000 to 2,500 feet. Slopes range from five to 50 per cent.
5. Several streams are located within the project tract and areas of the tract contain wildlife habitat, including deer and bear habitat.
6. The tract **is** entirely forested with typical northern hardwood stands of beech, birch, and **maple**, and numerous plantations of white pine, red pine, and **norway** spruce planted in the 1940s by Ward Lumber

Company, Inc. In 1968 NELA acquired most of the tract from Ward Lumber Company, Inc. The entire tract has been managed for the production of forest products for many years and is currently enrolled in the State Use Value Appraisal Program.

7. The lot lines as proposed by NELA are based on the following: 1) to take advantage of existing lot lines identified in the field by existing stone walls; 2) to use boundaries established by past land use which are identified by plantations or natural hardwood stands; 3) to have the size of each lot be at least 25 acres; and 4) to have each lot have access to or frontage on a public road.
 - a. NELA does not intend to construct any improvements on any of the lots in the proposed subdivision.
9. Several parcels of land within the NELA tract are owned by other people and most of these contain residences.
- B. Criterion 1 (A) (headwaters), 1 (B) (waste disposal), 1 (E) (streams), 1 (F) (shorelines), and 3 (water supplies)
10. The tract is characterized by steep slopes and shallow soils and includes a drainage area of 20 square miles or less. The project tract serves as a headwaters for Dowsville Brook, which runs through the property. Feeder streams and brooks flow from the upland areas southerly and easterly on the project tract and collect in Dowsville Brook which flows southeasterly into the Mad River. The extreme westerly portion of the project tract serves as a portion of the headwaters for Shepard Brook which flows easterly into the Mad River.
11. The project, as proposed, is not subject to any health and environmental conservation department regulations regarding reduction of the quality of the ground or surface waters flowing through or upon the project tract or regarding the disposal of waste.
12. No provisions were proposed by NELA for protecting the streams on the property through buffer strips or other means.
13. Maury Shor owns land on both sides of Town Highway #34 adjacent to Lot #6A/4. Mr. Shor owns and operates Duxbury Vermont Springs, Inc., a company which bottles

and markets spring water to the public. The source of water bottled by the company is a spring on Mr. **Shor's** land, located approximately 320 feet from the property line of Mr. **Shor's** land and lot #6A/4.

14. The Shor spring is an exceptional source of water. The spring produces an annual average flow of 17,450 gallons per day. Chemical and bacteriological analyses of the water performed since 1981 indicate exceptionally pure quality.
15. Duxbury Vermont Springs, Inc. operates under a permit issued by the Vermont Department of Health. The Well Head Protection Area, required to be identified and protected, consists of approximately 69.5 acres and extends from Mr. **Shor's** land onto approximately 45 acres of Lot #6A/4.
16. David Patterson lives on approximately 50 acres of land that adjoins **NELA's** Lots #17E2, 48/S, and 6B/8. He leases a spring located on Lot #48/S approximately 200 feet northwesterly of his property line. The spring right is an annual lease which is subject to termination by either party at any time on proper notice. To his knowledge, this is the only source of water in the area.
17. Townsend and **Jodee** Anderson live on a tract of land which adjoins the **NELA** tract on the east. They have a shallow spring located approximately 100 feet from their boundary with **NELA** Lot #7D/12. The spring is located at the base of a topographic bowl. The spring is vulnerable to contamination from uses on **NELA's** land if it is not protected. The Andersons and **NELA** agreed, if a land use permit is issued, upon the boundaries of an area which would be reviewed by the District Commission with respect to the impacts upon the Anderson Spring should there be any change in the use of certain portion of Lots #7D/12 and 7D/9 in the future. The Andersons and **NELA** also agreed, if a land use permit is issued, that continued forest resource management activities conducted within that defined area would be conducted in accordance with Accentable Manasement Practices for Maintainins Water auality on Loaina Jobs in Vermont and would consider the potential for adverse impacts on the Anderson spring.

C. Criterion 4 (soil erosion)

18. Access to Lot #7D/12 is by way of a right-of-way intersecting Town Highway #32. Most of the **right-of-way** is an existing logging road, while a new section was more recently negotiated between **NELA** and the owners of property adjoining Lot #7D/12. No road exists over the new right-of-way. It cuts across a steep slope and, if developed for road access, would require extensive cut and fill work on the steep slope, including the removal of mature trees. Soils on the slope are excessively drained, upland soils which range between shallow to moderately deep.
19. Because of the many steep slopes and water courses and wet areas on the land, any construction would require careful erosion control measures to ensure that undue erosion of soils does not occur.

D. Criterion 8 (aesthetics and scenic and natural beauty, historic sites, rare and irreplaceable natural areas)

20. The **NELA** tract is bordered to the north by Camel's Hump State Forest and privately-owned fore&land. To the south there is limited residential development. In combination with the adjacent Camel's Hump State Park, the **NELA** property constitutes a unique landscape of great beauty. Camel's Hump, which rises to the west of the **NELA** property, is a prominent and symbolic feature of the Vermont landscape and is visible from many locations in Vermont. The view from Ward Hill is unique because only from there is the camel's shape discernible: the ridgeline which forms the neck and head runs off to the west, the hump rises in the center, and the rump falls off to the east. The view of **Camel's** Hump across the Dowsville basin from Ward Hill is one of uninterrupted wilderness. The view from outside the tract is also one of uninterrupted natural beauty. The unique visual character of the area also derives from the remoteness and wildness of the area and the almost total absence of development of any kind.
21. **NELA** has not conducted an inventory of the natural features that contribute to the property's scenic and natural beauty or identified the sensitive scenic areas on the property that merit protection.

