

VERMONT ENVIRONMENTAL BOARD
10 V.S.A. §§ 60014092

Re: Mark and Pauline Kisiel
Land Use Permit Application #5 W1270-EB
Dock [REDACTED]

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER (ALTERED)

I. SUMMARY OF DECISION

In this decision, the Environmental Board ("Board") concludes that Mark and Pauline Kisiel's ("Applicants") application for a Land Use Permit pursuant 10 V.S.A. §§ 6001-6092 ("Act 250") complies with 10 V.S.A. §6086(a)(1)(G) (wetlands), 8 (aesthetics), **9(C)** (forest and secondary agricultural soils), 9(K) (public investments and facilities), and 10 (regional plan) but does not comply with 10 V.S.A. §6086(a)(1)(water pollution), (1)(A) (headwaters), (1)(E) (streams), 4 (erosion), 8(A) (necessary wildlife habitat), 9(A) (impact of growth), 9(H) (costs of scattered development), and (10) (local plan). Accordingly, the Board denies application #5 W 1270-EB and declares Land Use Permit #5 W 1270, issued by the District #5 Environmental Commission on November 5, 1997, void.

Key findings of the Board include:

A. Criterion 1. The Board must take into consideration the existing conditions of the streams on the land where the proposed project is located. Because the Applicants did not provide the Board with information regarding the existing water quality of those streams, the Board has no background data against which to measure the impact of any discharge caused by the proposed project.

B. Criterion 1 (A). The Board concludes that the proposed project will cause erosion, putting a fragile headwaters area at increased risk by increasing discharges into the streams, thereby increasing turbidity. Because the Applicants did not provide the Board with information regarding the existing water quality of the headwater streams, the Board has no background data against which to measure the impact of any discharge caused by the proposed project.

C. Criterion 1 (E). The proposed project will not maintain the natural conditions of the streams during construction or after completion. Because construction will take place on steep slopes in an area with shallow soils, erosion will occur during construction, thereby increasing sediment and turbidity in the streams. In addition to increased sedimentation during construction of the Project, runoff from impervious surface areas will cause sedimentation after completion of the Project. The Applicants have not considered all reasonable alternatives which would allow the streams affected by the proposed project to remain in their natural condition.

D. Criterion 4. Based on its conclusions under Criteria 1, 1 (A), and 1 (E), the Board concludes that the Project will cause unreasonable soil erosion so that an unhealthy condition may result.

E. Criterion 8(A). The Project will destroy or significantly imperil developing deer wintering areas on the Project Tract. The Applicants have not applied all feasible and reasonable means of preventing or lessening the destruction, diminution, or imperilment of the deer wintering habitat on the lands of the proposed project.

F. Criterion 9(A). The Applicants did not provide any evidence on the anticipated costs for education, highway access and maintenance, sewage disposal, water supply, police and fire services and other factors relating to the public health, safety and welfare.

G. Criterion 9(H). The proposed project meets the definition of scattered development. The Applicants submitted evidence regarding the public benefits of the proposed project, including expected tax revenues from the proposed project and recreational benefits of a trail easement. However, the Applicants submitted no evidence regarding the public costs, if any, of the proposed project. Without such information, the Board is unable to determine whether the public costs of the proposed project outweigh the public benefits of the proposed project.

H. Criterion 10 (local plan). The proposed project does not comply with two specific provisions in the local plan: prevention of the creation of parcels which will result in development on steep slopes and maintenance of the current status of all class four Town Highways to promote their use for walking, bicycling and horseback riding.

II. SUMMARY OF PROCEEDINGS

On November 5, 1997, the District #5 Environmental Commission ("Commission") issued Land Use Permit #5 W 1270 and its supporting Findings of Fact, Conclusions of Law, and Order ("Permit"). The Permit authorizes the Applicants to create a five-lot residential subdivision, improve 2,400 feet of Bowen Road (also known as Town Highway 36), construct 1,300 feet of private roadway, construct 2,160 feet of driveways, and construct related infrastructure, including the extension of power and utility lines ("Project"). The Project is located off of Bowen Road in the Town of Waitsfield, Vermont.

On December 1, 1997, the Town of Waitsfield Select Board and Planning Commission ("Town") filed an appeal with the Board from the Permit. The appeal is filed pursuant to 10 V.S.A. § 6089(a) and Environmental Board Rules ("EBR") 6 and 40. The Town contends that the Commission erred with respect to Criteria 1 (water pollution), 1 (A)

(headwaters), 1(E) (streams), 1(G) (wetlands), 4 (soil erosion), 8 (aesthetics), 8(A) (necessary wildlife habitat), 9(A) (impact of growth), 9(C) (forest and secondary agricultural soils), 9(H) (costs of scattered development), 9(K) (development affecting public investments), and 10 (local or regional plan) as set forth at 10 V.S.A. § 6086(a).

On December 2, 1997, the Northfield Range Concerned Citizens ("NRCC") filed an appeal with the Board from the permit. NRCC contends that the Commission erred with respect Criteria 1 (A) (headwaters), 1 (E) (streams), 4 (soil erosion), 9(H) (costs of scattered development), and 10 (local or regional plan) as set forth at 10 V.S.A. § 6086(a). NRCC's appeal does not raise any criteria or issues different from those raised by the Town's appeal.

The Board originally scheduled the prehearing conference in the appeal for January 8, 1998. On December 17, 1997, the Town requested postponement of the prehearing conference until a date no earlier than January 22, 1998. Per the Town's request and upon the Applicants' waiver of the provisions of 10 V.S.A. § 6085(b) that a prehearing conference be held within 40 days of receipt of the notice of appeal, the Board rescheduled the prehearing conference for January 22, 1998. On January 12, 1998, the Applicants requested postponement of the prehearing conference until January 30, 1998. Per the Applicants' request, the Board rescheduled the prehearing conference for January 30, 1998.

On January 30, 1998, Board Chair Marcy Harding convened a prehearing conference in Montpelier, Vermont.

On February 4, 1998, Chair Harding issued a prehearing conference report and order ("Prehearing Order") which is incorporated herein by reference. The Prehearing Order set forth, among other things, a schedule of dates for the filing of prefiled evidence, the second prehearing conference, the site visit, and the hearing. The Prehearing Order stated that it was binding on all parties unless a written objection to it was filed on or before February 17, 1998.

On February 13, 1998, the Town filed a Motion for Continuance ("Motion"), objecting to the schedule set forth in the Prehearing Order. In its Motion, the Town requested rescheduling of the date for filing prefiled direct evidence from February 24, 1998 to a date no earlier than March 17, 1998. The Town also requested rescheduling of the hearing from April 22, 1998 to a date no earlier than May 20, 1998.

On February 19, 1998, the Applicants filed an objection to the Town's Motion.

On February 20, 1998, Chair Harding issued a revised prehearing conference report and order ("Revised Prehearing Order") which set forth a new schedule of dates for the filing of prefiled evidence and denied the Town's request to reschedule the hearing. The Revised

Prehearing Order is incorporated herein by reference.

The parties filed prefiled testimony, lists of witnesses and exhibits, proposed findings of fact and conclusions of law, and evidentiary objections during March and April, 1998.

On April 21, 1998, Chair Harding convened a second prehearing conference by telephone and issued the Chair's Preliminary Rulings on Evidentiary Objections which are hereby incorporated by reference.

On April 21, 1998, the Board conducted a site visit.

On April 22, 1998, the Board convened a hearing in the City of Montpelier with the following parties participating: the Applicants by Paul Gillies, Esq., the Town by Joseph McLean, Esq., NRCC by Brian Shupe, and Richard and Patricia Condon by Richard Condon.¹

After placing its site visit observations on the record, the Board gave the parties the opportunity to place their own observations on the record. The Board then gave the parties an opportunity to object to the Chair's Preliminary Rulings on Evidentiary Objections. The Town objected to certain rulings made by the Chair, including rulings which allowed the Applicants an opportunity to establish a foundation for the testimony of Gunner McCain. The Board affirmed and adopted all of the Chair's Preliminary Rulings of Evidentiary Objections, including those objected to by the Town. After giving the Applicants an opportunity to establish a foundation for Mr. McCain's testimony, the Board concluded that the testimony at issue was admissible. After ruling on the evidentiary objections, the Board heard testimony and arguments from the parties. The Board conducted deliberative sessions on April 22, 1998, April 29, 1998, and May 26, 1998.

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. See Petition of Village of Hardwick Electric Department, 143 Vt. 437,445 (1983).

III. ISSUES

- A. Whether, pursuant to 10 V.S.A. § 6086(a)(1), the Project will result in undue water pollution.
- B. Whether, pursuant to 10 V.S.A. § 6086(a)(1)(A)(i)-(v), the Project will meet any applicable health and environmental conservation department regulation

¹Richard Condon participated by telephone.

regarding reduction of the quality of the ground or surface waters.

- C. Whether, pursuant to 10 V.S.A. § 6086(a)(1)(E), the Project's subdivision of lands on or adjacent to the banks of a stream will, whenever feasible, maintain the natural condition of the stream, and will not endanger the health, safety, welfare of the public or of adjoining landowners.
 - D. Whether, pursuant to 10 V.S.A. § 6086(a)(1)(G), the Project will violate the rules of the water resources board, as adopted under 10 V.S.A. § 905(9), relating to significant wetlands.
 - E. Whether, pursuant to 10 V.S.A. § 6086(a)(4), the Project will cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result.
 - F. Whether, pursuant to 10 V.S.A. § 6086(a)(8), the Project will have an undue adverse effect on aesthetics.
 - G. Whether, pursuant to 10 V.S.A. § 6086(a)(A)(i)-(iii), the Project will destroy or significantly imperil necessary wildlife habitat or any endangered species.
 - H. Whether, pursuant to 10 V.S.A. § 6086(a)(9)(A), the Project will significantly affect the Town of Waitsfield and the region's existing and potential financial capacity to reasonably accommodate both the total growth and the rate of growth otherwise expected for the town and region and the total growth and rate of growth which would result from the Project if approved.
 - I. Whether, pursuant to 10 V.S.A. § 6086(a)(S)(C)(i)-(iii), the Project involves the subdivision of forest or secondary soils and, if so, whether the Project will significantly reduce the potential of those soils for commercial forestry or adjacent primary agricultural soils for commercial agriculture.
 - J. Whether, pursuant to 10 V.S.A. § 6086(a)(9)(H), the Project is physically contiguous to an existing settlement and, if not, whether the additional costs of public services and facilities caused directly or indirectly by the Project outweigh the tax revenue and other public benefit:: of the Project.
 - K. Whether, pursuant to 10 V.S.A. § 6086(a)(9)(K), the Project involves the subdivision of lands adjacent to governmental and public utility facilities, services, and lands, and, if so, whether the Project will unnecessarily or
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unreasonably endanger the public or quasi-public investment in the facility, service, or 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 facility, service, or lands.

- L. Whether, pursuant to 10 V.S.A. § 6086(a)(10), the Project is in conformance with any duly adopted local or regional plan or capital program under chapter 117 of Title 24.