22. The Division for Historic Preservation (the Division) has performed a preliminary surface survey of historic and prehistoric sites on the tract, researched the available historic documents, and collected oral history. The surface inspection revealed several historic sites, including a saw mill, a sluice gate house, a mill dam, two sugar houses, several cellar holes, and barn and farm house foundations.
23. The area of Duxbury of which the NELA property is a part contains an entire abandoned town with unusual historic integrity in that the sites remain largely intact due to the absence of development. The Vermont Advisory Council on Historic Preservation has designated the **NELA** property and certain surrounding lands as the Dowsville Brook Historic Archeological District and included the NELA tract on the State Register of Historic Places because of the importance of the District to provide significant information about the prehistory and history of Duxbury. Duxbury does not have a comprehensive written town history; the sites on the NELA tract constitute the major source of information about the history of the Dowsville Brook settlement.
24. Further knowledge about South **Duxbury's** early settlement lies buried, much of it under the forests on the NELA tract. The Beers Atlas of Washington County, 1873, indicates that at least a dozen other historic archeological sites are located on the NELA tract. It is also well established that small streams such as the Dowsville and Shepard Brooks served as corridors for upland hunting by Vermont's native people.
25. The Division applied a standard environmental model for predicting the likelihood of the existence of prehistoric archeological sites and determined that the site is an archeological sensitive area. This means that the area is likely to contain unidentified prehistoric sites because of its environmental characteristics. Use of such models is accepted scientific practice.
26. Prehistoric archeological sites are fragile, nonrenewable resources that constitute the only surviving record of Vermont's native people. The **spacial** pattern of artifacts is important to an understanding of an archeological site.

27. The subdivision of this property could prevent the identification and protection of the historic and prehistoric sites **on** the NELA tract that have not yet been identified. Individual lot owners are likely not to have the resources, incentive, or cooperative mechanism to comprehensively identify, evaluate, and protect these resources. Multiple ownership of this property will preclude an integrated study of the area's archeological resources necessary to gain a complete understanding of the overall historic community.
28. The Applicant did not undertake field studies to determine the presence of rare and irreplaceable natural areas.

E. Criterion 8(A) (endangered species and necessary wildlife habitat)

29. The Applicant did not perform field studies to determine the presence of any endangered species.
30. The State Department of Fish and Wildlife conducted a preliminary survey of the NELA property to determine whether it contains necessary wildlife habitat. Two wildlife biologists visited the area on three days to perform a wildlife habitat survey and investigate the subdivision's potential impacts on wildlife habitat. The biologists identified several portions of the tract which qualify as necessary wildlife habitat. **It** is likely that the property contains additional areas of necessary wildlife habitat; surveys would have to take place in order to identify all the necessary wildlife habitat on the tract.
31. The tract contains at least two distinct areas constituting necessary wildlife habitat. Portions of Lots **7D/3** through **7D/8** comprise a deer wintering area, and the area north of the blue line on Exhibit ANR-2, including Lots **6A/1, 6A, 6A/2, 6A/3, and 6A/4,** comprises important black bear habitat due to the presence of beech stands, a wetland, good cover, and remoteness.
32. Four areas of nut-producing beech trees that receive regular use by bears are located on Lots **6A/1, 6A** and the corner of **6A/2, and 6A/4.** These four areas contain large concentrations of mature beech trees with heavy

current and past scarring of bark by bear claws, demonstrating long-term bear fidelity to these sources of important fall food.

33. The tract contains an important wetland located on the northern boundary of Lot 6A. This wetland provides an important source of spring food for bears.
34. NELA agrees that the State's identification of the location of winter deer range, bear habitat area, and wetlands is generally accurate, and that there might be more areas of beech stands used by bears.
35. Bears need extensive tracts of undisturbed, remote habitat for their survival. The annual home range is from five to 15 square miles for female black bears and from 20 to 60 square miles for adult bears. Bear habitat in Vermont primarily is found in the more remote, less developed higher mountainous areas along the spine of the Green Mountains. The NELA parcel is located within this optimal bear habitat and as an integral part of the larger habitat area plays a key role in the long term survival of Vermont's black bear population. The extensive forested terrain on this tract provides secure cover for bears near key food sources.
36. The Department of Fish and Wildlife recommends a buffer zone of at least one-half mile from any development in order to protect bear habitat from human influence. A blue line was drawn on Exhibit ANR-2 which represents the necessary buffer zone for protection of the bear habitat identified on the property. Uses within the buffer zone should be limited to recreational uses and selective timber harvesting.
37. The NELA property contains readily identifiable concentrated bear habitat that offers key food supplies and cover which are decisive to the survival of those bears whose home range includes this land.
38. The NELA property contains an important deer wintering area, consisting of mature conifers, located along the Dowsville Brook. The entire **deeryard** is approximately 200 acres in size, 100 acres of which are located on **Lots 7D3, 7D4, 7D5, 7D6, 7D7, and 7D8** (outlined in black on Exhibit ANR-2). The Department recommends a **300-foot** buffer around deeryards to protect the habitat from human influence.

39. The **deeryard** is readily identifiable because it exhibits historic and current use by deer in the form of bark scarring caused by repeated browsing. This **deeryard** is likely decisive to the survival of the deer that use the softwood cover and food sources because of the critical role that the softwood cover and available food sources play in the survival of deer through the winter months by minimizing depletion of the **deers'** energy reserves.
40. NELA provided no information on the benefits which would accrue to the public from the subdivision.
41. There are many benefits to the public from the existence of healthy bear and deer populations. These include the ecological values that pertain to the role of bear and deer in the environment, the scientific values relating to the importance of advancing human and animal knowledge and understanding, the aesthetic values that relate to the existence of bear in an area, and the cultural values that relate to the species as an important part of our society.
42. The reasonably foreseeable human activity and development caused by the subdivision will likely alter the habitat by reducing remoteness, interfering with bear use of the beech stands and the wetland and with deer use of the winter range. Deer and bear may abandon the habitat and suffer increased mortality as a result. The beech stands, wetland, and **deeryard** could be rendered useless as sources of food and cover.
43. NELA has not identified all the necessary wildlife habitat on its property or provided any mechanism for habitat protection and management by future lot owners. The subdivision of this property will prevent unified and coordinated protection and management of the habitats because of fragmented ownership patterns. Lack of coordinated management and protection of the habitats would likely significantly imperil or destroy the necessary deer and bear habitats on the property. Uncoordinated or unplanned logging activities by individual lot owners could destroy the beech stands and the deeryard.
44. The lot lines drawn by NELA do not take the deer and bear habitat areas into account. The **deeryard** extends over six lots while the most critical food components of the bear habitat are divided among nine or more lots.

45. NELA has not proposed a wildlife management plan that would guide the activities of future lot owners so that damage to the **deeryard** and the bear habitat would be avoided.
46. NELA has not conducted an inventory of the wildlife habitat on its property so that future lot owners could locate and design their improvements to avoid key habitat components.
47. NELA has not established any mechanisms to ensure that future lot owners would make coordinated decisions with respect to the necessary habitat areas.
48. NELA has not established a wildlife habitat conservation zone or redrawn lot lines to respect the most important wildlife habitats. NELA also has not employed cluster planning by concentrating residential lots in the southern half of the tract and protecting the most important habitat components in the tract's northern sections from incompatible human activity.

F. Criterion 9(C) (forestry soils)

49. The entire NELA tract contains soils which support highly productive commercial forestry. The tract is under the single ownership of an organization which has actively managed the property solely to produce forest products. The tract is enrolled in the Use Value Appraisal Program (WA Program) and is managed according to a forest management plan approved by the county forester. The tract has been managed as forest land for forest products for nearly 100 years and has regional importance for its timber quality and commercial productivity.
50. The tract is being managed in accordance with a Forest Resource Management Plan. The plan divides the tract into 60 specific forest stand areas according to species type and age of the trees. A different management prescription is recommended for each of the stands.
51. Enrollment in the WA Program allows a landowner of at least 25 acres to pay lower property taxes based on the land's appraisal value as forest land. The State of Vermont pays the difference in property taxes between the use value and the fair market value. The WA Program encourages management of **forest** land but is not intended to force a landowner into tiparticular type of

management. Property owners can withdraw from the UVA Program at any time. A tax is imposed if the land is developed in the future, but there is no penalty for withdrawing from the program and not developing the land.

52. The incentive will exist for future lot owners to withdraw from the WA Program because the value of portions of the land for development will exceed its value for timber production. Even if a lot is retained in the WA Program, no mechanism exists for requiring an overall management plan or for preventing individual lot owners to manage their forest stands inconsistently with other lot owners.
53. Although lots as small as 25 acres are accepted into the UVA Program, management of considerably larger parcels of forest is more efficient and economically viable for commercial purposes. Under favorable circumstances of soil, topography, and access, intensive commercial forestry can be practiced on as little as 50 to 75 acres. The more hindrances to efficient and productive management, the larger the parcel must be. Under unfavorable conditions such as long skidding distances, poor soils, steep terrain, and wetlands, 300 or more acres are needed for viable commercial forestry. The creation of small lots reduces the volume and value of timber available for harvest, reduces the viability of commercial harvesting, and reduces the incentive for timber harvesting on the property.
54. The lot lines drawn by NELA do not take into account the integrity of distinct forest stands, topography, soil conditions, or streams and in fact bisect the forest stands. Many of the lots are under 50 acres in size. Separate lot ownership will increase production costs, increase the difficulty in operating equipment, increase skidding distances, decrease access and operating options across individual lots, increase the need for new log landings and roads, increase the risk of soil erosion and water pollution, and reduce the economies of scale. At least 25 of the 33 lots will experience a significant reduction in their potential for commercial forestry due to their small size alone or in combination with the existence of areas of steep slopes or wet soils.