IV. FINDINGS OF FACT

The findings of fact below are organized into a general section followed by sections related to the specific issues. Because many findings are relevant to more than one issue, the findings should not be read as applicable only to the specific issue(s) under which they are contained. Where findings from the general category or another specific category are relevant, they are assumed and not repeated.

General Findings

1. The Project consists of a five-lot residential subdivision, improvements to 2,400 feet of **Bowen Road** (also known as **Town Highway 36**), construction of 1,300 feet of private roadway, construction of 2,160 feet of driveways, and construction of related infrastructure, including the extension of power and utility lines.
2. The Project is located on a 158 acre tract ("Project Tract") owned by the Applicants..
3. The Project Tract is located at the end of **Bowen Road** in the Town of **Waitsfield** on the western side of the Northfield Range.
4. The Project Tract is forested with steep slopes that offer limited but dramatic views to the west.
5. The elevation of the Project Tract ranges from 1,500 to 2,000 feet. All construction will occur between the elevations of 1,500 and 1,700 feet within a 20± acre limited clearing area ("Limited Clearing Area") on slopes ranging approximately from 5% to 25%.
6. The five proposed lots will have the following areas:

Lot 1 - 93.8 acres

Lot 2 - 15.6 acres
Lot 3 - 15.7 acres
Lot 4 - 14.8 acres
Lot 5 - 18.1 acres

7. Bowen Road is a class 4 town road. In order to provide access to the Project Tract, the Applicants will improve approximately 2,400 feet of Bowen Road by upgrading and widening the road.
 8. In addition to upgrading Bowen Road, the Applicants will construct approximately 1,300 feet of private roadway ("Project Road") as access to Lots 3, 4, and 5.
 9. The Applicants also will construct the driveways to the house sites on Lots 1-5.
 10. The common portion of the driveway to Lots 1 and 2 will be approximately 400 feet long with an average grade of 11.6%. Individual drives to Lots 1 and 2 each will be approximately 160 feet long.
 11. The driveway to Lot 3 will be approximately 760 feet long and will have an average grade of 12.5%.
 12. The driveway to Lot 4 will be approximately 580 feet long and will have an average grade of 12.5%.
 13. The driveway to Lot 5 will be approximately 100 feet long.
 14. The northern boundary of the Project Tract borders Scrag Municipal Forest.
 15. Although members of the public currently access Scrag Municipal Forest through the Project Tract, there is no formal easement providing permanent public access to the municipal forest. As part of the Project, the Applicants will grant a public recreational trail easement to the Town. The recreational trail ("Trail") will begin at the end of Bowen Road and cross Lots 2-5 of the Project Tract to permit access to Scrag Municipal Forest for biking, hiking, and horseback riding. Additionally, the Applicants will construct a parking area for 6 vehicles at the end of Bowen Road for users of the Trail.
 16. An existing logging road runs through the Project Tract in the general area of Lots 1 and 2. The Applicants will utilize the logging road in the implementation of their forest management plan.
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17. The Applicants will grant a logging easement to the Town which provides access to the Scrag Municipal Forest. The easement will follow the route of the recreational trail and an existing woods road. A log landing area will be located on Lot 5.
18. The Project Tract will be subject to the Bowen Place Protective Covenants (“Covenants”). The Covenants state that the Project Tract is “subjected to the terms, conditions, covenants and restrictions of these Protective Covenants, which shall be perpetual, run with the land and be binding and inure to the benefit of each and every owner and occupant of the Property including but not limited to Kisiel’s heirs, assigns and respective heirs, executors, administrators, successors and assigns.”

Criterion 1 (water pollution). Criterion 1(A) (headwaters). Criterion 1 (E) (streams). and Criterion 4 (erosion)

19. The Project is located in a headwaters region characterized by steep slopes and shallow soils.
20. Sewage disposal for Lots 1, 2, and 3 will be provided by a shared septic system located by easement on Lot 10 of the adjacent Eurich Farm Subdivision.
21. Sewage disposal for Lots 4 and 5 will be provided by a shared septic system located by easement on Lot 5.
22. There are two primary streams located on the Project Tract above 1,500 feet in elevation: Folsom Brook and Central Brook.
23. Folsom Brook flows generally in a northwesterly direction over and through the northern corner of the Project Tract.
24. Central Brook flows generally in a northwesterly direction over and through the center of the Project Tract. On June 11, 1997, the stream flow rate of Central Brook was approximately .16 cubic feet per second. Following a storm event: however, flows could exceed that rate significantly.
25. Paragraph 19 of the Covenants states:
 19. **Streams.** For the protection of streams, a twenty-five (25) foot undisturbed, naturally vegetated buffer strip shall be maintained from the top of the stream banks for all streams. Trees within these zones shall remain undisturbed, except that falled [sic] trees may be removed.