55. The drawing of lot lines will fragment the tract into multiple ownerships, preventing the uniform and coordinated management necessary to sustain commercial forestry. **NELA's** subdivision plan does not ensure the continuation of commercial forestry.
 56. NELA provided no evidence on whether it could realize a reasonable return on the fair market value of the land by devoting the forest to alternative uses that would not significantly reduce the forestry potential of the forestry soils.
 57. NELA provided no evidence that its subdivision plan is designed to minimize the reduction of forestry potential by using cluster planning to economize on land usage.
- G. Criterion 9(H) (costs of scattered development)
58. The NELA tract is located in a rural area of Duxbury with a very low population density. It is not contiguous to an existing settlement and is far removed from town services and facilities. The Town Plan discourages development in this area because of its inaccessibility and the attendant difficulties and expenses to the Town should the Town be required to provide services there.
 59. Subdivision of northern forest lands often leads to residential and recreational development because the market value of land for development can be much greater than its value for growing trees for timber. A study conducted in northern New England documents that similar subdivisions of productive forest land have increased demand for town services, increased government expenses to meet the needs of additional population, placed new demands on schools and other services, increased property taxes, and reduced affordable housing.
 60. The highest and best use of the property is not forest management but is residential development. The lot lines were drawn to allow lot owners to construct a house and still have a minimum of 25 acres of land to enroll in the WA Program. Zoning on 480 acres of the tract would allow five-acre minimum lot sizes and 25-acre minimum lot sizes on all the land between 1,500 and 2,500 feet in elevation.

61. NELA provided no evidence that the additional costs of public services and facilities caused directly or indirectly by the subdivision will not outweigh the tax revenue and other public benefits generated by the subdivision.

H. Criterion 9(K) (public investments)

62. The NELA tract lies adjacent to and downslope from Camel's Hump State Forest and is visible from many parts of the state lands, including its hiking trails.

63. The integrity of the wildlife habitat and forest lands within the state forest are dependent on the proper management of the adjoining NELA tract because these lands all form one ecosystem.

64. The State Forest is used extensively for public recreation, including hiking, hunting, and enjoying the scenic values.

I. Criterion 10 (local and regional plans)

65. NELA's application for a zoning permit from the Town of Duxbury states, under the "Proposed Use" section: "No change by the applicant. Forest Land for the production of Forest products under approved management plan."

66. The Duxbury Town Plan refers in a number of places to the importance of preserving and protecting historic and scenic features, forests, and wildlife areas.

67. The Preface to the Town Plan contains the following statements in its list of purposes:

2. To protect soil, forests, water, primary agricultural land, and other natural resources;

. . .

4. To protect and preserve the historic features of the Vermont landscape and of its villages, towns, and cities, to preserve open space and to provide a sound economic basis for

its maintenance as open space and . . . to
encourage and enhance the attractiveness of the
Vermont scene

Duxbury Town Plan at 1.

68. Goals for the Plan include:

To preserve and protect forests, swamps,
ponds, and water courses as recreational and
wildlife areas.

Id. at 3.

69. Basic policies of the Town include the following:

Significant Features

The Town of Duxbury contains numerous
physical and manmade features, which might
be considered unique for historical, archaeo-
logical, geological, or ecological reasons.
. . . Land owners whose land includes
significant features are encouraged to
recognize these features as part of the
historical and natural heritage of the town
and to preserve them to the maximum extent
possible.

Id. at 5. The forests and deeryards on the NELA tract
are identified as "significant features" in the Plan.
Id. at 33, 35-37.

Aesthetics

It is the purpose of this plan to
preserve the scenic and natural aspects
of the open farmland, mountain vistas and
traditional rural character which has
been Duxbury's heritage. Any possible
adverse effect on these aesthetic features
must be considered in approving plans for
development.

Id. at 5.

70. Most of the NELA tract is located in the Timber
Management and Wildlife District, consisting of all

lands between 1,500, and 2,500 feet. With respect to this district, the Town Plan provides the following, in pertinent parts:

The forest and vegetation cover of this area must be more or less kept intact in order to prevent soil erosion, destruction of a vital wildlife habitat, and contamination of ground and surface waters. ... The area is clearly extremely difficult to provide with any Town services, and no encouragement for any type of development is offered. ... [F]orestry will be encouragedLow intensity, daytime recreational uses ... are also encouraged.

Id. at 7.

71. The Transportation Statement of Policy includes the following:

This area [including the NELA property] . . . is also land best retained in its wilderness state in order to preserve its wildlife, water sources, and fragile soils. It is a highly valuable recreational and scenic asset so preserved.

Id. at 13.

72. The Town Plan encourages the concentration of "residential development in hamlet clusters with appropriate areas designated for commercial and light industrial uses."

Id. at 23.

73. The Town Plan identifies "Future [Recreation] Needs to 1990" to include continuing "the program of identification and development of historic sites."

Id. at 29.

74. The Chairperson of the Duxbury Planning Commission believes that NELA's proposal would conform with the Town Plan if a mechanism existed that ensured that the lots would be managed as forest lands after sale, but if the sale of the lots results in development, the proposal would conflict with the Plan.

75. The Central Vermont Regional Land Use Plan includes the NELA parcel in an area defined as "productive forest land." The Plan states:

All productive forest land in this area, should be brought under long term forest management. ...

Development should be limited to uses compatible with timber production, and no development should have the effect of reducing the capability of the land for long term timber production.

When land development does occur, it should be designed to minimize impact on productive forest land. Specifically, no development should have the effect of reducing access to productive land, nor should it interfere with the timber producing capability. Clustering and common ownership of the undeveloped portion are recommended to avoid fragmentation and preserve the land resource.

Id. at 9-10.

76. The Regional Plan recognizes the importance of wildlife habitats. One policy of the Plan is that "[e]very effort should be made to protect and/or enhance critical wildlife habitats by consultation with wildlife biologist[s]." Id. at 9. The Plan also establishes a policy:

to maintain the viability of deeryards so as to protect and support the wintering population of the white-tailed deer. ... Every effort should be made to mitigate possible adverse impacts of such development. Where such development requires Act 250 review, the findings and mitigation measures offered by the State Wildlife Biologist should serve as guidelines for land use permit conditions (or in special cases, denial).