26. Contrary to Paragraph 19 of the Covenants, the Applicants now propose a fifty (50) foot buffer for Central Brook and Folsom Brook.
 27. In addition to Folsom Brook and Central Brook there is an unnamed stream (characterized by the Applicants as a "swale") located east of Lot 3, between the proposed driveway and a stone wall.
 28. In addition to the above streams, there are other streams on the Project Tract as well as a number of swales, seeps, and intermittent watercourses.
 29. The Applicants have not performed a complete evaluation of all streams and watercourses on the Project Tract. A majority of the ephemeral streams as well as some of the smaller year round streams have not been identified.
 30. There are several small streams located below the elevation of the house sites.
 31. The Project Road will cross Central Brook between Lots 3 and 4. The Applicants will install a five foot diameter culvert at the crossing.
 32. The Trail crosses Central Brook between Lots 3 and 4.
 33. The Project driveways cross numerous small streams and watercourses feeding into Central Brook. For instance, the Lot 3 house site is located upstream from the confluence of a stream and Central Brook. The Lot 3 driveway crosses the stream in two locations, creating a significant potential for sediment transport into the stream and Central Brook.
 34. The Lot 3 house site is approximately 40 feet from one stream and 140 feet from another stream. The Lot 3 driveway passes near the buffer of Central Brook and twice crosses an intermittent stream. The driveway is approximately 30 feet from another intermittent stream which flows into **Central Brook**.
 35. The streams on the Project Tract comprise a portion of the Mad River watershed.
 36. Wise management of watersheds involves protection of streams which drain high elevations and feed larger streams and rivers. Protection of high elevation streams is crucial to the ultimate protection of downstream receiving waters such as the Mad River.
 37. Headwaters are crucial to the health of the connected downstream riverine systems. Headwaters provide good water quality through sediment control and nutrient
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processing for downstream reaches of the watershed. Headwaters are sensitive to human disturbance and respond negatively and quickly to changes in the vegetation in their watersheds.

38. The Project will change vegetation and slope patterns, creating runoff which will have a tangible effect on the larger, headwater streams.
39. Approximately 2% of the Project Tract will be covered with impervious surface areas. This impermeability figure is based on the assumed area of roads and driveways, house site turnarounds, and dwellings. It does not include the area of impervious surfaces created by outbuildings, patios, or other residential structures likely to be constructed on the Project Tract.
40. Since erosion in headwaters areas has an escalating impact downstream, it is likely to result in increased turbidity, streambank erosion, increased water temperatures and overall losses in water quality in the watershed.
41. The increase in sediment to the headwaters from erosion will increase the turbidity in the headwaters streams on the Project Tract.
42. Section 1-02 of the Vermont Water Quality Standards ("VWQS") states, in part, that "It is the policy of the State of Vermont to . . . protect from risk and preserve in their natural state certain high quality waters including fragile high-altitude water, and the ecosystems they sustain."
43. Section 4-08 of the VWQS provides that waters in the Project area (within the Winooski Basin) are designated as Class B, cold water fish habitat.
44. Under 3-03 (B)(1) of the VWQS, the turbidity levels for cold water fish habitat shall not exceed 10 Nephelometric Turbidity Units ("NTU").
45. The Applicants have not evaluated the turbidity conditions of the streams on the Project Tract to determine whether an increase in sediment will violate the VWQS.
46. Although the streams on the property are very high quality upland watercourses, they are not truly "pristine" due to the impact of past logging activity. The streams are in the process of recovery, however, and have the potential to become pristine.

A good indicia of stream health is the presence of various forms of aquatic biota, including stone fly, may fly and caddis fly, as well as viable fish populations. There are species of may fly, stone fly, and other macro invertebrates in the streams on the

Project Tract.

48. Aquatic biota are critical to sustain fish populations which depend on them for food. There are brook trout in Folsom Brook; Central Brook also contains viable fish habitat.
 49. Stream biota are affected severely by sedimentation, increases in water temperature and the introduction of toxins into the aquatic environment.
 50. Sedimentation specifically results in the destruction of macro invertebrate habitat through the process of "embeddedness" (the filling of interstitial space between rocks and stones with sediment). Embeddedness reduces levels of dissolved oxygen in the stream.
 51. Both macro invertebrates and fish depend on oxygen to survive.
 52. Macro invertebrates and prevalent fish species also require cold water for survival. This is because, among other things, colder water has the capacity to hold higher levels of dissolved oxygen.
 53. Stream temperatures are directly related to and varied by the temperature of overland flows which, in turn, are influenced by such factors as the removal of tree cover and the creation of impermeable surfaces.
 54. There is an integral relationship between the lower reaches of the Mad River and its upland streams and headwaters so that changes in sedimentation and temperature in the headwaters will adversely impact downstream areas.
 55. Over time, **environmental** impacts such as erosion in a headwaters area will have an escalating impact downstream, resulting in increased turbidity, streambank erosion, increased water temperature and overall losses in water quality.
 56. Currently, the temperatures in the Mad River are somewhat elevated from prior levels. The cooling effect of upland streams and headwaters is critical to the river's ability to sustain viable populations of fish and aquatic biota.
 57. Soil erosion is generally defined as the movement of soil particles in surface water. It typically occurs when precipitation or discharge (ie. excess runoff from precipitation) impacts on steep and/or exposed soils.
 58. Steepness of slope, above all else, is the critical factor influencing erodability. Other
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factors, including precipitation levels, the exposure of shallow soils, and the removal of forest canopy and other vegetation, and the channelization of overland flows increase the potential for unreasonable soil erosion.

59. The Project Tract is predominantly wooded, with the forest floor covered by vegetative matter.
60. There are a total of eight soil series on the Project Tract. Dixfield Series (Stony) and Rawsonville-Hogback Complex (Stony) are the predominant soil types in the Project area. These soils are characterized as “moderate to severe” and “severe” for site development for dwellings without basements and “severe” for site development for dwellings with basements.
61. Rawsonville-Hogback Complex is particularly problematic for building site development due to its characteristic shallowness to bedrock and susceptibility to erosion. The severity of Rawsonville series soils for development of dwellings without basements increases with slope. Potential site development for dwellings with basements is uniformly characterized as “severe.”
62. Hogback series soils are rated as “severe” for all types of dwellings, regardless of slope.
63. Some construction will take place on slopes of 25%. The Project house sites are located on slopes with gradients ranging from 5% to 20%.
64. The maximum slope for the Project Road will be 10%. The maximum slope for the Bowen Road will be 12%. The final grades of driveways will be a maximum of 15%.
65. The Applicants intend to use soil erosion control methods as set forth in the Vermont Handbook for Soil Erosion and Sediment Control on Construction Sites (1982) (“Handbook”).
66. In discussing factors influencing erosion, the Handbook states:

The size and steepness of slopes within a watershed influence the amount and rate of runoff. As the length and gradient (steepness) of a slope increase, the amount and rate of runoff increase and the potential for erosion is magnified. . . . By limiting the length and gradient of slopes created or modified during development, one can reduce the volume and velocity of runoff and minimize erosion.

Handbook at 6.

67. The Applicants intend to install approximately 60 haybale dykes for temporary erosion control purposes to intercept surface runoff. In addition, the Applicants' intend to install a large but unspecified number of haybale dykes around all disturbed areas during house construction.
 68. Haybales are temporary erosion control methods. Haybales catch sediments from soils that are being eroded and mitigate effects of sediments moving further downstream.
 69. Inspection of temporary erosion control devices will occur weekly (daily after heavy rains) and repairs will occur on an "as needed" basis.
 70. Seeding and mulching disturbed areas can mitigate erosion, but knowing the season in which disturbance will occur is integral to the effectiveness of such measures. Seeding and mulching disturbed areas is less successful on very steep slopes where seedlings or mulch can be washed away without being effective.
 71. In order for any of the temporary erosion control methods to be effective, a careful plan which includes phases of construction during particular seasons is essential.
 72. Large trees, especially hardwoods, provide a high surface area canopy which prevents "rain drop" erosion by (1) cushioning rain falling on soils (decreasing the potential energy), and (2) providing a continuous cover of organic matter (leaf debris) that further protects soils from "rain drop" erosion and "shear" erosion by providing binding material for soil particles. Additionally, tree roots bind soils, adding extra protection from erosion.
 73. The greatest risk of unreasonable soil erosion will occur during the three year construction phase of the Project.
 74. No exterior site work will occur between October 1 and April 15. Streams and soils are most vulnerable to erosion problems in mid-April.
 75. The Applicants have not provided any credible evidence regarding the duration of soil disturbance, the size of the total disturbed area, or the limits of soil disturbance.
 76. All disturbed areas will be seeded and mulched within 72 hours of being brought to finished grade.
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77. The Applicants will utilize the following permanent erosion control measures: (1) installing either stone-lined or vegetative ditches, (2) grading, seeding, and mulching disturbed areas, and (3) installing ten culverts, some with stone head walls and culvert barriers, along roads and driveways.
78. Maintenance of permanent erosion control measures, including the inspection, clearing, and repair of ditches, culverts, barriers, and rip rap, is critical to their proper functioning.
79. Unmaintained erosion control measures, especially on roads and driveways, will fail ultimately. Such failure may result in increased erosion as a result of the increased speed of channelized flows.
80. Paragraph 10 of the Covenants provides:

10. **Environmental** Protection. All uses or activities shall be consistent with the protection of environmental systems, and the encouragement of sound utilization and conservation of agricultural and forest resources. All owners shall (comply with Land Use Permit # _____, as now or hereafter amended, the subdivision permit issued by the Town of Waitsfield, and other permits governing this development.

Standard erosion controls to prevent the transport of sediments shall be installed and maintained during construction activity on all lots.

81. Paragraph 12 of the covenants provides:

12. **Maintenance.** On or before the 1st day of December of each year the owners shall elect by a majority vote, an administrator for the forthcoming calendar year. The administrator shall be responsible and have authority to contract on behalf of all owners for the following:

A. The repair, maintenance, snow plowing and application of sand or other materials to minimize ice and dust conditions of the driveways.

B. Collect moneys from owners and make all payments for the maintenance and upkeep of the driveways.

C. Call meetings for the owners.

D. Arrange and contract for the maintenance of the Property according to the

dictates of the Forest Management Plan.

E. Owners may call a meeting of owners upon 15 days written notice signed by a majority of owners to discuss and determine any issues relating to the Property or the duties of the administrator.

F. Any charges or assessments not paid when due shall be a lien upon the lot upon recording of a notice by the administrator, which may be foreclosed in the same manner as a condominium lien would be foreclosed.

82. The Applicants have provided no additional details regarding the long term maintenance or repair of the erosion control devices.

83. The Handbook states:

- (1) IF the largest area of soil disturbed at any one time is less than 2 acres and
- (2) IF the steepest average slope in the area of disturbed soil is less than 10% and
- (3) IF the longest time period that any soils will be disturbed and bare, without stabilization, is less than 3 months and
- (4) IF the nearest critical or man-made feature (such as a stream, pond, wetland, building, road, or utility) in the downslope direction is separated from the nearest area of disturbed soil by more than 100 feet of undisturbed vegetation, and if the nearest property line in the downslope direction is separated by more than 50 feet of undisturbed vegetation

THEN the construction site is estimated to have a LOW EROSION POTENTIAL.

Use the routine erosion and sedimentation control measures described in Chapter 4, along with some good common sense, to reduce erosion to minimal levels.

IF any of the conditions stated in the above four "Ifs" is not met

THEN the construction site MAY have some special erosion and sedimentation problems that merit specific attention.

Use the evaluation procedure at the end of this chapter to determine the severity of erosion potential. Then use Chapter 5 to choose the control measures best suited for the specific problems of the site.

Handbook, pages 15-16.