Id. at 17.

77. The Regional Plan establishes a goal of preserving "ecologically sensitive areas" in their natural condition. The Plan identifies deer wintering areas and critical bear habitat identified by the Department of Fish and Wildlife as ecologically sensitive areas which "should receive full protection from potentially harmful use." The Plan states:

Any activity that may lead to irreversible damage to or destruction of an ecologically sensitive area should be closely evaluated. Where a proposed activity is in proximity to an ecologically sensitive area, a buffer strip should be maintained around it to insure adequate protection. The buffer strip should be designed in consultation with the appropriate State agency.

Id. at 16.

78. The Regional Plan also establishes a goal "to preserve, protect, and perpetuate significant historic and prehistoric resources, architecture and sites as an important record of Vermont's heritage. Id. at 21. The Plan states:

Any activity that may have an impact on an historic site or structure . . . [or] on a prehistoric or archaeological site should be planned in consultation with the Division for Historic Preservation

Id. at 21-22.

79. The Regional Plan strongly discourages scattered development. A policy of the Plan states:

New development outside existing settlements should be planned so as to respect the historic settlement pattern of compact villages and urban centers separated by rural countryside. ...

Id. at 32.

III. CONCLUSIONS OF LAW

A. Scope of the Awwaal

NELA has argued throughout this proceeding that its proposal consists merely of subdividing forest land into lots that will continue to be forest land and that the drawing of lot lines with no development has no environmental consequences. Accordingly, contends NELA, there will be no effects on the resources within the tract and therefore NELA has no obligation under Act 250 to provide information concerning those resources. NELA believes that if and when future lot owners develop plans to construct improvements on the lots, those activities will be subject to Act 250 review and at that time the effect upon the resources will be considered and conditions imposed to protect the resources.

The Board agrees that it can only review the reasonably foreseeable effects of the subdivision. NELA, however, misconstrues the meaning of "subdivision" within Act 250. Act 250 regulates two distinct types of activities: subdivisions and developments. Each one has its own definition. "Development" essentially consists of constructing on land for a commercial or industrial purpose. 10 V.S.A. § 6001(3). "Subdivision" means dividing land into lots. 10 V.S.A. § 6001(19). Both subdivisions and developments require a permit prior to commencing development or subdivision. 10 V.S.A. § 6081(a). Before granting a permit, a district commission or the Board must find that a development or a subdivision complies with the ten criteria. 10 V.S.A. § 6086(a).

If NELA's argument were correct, the word "subdivision" in Act 250 would be entirely superfluous. Contrary to NELA's position, the definition of "subdivision" refers only to dividing land but makes no reference to construction. Thus the Board is required, under § 6086(a), to review a proposal to subdivide land for its effect upon the resources protected by the ten criteria and in this decision judges NELA's application accordingly.

NELA's proposes to subdivide land into 33 lots. It states that the land will remain in the Use Value Appraisal Program and that future lot owners may manage their properties for forestry purposes. However, nothing in the proposal limits activities on the lots to forestry uses. NELA has not provided any mechanism to ensure or even encourage that the land be managed for forestry purposes

after the individual lots are sold. Therefore, the Board must consider this application as it would any application for a subdivision. That is, the effects of the subdivision on the natural resources of the property are reviewed, assuming that any allowable activities may take place on the **lots**.

When a subdivision is proposed on lands that contain natural resources which will be affected by the division of the land, review of the effect of the division of the land on those resources must occur, pursuant to 10 V.S.A. § 6086(a). As discussed below, the fragmentation of the land resulting from this subdivision, as proposed, will directly affect historic and archeological sites, wildlife habitat, and forestry soils. The Applicant should identify these resources prior to subdivision of the tract. Lot lines could then be drawn to respect the resources and provide sufficient buffer areas, and mechanisms for protection of the resources by future owners of the tract would be provided.

Other resources are not affected by the subdivision, but will be affected by development or other activities on the lots. Concerning these, the Board believes that identification of the resources and review of the effect of activities are appropriate when improvements are proposed by individual lot owners.

NELA's motion dated July 18, 1990, to exclude all testimony relating to the effect of the subdivision on the natural resources, is denied.¹¹¹

B. Burden of Proof

The statute provides that the Applicant has the burden of proof on Criteria 1(A), 1(B), 1(E), 1(F), 3, 4, 9(C), 9(H), 9(K), and 10, and that opponents to the project have the burden of proof on Criteria 8 and 8(A). 10 V.S.A. § 6086.

¹ NELA continued to object to the admission of any testimony relating to the effect of the subdivision *on* the natural **resources** on the site throughout the proceedings. Those objections are also overruled.

The burden of proof generally includes the burden of production and the burden of persuasion. The term burden of proof as used in Act 250 refers primarily to the burden of persuasion. Re: Pratt's Pronane, #3R0486-EB, Findings of Fact, Conclusions of Law and Order at 4-5 (Jan. 27, 1987). Thus, in judging whether a party has met its burden of proof, the issue is not whether that party has offered evidence, but whether that party has persuaded the Board. In making its findings and conclusions, the Board may consider all the evidence presented, regardless of which party introduced it. In re Cuechee Lakes Corooration, No. 154 Vt. 543, 553-54 (July 13, 1990).

The burden of production, or the burden of coming forward with the evidence, is on the applicant for all the Act 250 criteria. The Board has previously determined that the applicant must produce sufficient evidence on which the district commissions or Board can make affirmative findings. Re: Killinaton, Ltd. and International Paper Realty Corp #1R0584-EB-1, Findings of Fact and Conclusions of Law and Order (Revised) (Part III) at 20-21 (Sept. 21, 1990). Re: Pratt's Pronane, #3R0486-EB, Findings of Fact, Conclusions of Law and Order at 4-5 (Jan. 27, 1987). In the Pratt's Pronane decision, the Board stated:

Regardless of who bears the burden of persuasion in a given case, the usual rule of law is that the plaintiff, the proponent of a rule or order, or an applicant for a permit always bears the burden of producing evidence. . . . Therefore, even without further analysis, at the very least it is clear that the applicant for an Act 250 permit, when proceeding before either a District Commission or the Board, has the burden of providing sufficient evidence upon which the Commission or the Board can make a positive finding. If the applicant does not do so, a Commission or the Board can deny the permit under Criteria 1-4 and 8-10. . . .

To better understand this issue, it is helpful to examine the difference between the role of a judicial **factfinder** and that of an agency acting in a quasi-judicial capacity. The Commissions and the Board are charged by statute with the affirmative.

obligation of making positive findings under each of the ten criteria of 10 V.S.A. § 6086(a). That section requires that before granting a permit, the Board or Commission shall find that the subdivision or development will not cause an undue adverse impact on the environment. ... Regardless of who bears the burden of producing evidence or of persuasion, the Board or Commissions must be able to make positive findings on all the criteria [in order to issue a permit].

Re: Pratt's Prooane at 4-5. See also Re: Washinaton Electric Cooverative. Inc., #5W1036-EB, Findings of Fact and Conclusions of Law and Order (Dec. 19, 1990).

The Board reviews **NELA's** application and the evidence offered in light of this analysis of the burden of proof. Thus, to the extent that NELA did not present sufficient evidence for the Board to conclude that the subdivision proposal complies with the criteria that will be affected by the subdivision, positive findings cannot be made and the application must be denied.

C. Waste disvosal. water suvvlies. and streams

The NELA tract serves as a headwater for Dowsville Brook, which runs through the property, and as a portion of the headwaters for Shepard Brook. It also contains numerous **feeder** streams and brooks. Several important springs are located on or close to the **NELA** property.

Water supplies and streams will not be affected by the subdivision, but could be affected by activities undertaken by future lot owners. If the Board were issuing a permit, it would require that specific measures be taken to protect the water supplies used by the parties to this appeal and that undisturbed vegetated buffers be maintained to protect all streams and streambanks on the property. The Board would also **require that** all forest resource management activities be conducted in accordance with Acceptable Manasement Practices for Maintainina Water Quality on Logging Jobs in Vermont.

D. Soil erosion

The site contains steep slopes and shallow soils, with a high potential for construction activities to cause severe erosion. If the Board were issuing a permit, it would

require that all timber harvests and construction of stream crossings and log landings be done in strict compliance with the Accentable Management Practices established by the Vermont Department of Forests, Parks, and Recreation. The Board would also require that future lot owners follow the Erosion Control Handbook for Soil Erosion and Sediment Control on Construction Sites published by the Vermont Geological Survey and that close attention be paid by the District Commission in its review of erosion control measures for any construction activities proposed by lot owners.

E. Scenic and natural beauty and aesthetics, historic sites, and rare and irreplaceable natural areas

Criterion 8 requires the Board to find that the proposed subdivision "[w]ill not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites or rare and irreplaceable natural areas." 10 V.S.A. § 6086(a)(S).

1. Scenic and natural beauty and aesthetics

The Board heard testimony from both professionals and residents of the area of the proposed subdivision, and observed on its own, that the view of the NELA property both by itself and in combination with the adjacent Camel's Hump State Park is one of great and uninterrupted natural beauty. Camel's Hump and portions of the NELA tract are visible from many locations in Vermont. The remoteness of the area and almost total absence of development of any kind contribute to the uniqueness of the view. The **viewshed** containing the NELA property is particularly sensitive to land use changes because of its high, remote location and natural woodland setting. Inappropriate placement of houses, roads, and timber cuts could destroy the wilderness quality and have a devastating effect on the scenic quality of the tract and of **Camel's Hump**. The Board believes, however, that the fragmentation of ownership resulting from the subdivision will not affect the scenic resources and that protection can be provided before **individual** lot owners undertake activities on their land and would require protection of the scenic resources if the Board were issuing a permit.

2. Historic sites

"Historic site" is defined in Act 250 as:

any site, structure, district or
archeological landmark which has been

officially included in the National Register of Historic Places and/or the state register of historic places or which is established by testimony of the Vermont Advisory Council on Historic Preservation as being historically significant.

10 V.S.A. § 6001(9).

The NELA tract is listed on the State Register of Historic Places because of its importance as part of the Dowsville Brook Historic Archeological District in providing significant information about the prehistory and history of Duxbury. A number of historic sites have been found on the NELA property. Apparently very little knowledge of **Duxbury's** history is available and therefore the sites on the NELA tract constitute the major source of information about the history of the area. Furthermore, the historic sites are part of an historic district which, taken as a whole, will likely provide unique information on the community of the Dowsville Brook area.

A standard environmental model was applied to predict the likelihood of the existence of prehistoric archeological sites. The results showed that the area is likely to contain prehistoric sites.