84. Because the Project involves disturbance of areas with slopes in excess of 10%, with shallow depth to bedrock conditions, on soils classified as having severe erosion problems, near streams and wetlands which are part of the headwaters of the Mad River, very specific erosion control methods must be implemented. Erosion control methods for standard sites with standard conditions do not address the extreme conditions of the Project Tract.
85. Minimizing the areas of disturbed soils and the duration of exposure are strategies for erosion control planning which the Applicants have not addressed thoroughly. Each house site is separated from the others, essentially creating five mini-developments. Three house sites have individual driveways. The Applicants have not submitted a plan addressing construction phases and duration of exposures.
86. Permanent erosion control structures should be designed for a 2.5 year storm event, taking into account the added 20-30% potential increases in storm intensity above 1,500 feet. The Applicants have not evaluated fully the design of the Project's permanent erosion control structures.
87. Each of the Project building sites has unique and significant erosion problems. The sites on Lots 1 and 2 are located near or directly upgradient of a wetland area.
88. Under natural conditions, wetland areas are saturated and only able to receive additional water under certain time conditions. For example, the forest canopy absorbs precipitation on leaves and releases the precipitation to the receiving wetland more slowly than an upgradient developed area consisting of impermeable road and building areas and unforested lawn areas. Larger volumes of water may not be absorbed readily by the wetlands and potentially could flow off site, causing erosion in downstream areas.¹
89. The sites on Lots 4 and 5 are built on steep slopes near exposed bedrock areas with soils indicating shallow depth to bedrock conditions. Under these conditions, changing the forest canopy will cause the underlying soil to absorb the precipitation to capacity, causing a strain on the soil-bedrock interface under steep slope conditions. This strain may result in slope failures due to "sheer" erosion.
90. The driveway to site 3 is long and crisscrosses many ephemeral streams on the slope. Constant repairs will be necessary to maintain the driveway, potentially causing chronic erosion problems during driveway maintenance periods.

91. Exhibits K5B-E depict numerous overland flows as a result of discharges from ditches and culverts. Several of those overland flows run onto lands of adjoining property owners to the west (the Kaminski property). The Applicants have not specifically indicated what, if any, effect those discharged flows will have on adjoining properties or whether additional erosion control measures are available to further mitigate any negative impacts on neighboring properties and downstream areas.
92. At elevations between 1,500 and 1,700 feet, forest ecosystems are exposed to heightened climatic influences, including increased wind, rain, and pollutant loads, which together create an ecologically stressed environment.
93. Forest canopy intercepts rainfall, reducing the impact of “raindrop erosion” and providing a natural protective buffer between the forest floor/understory and the heightened climatic influences noted above.
94. “Edge” occurs when trees and understory are cleared or otherwise destroyed, creating openings in the forested canopy and exposing those trees on the perimeter of the cleared area to both fetch (unimpeded wind, potentially causing windthrow of trees) and pollution.
95. The creation of edge increases the likelihood of tree mortality.
96. The Project will result in the creation of approximately three miles of edge.
97. The removal of forest canopy and other vegetation, the creation of impermeable areas, and the channelization of overland flows on the Project Tract will all increase the potential for unreasonable soil erosion, adversely affecting forest health.

Criterion 1 (G) (wetlands)

98. There are four Class 3 wetlands on the Project Tract that may be impacted by the Project.
 99. There are two wetlands on Lot 2. The first wetland is a wet meadow dominated by sensitive ferns. The second wetland is a rich, sloping fen.
 100. Fens are uncommon and irreplaceable wetlands in Vermont. This particular fen is not a high quality example of the fen community type.
 101. Both wetlands on Lot 2 are fed by springs. Their presence helps to reduce any
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erosion that would otherwise occur if the springs ran down upland soils.

102. A third wetland **area** is located near where the Project Road crosses Central Brook on Lots 3 and 4 and to the southwest of the crossing.
103. A fourth wetland is **located** at the proposed log landing on Lot 5.
104. There are two culverts located directly downgradient of the Lot 2 wetlands.
105. The Applicants plan to install a sewer line which will pass through the northwest corner of the wet meadow wetland on Lot 2. A break in the sewer line would significantly **impact** the water quality of the wetland. Construction disturbance of the wetland could be **significant** if the sewer line fails in the future.
106. Paragraph 18 of the **Bowen Place Protective Covenants** provides:

18. **Wetlands.** No dredging, draining, grading, filling, or cutting of woody vegetation shall be allowed in any wetlands, or wetland buffer zones. Standing dead trees in the wetlands or buffer zones shall remain undisturbed. Fallen trees in the wetlands or buffer zones may be removed by the landowner.

Criterion 8 (aesthetics)

107. The Applicants **have** not prepared specific plans for the five houses to be constructed. The house designs will be left to the discretion of the lot buyers within the parameters of the **architectural** approval process set forth in the **Bowen Place Protective Covenants**.
108. Paragraphs 1 and 2 of the **Bowen Place Protective Covenants** state:
 1. **Structures.** No building or structure shall be constructed, erected or moved onto the Property, without approval by Kisiel [Applicants] in writing. Structures permitted shall include single family residential dwellings, ancillary **structures**, barns, garages, home workshops, swimming pools, pool houses, tennis courts, hot tubs, or other similar structures normally associated with **residential** dwellings. Structures shall be completed within twelve months from the start of construction.
 2. **Architectural Approval.** All aspects of construction including but not limited to the proposed site, exterior size and form, materials, colors, and

finished grade elevation shall be approved in writing by Kisiel [Applicants] prior to construction. Architectural elements to consider include blending roofline with surrounding landscape and using earthtone colors for facades.

109. Paragraphs 5 through 9 of the Bowen Place Protective Covenants state:

5. **Signs.** No billboards or advertising of any kind shall be erected or displayed on the property. However, signs indicating the names of property owners or occupants, boundaries, no hunting, no trespassing, and/or property for sale are permitted. All signs shall be no greater than two square feet in size, and shall not be neon, brightly lighted or self lighted.

6. **Trash.** The placement, collection or storage of trash, waste or any unsightly or offensive material shall not be permitted outside of approved structures. No hazardous material shall be stored, processed or disposed of on or in any part of the Property. The storage and spreading of manure, lime, or other fertilizer for agricultural purposes is permitted.

7. **Land Surface,** There shall be no disturbance of the land surface, including but not limited to: filling or excavating, removal of topsoil, sand, gravel, rocks or minerals, or change in the topography of the land in any manner, except as may be reasonably necessary to carry out the uses permitted in accordance with these Protective Covenants.

8. **Clearing.** Kisiel [Applicants] shall clear house sites and other open areas according to the Plans. Tree cutting in all forested areas shall be limited to uneven aged forestry management practices in order to maintain a continuous wooded canopy over the area. No trees larger than eight inches in diameter in cleared areas shall be cut without the express permission of Kisiel [Applicants]. Any clearing of trees to create an uninterrupted view of the entire building facade is strictly prohibited.

The finished construction shall include landscaping and the planting of trees, if necessary, to avoid an uninterrupted view of the facade of any building.

9. **Subdivision.** No Lot shall be further subdivided except for purposes of conveying normal and customary utility easements, or for purposes of conveying portions of a Lot (or easement therein) to an abutter. In no event may a Lot be reduced in area to less than seventy-five (75%) of its original deeded area.

Lot 1, however, may be further subdivided to create either (a) common land for the benefit of all homeowners or (b) a parcel of land to add to the Waitsfield Town Forest.

110. Paragraph 16 of the Bowen Place Protective Covenants states:

16. **Utilities.** All service lines for utilities shall be installed underground. Any service stations or other above ground utility related objects shall be located so they are not visible to adjoining property owners, except with Kisiel's [Applicant's] approval. All outdoor lighting shall be installed in such a manner as to conceal light sources from view substantially beyond the perimeter of the area to be illuminated.

111. Paragraph 24 of the Bowen Place Protective Covenants states:

24. **Notice of Non-compliance.** In order to assure compliance with the provisions of these Protective Covenants, the purchaser of any Lot shall place \$10,000 into the Association Escrow Account,

112. Paragraph 25 of the Covenants states:

25. **Failure to Comply.** In the event Kisiel [Applicants] or the Association become aware of circumstances of non-compliance, Kisiel [Applicants] or the Association may give notice to the owner and the Town Clerk, Town of Waitsfield, by registered mail, and demand corrective action by the owner. Failure by the owner to cause corrective action as may be demanded within a reasonable time after receipt of notice and reasonable opportunity to take corrective action shall entitle Kisiel [Applicants] or the Association to bring an action in a court of competent jurisdiction to enforce the terms of these Protective Covenants and to recover any damages arising from such non-compliance. If the court determines that the owner has failed to comply with these Protective Covenants, the owner shall reimburse Kisiel [Applicants] or the Association, as the case may be, for any reasonable costs of enforcement, including court costs and reasonable attorney's fees, as well as any cost to remedy the violation as they may be expended, together with interest at the highest legal rate, due as of the date of expenditure. The funds placed in the Association Escrow Account shall also be available to pay the costs of bring [sic] the property back into compliance. Kisiel [Applicants] or the Association shall be entitled to draw on all owners' deposits to enforce any failure by any owner to comply, if necessary.

113. The Project Tract is visible from several Town roads, including East Warren Road and Ralston Road.
114. Visually, the landscape surrounding the Project Tract is scenic and rural, consisting primarily of steep, forested hillsides in the background. In the foreground, there are fields, meadows, isolated farm houses, and barns associated with the historic "working landscape."
115. The house sites are located to maximize the screening benefit gained from existing trees.
116. No more than 10% of the facade of any building will be visible from any Class 1, 2, or 3 road.
117. Two other residential subdivisions are located adjacent to the Project -- the Eurich Farm subdivision and the Scrag Mountain subdivision.
118. There are stone walls along Bowen Road which have aesthetic value. They will be protected from damage during the upgrade of Bowen Road. The final slopes between the walls and Bowen Road will be stable to avoid undermining the walls.

Criterion 8(A)(necessary wildlife habitat)