The Board believes that, at a minimum, the Applicant must identify the general areas that are likely to contain archeological resources. Identification of the general areas would allow lot lines to be drawn to avoid these areas, if possible. If total avoidance is not possible, and no identification is made prior to subdivision of the property, individual lot owners will not know prior to purchasing the lots whether the lots contain archeological resources that require protection or where on the lots they can construct improvements without disturbing the archeological sites. This could result in unnecessary expense to future lot owners who may discover, after identifying the archeological sites on their lots prior to development, that their plans are not viable because they cannot build in certain areas, or inadvertent destruction of the archeological sites. Moreover, individual lot owners are not likely to have the resources, incentive, or mechanisms to identify, evaluate, and protect the historic and archeological resources on the site. Therefore, identification of at least the general areas likely to

contain archeological sites should be done prior to the subdivision of the land. When individual lot owners apply for a permit to construct improvements, they will be required to identify specific archeological and historic sites and to provide protection for the sites.

In this case, the Applicant provided insufficient information for the Board to be able to conclude that the subdivision will not have an undue adverse effect on historic sites.

3. Rare and irreplaceable natural areas

The Applicant performed no studies to determine whether the site contains any rare and irreplaceable natural areas. If the Board were issuing a permit, it would require that, prior to any construction, individual lot owners perform detailed field studies to determine whether any rare and irreplaceable natural areas exist on their lots.

F. Necessary wildlife habitat and endangered species

The State of Vermont, Department of Fish and Wildlife, provided a great deal of testimony about the presence of necessary bear and deer habitat on the NELA property. It identified several portions of the tract which qualify as necessary wildlife habitat. Four separate areas of nut-producing beech **trees** which receive regular use by black bears, and a **deeryard** of approximately 200 acres, were discovered. These habitat areas cut across a number of the lot lines proposed by NELA for the subdivision.

NELA provided no evidence concerning wildlife habitat on its property. As discussed above, the applicant must provide sufficient evidence to the Board for the Board to find in its favor. In this case, the only evidence presented to the Board showed a high likelihood that the NELA tract contains necessary wildlife habitat. The Board believes that the proposed subdivision will destroy or significantly imperil the habitat by fragmenting it so that it may not be able to be managed in the future for the continued use by the wildlife that depends upon it for its survival. The Applicant provided no evidence concerning the subcriteria of Criterion 8(A), namely (i) whether the benefit to the public from the subdivision outweighs the loss to the public of the habitat and (ii) whether all feasible and reasonable means of preventing or lessening the destruction or imperilment of the habitat have been applied.

Evidence that was presented showed that the loss to the State of the bear and deer habitat would be substantial. The Applicant provided no proposal for reducing the adverse effect on the habitat from the subdivision, such as lot lines drawn to avoid the habitat or a habitat management plan.

Therefore, the Board concludes that without a plan for ensuring the protection of the necessary wildlife habitat on the site, the proposed subdivision will not comply with Criterion 8(A).

G. Forest soils

Criterion 9(C) of Act 250 provides, in pertinent part, that the applicant must demonstrate that the subdivision "will not significantly reduce the potential of [the forest] soils for commercial forestry" 10 V.S.A. § 6086(a) (9) (C). "Forest soils" are defined as soils "which have reasonable potential for commercial forestry... and which have not yet been developed. In order to qualify as forest ... soils the land containing such soils shall be characterized by location, natural conditions and ownership patterns capable of supporting or contributing to present or potential commercial forestry" 10 V.S.A. § 6001(8).

The Board believes that the NELA land contains substantial amounts of forest soils and that the subdivision will significantly reduce the potential of the soils for commercial forestry. Although NELA contends that lot owners may remain in the Use Value Appraisal Program and continue to manage their land for commercial forestry purposes, NELA provided no mechanism to ensure that this will happen. To the contrary, the lot lines were drawn with total disregard for the existing forest stands and in fact the lines transect the stands, so that continued management of the stands by multiple owners would be very difficult. Moreover, the creation of smaller lots will substantially reduce the productivity and viability of the soils for commercial forestry by reducing the commercial economies of scale which contribute to the current productivity of the tract. It is likely that the fragmented ownership that will result from the subdivision will significantly reduce the potential for commercial forestry.

NELA established no mechanism to minimize the reduction of commercial forestry potential such as a mandatory forestry management plan, a cooperative management

arrangement among lot owners, or a subdivision design that ensures long-term commercial management over large blocks of contiguous forest. Accordingly, the Board must conclude that the potential of the soils for commercial forestry will be significantly reduced.

NELA also failed to provide evidence on the subcriteria of Criterion 9(C), namely (a) that a reasonable return can be obtained only by devoting the forest soils to uses which will significantly reduce their forestry potential and (b) that the subdivision has been planned to minimize the reduction of forestry soils "by providing for reasonable population densities, reasonable rates of growth, and the use of cluster planning ... designed to economize on the cost of roads, utilities, and land usage." 10 V.S.A. § 6086(a)(9)(C)(i) and (iii). NELA failed to provide an analysis of the return which could be obtained by unconditional sale of the lots as proposed compared with the return obtainable if lots were clustered on a portion of the tract or sold as designed, but with covenants to ensure continued forestry management, or to present alternative designs. See Re: Homer and Marie Dubois, #4C0614-3-EB, Findings of Fact, Conclusions of Law, and Order at 1-8 (May 18, 1988).

Accordingly, the Board concludes that the proposed subdivision does not comply with Criterion 9(C).

H. Costs of scattered development

Criterion 9(H) requires that a permit will be granted for a subdivision which is not physically contiguous to an existing settlement if it is demonstrated that

the additional costs of public services and facilities caused directly or indirectly by the proposed ... subdivision do not outweigh the tax revenue and other public benefits of the ... subdivision such as increased employment opportunities or the provision of needed and balanced housing accessible to existing or planned employment centers.

10 V.S.A. § 6086(a)(9)(H) (emphasis added).

The NELA tract is not physically contiguous to an existing settlement. The Applicant provided no evidence concerning whether costs caused "directly or indirectly by the proposed ... subdivision" are outweighed by tax revenue and other public benefits of the development.

The Board must assume that at least some of the lots will be developed since there is nothing in the proposal that prohibits development. The location of the project near a heavily travelled tourist route and the proximity of the site to several ski areas, the capital city of Vermont, and the interstate, indicate that residential development of the land is likely. The findings of the Northern Forest Lands Study that the subdivision of northern forest lands inevitably leads to residential and recreational development adds further support to the Board's assumption that at least **some of** these lots will be developed.

In a recent decision the Board described information which an applicant can provide concerning the indirect effects of growth caused by construction of a power line. The Board stated:

[B]asic information about the rate and pattern of growth in the local and regional areas could be provided. General information about the suitability for development of the land along the route of the power line would not be difficult to ascertain.

Re: Washinaton Electric Cooperative, Inc., #5W1036-EB,
Findings of Fact, Conclusions of Law, and Order at 9
(Dec. 19, 1990).

Similarly, the Applicant could provide information about the likely growth consequences of subdividing a large tract of land in relatively close proximity to a ski resort area with information on the potential costs of providing public services.

Absent any information from the Applicant, the Board concludes that the Applicant has failed to satisfy its burden of proof on Criterion 9(H).

I. Public investments

In order to satisfy Criterion 9(K), an applicant must demonstrate that, if it proposes to subdivide land adjacent to public lands, the subdivision "will not unnecessarily or

unreasonably endanger the public or quasi-public investment in the ... lands, or materially jeopardize or interfere with the function, efficiency, or safety of, or the public's use or enjoyment of or access to the ... lands."

10 V.S.A. § 6086(a)(9)(K).

The Camel's Hump State Forest is public lands that contain a number of hiking trails and is used extensively by the public. Camel's Hump itself is an important and symbolic mountain in the State. The health of the wildlife and forests on the state lands are tied to the health of the ecosystem of the area which includes **NELA's** land.

The Board believes that inappropriate placement of houses, roads, and timber cuts by future lot owners could destroy the views from the state forest or from public highways toward Camel's Hump Mountain and could interfere with the backcountry experience of park users. If the Board were issuing a permit, it would require that proposals for activities on any lot be carefully scrutinized for their potential effect on Camel's Hump State Forest and that the views from both within and outside the park be protected.

J. Local and regional plans

The Board concludes that the proposed subdivision does not comply with either the Duxbury Town Plan or the Central Vermont Regional Land Use Plan. Both plans set forth clear goals: to preserve important natural resources, including wildlife, forests, and historic sites, to the greatest extent possible. Cluster planning is encouraged to minimize the effect of development on natural resources.

A subdivision proposal for this tract of land which includes mechanisms for protecting the wildlife habitat, historic sites, and the potential for productive forestry would likely comply with the Town and Regional Plans. However, as proposed, this subdivision violates the Town Plan's policies to retain the area in which this tract is located as wilderness in order to preserve its wildlife habitat, forestry, and historic resources, and the Regional Plan's goals of preserving wildlife habitat in its natural condition and historic sites.

The Board therefore concludes that, as proposed, this subdivision does not comply with criterion L0.

IV. ORDER

Land Use Permit Application #5W1046-EB is hereby denied. Jurisdiction is returned to the District #5 Environmental Commission.

Dated at Montpelier, Vermont this 1st day of October, 1991.

ENVIRONMENTAL BOARD



Stephen Reynes, Acting Chair
Ferdinand Bongartz
Rebecca Day*
Samuel Lloyd
Charles Storrow
Steve E. Wright*

Dissenting:

Arthur **Gibb**

*Partial dissenting opinion of Rebecca Day and Steve Wright:

We concur with most of the majority's conclusions and would also deny the permit. We disagree only with the majority's conclusion that fragmentation of the NELA property caused by the subdivision would not have an affect on the scenic resources. The evidence clearly established that the property contains important scenic resources and some particularly sensitive visual areas. We believe that the reasonably foreseeable activities that will be the inevitable result of the subdivision of this property could destroy the sensitive scenic resources. In the absence of any information from the Applicant concerning the scenic resources on the tract, we conclude that the subdivision will create an undue adverse effect upon the scenic and natural beauty of the area and aesthetics.

Dissenting opinion of Arthur Gibb:

I believe that a permit should be granted with conditions. Any change in use from commercial forestry should be subject to Act 250 review. Conditions should be

imposed restricting lots 6A and **6A/1** to forestry and conservation uses, incorporating the agreements regarding the Shor and Anderson springs, and mandating delineation of necessary areas for wildlife habitat.

I am fully cognizant of the threat to the Northern forest lands from development. They can more properly be protected, however, through easements and purchase of lands for conservation purposes. There are both public and private programs available for this purpose.

(S16)NELA