119. A variety of wildlife exists on the Project Tract including white tail deer populations, coyotes, ground nesting birds, small mammals, and a variety of birds. Additionally, there is evidence of habitat for moose, black bear, and bobcat at upper elevations.
 120. Deer require mature softwood stands to survive in the winter. There are mature and developing softwood stands on Lots 1, 2, and 3.
 121. The Project Tract contains approximately 17.3-19.3 acres of deer wintering area (calculation based on the 70% softwood crown closure plus available browse standard). The deer wintering area impacted by the Project is between 6.1 and 8.1 acres. The amount of deer wintering area not impacted by the Project is 11.2 acres.
 122. The Department of Fish and Wildlife requires a 2: 1 habitat compensation ratio for projects that will impact deer wintering habitat (i.e. for every acre of habitat impacted, 2 acres of the same habitat must be protected). The Project's habitat compensation ratio is between 1.4: 1 and 1.8: 1. These ratios do not meet the Department of Fish and Wildlife's standard.
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123. In addition to established deer wintering areas, the Project Tract contains approximately 6.8 acres of developing softwood area which constitutes a developing deer wintering area.
124. The house sites on Lots 1, 2, and 3 are all within the developing deer wintering area.
125. There is a developing deer wintering area on the western perimeter of the Project Tract. The forest vegetation there contains a mixture of hardwood species and softwoods, including Red Spruce and White Pine. Young Red Spruce regeneration is appearing under the taller hardwoods, pine, and other spruce. This indicates that the Red Spruce population, and the resulting future deer yard, is developing and will eventually take over much of the developing deer wintering area.
126. The Project's impact on the narrow deer wintering area between the house sites on Lots 3 and 4 will have particularly negative effects on deer travel routes because it is used by deer for access to the riparian zone of Central Brook.
127. The house site on Lot 1 impacts a deer wintering area to the south of the Project Tract which is not part of the Project Tract.
128. Wintertime noise, human activity (including wintertime recreational activities), vehicles, and domestic pets all create stress for wintering deer populations and may cause deer to abandon the deer yard. However, the greatest single threat to the viability of a deer wintering area is fragmentation due to associated incompatible land uses.
129. Many common by-products of residential development such as petroleum, anti-freeze, fertilizers, and pesticides are toxic to plant and animal species. The introduction of these substances into soils and streams in the forest ecosystem may negatively impact population levels of those species and/or remove viable wildlife habitat on the site.
130. Paragraphs 13 and 20 of the Bowen Place Protective Covenants provide:
13. **Maintenance of the Property.** The Property shall be maintained as forest land, with the exception of the cleared areas. No structures shall be constructed or maintained, nor shall any other use be made which is inconsistent with its maintenance as forest land. The Property shall be maintained according to a Forest Management Plan as prescribed by a Consulting Forester or any other Forester assigned by the Bowen Place Homeowners Association. Proceeds from timber cutting in accord with the

Forest Management Plan shall inure to the benefit of The Bowen Place Homeowners Association.

20. **Animals.** A deer wintering habitat exists on the property and in the vicinity. Accordingly, dogs should be kept under their owners control at all times between December 1 and May 1. No animals or household pets shall be kept or maintained in such a manner as to create a nuisance for adjoining property owners or natural wildlife. Nuisance shall include barking of dogs for prolonged periods or at such times or places so as to cause annoyance or inconvenience to adjoining property owners.

Criterion 9(A) (impact of growth)

131. The Town has a duly adopted capital improvement program.
132. The Town's population was 1,422 in 1990.
133. The Town anticipates that its population will grow to between 1,532 and 1,659 by the year 2000. This represents an average annual rate of growth of up to 1.7% (approximately 24 people per year).
134. The Project's five residences will add approximately 20 people to the Town's population over a three year period.
135. At a 1.7% annual growth rate, the Town's population is expected to be 1,496 people at the end of the Project's three year build out period (total growth of 5.2% over the three year period).
136. The Project will contribute approximately 1.3% of total growth over the three year period.
137. The Applicants did not provide any evidence on the anticipated costs for education, sewage disposal, water supply, police and fire services and other factors relating to the public health, safety and welfare.

Criterion 9(C) (forest and secondary agricultural soils)

138. The Project Tract contains forest soils.
 139. With the exception of the Limited Clearing Area, all of the land will be managed under a forest management plan ("Forest Management Plan").
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Criterion 9(H) (costs of scattered development)

140. The Project is not physically contiguous to an existing settlement.
141. The Town provides a variety of governmental services, including fire protection, school bus service, and road maintenance and repair.
142. The Applicants presented no evidence regarding the Town's anticipated costs of providing fire protection and school bus service to the Project.
143. The Town has agreed to assume maintenance of **Bowen** Road upon the construction of three residences associated with the Project. There was no credible evidence regarding the Town's anticipated costs of maintaining and repairing **Bowen** Road.
144. Given the elevation of **Bowen** Road, the Town likely will have increased costs associated with snow removal. The Town may have to use a bucket loader and/or other heavy equipment to keep **Bowen** Road passable during the winter. Such equipment is expensive to operate and maintain.
145. The average value of each of the five lots, when fully developed, will be approximately \$500,000.
146. The municipal tax rate (excluding school taxes) for the Town in 1997 was \$.38 per \$100 assessed value. At that tax rate, each lot will generate approximately \$1,900 in municipal tax revenue and the entire Project will generate \$9,500.
147. The Applicants will pay the costs of upgrading **Bowen** Road, constructing the Project Road, and installing buried utility lines to the Project.

Criterion 9(K) (development affecting public investments)

148. Paragraph 14 of the Covenants states:
 14. **Public Trail.** There is a 10 foot wide public trail easement shown on the Plan. Maintenance shall be at public expense. Any maintenance work proposed must be approved by the Association, which approval shall not be unreasonably withheld. Cross-country skiing, biking, horseback riding, and walking are permitted on the public trail. Any other activities may be permitted with Association approval.
149. Paragraph 11 of the Bowen Place Protective Covenants states:

11. **Homeowners Association.** All owners of the Property, or any part thereof, shall join "The Bowen Place Homeowners Association" (the "Association") for the purpose of maintaining the property in accord with these Covenants, and driveways as shown on the Plan. The owners shall be subject to and abide by any bylaws, rules, and regulations established by the Association and shall share proportionally in the costs of maintaining the driveways and Property, and operation of the Association. Each lot shall be entitled to one vote for all purposes. Additionally, the owner of Lot 10 B Eurich Farm Subdivision shall share proportionally in the costs of maintaining the driveways.

Criterion 10 (local and regional plan)

150. The introductory paragraph of Chapter IV of the Waitsfield Town Plan states:

The following chapter, Waitsfield Tomorrow, comprises the actual plan for the Town. It sets forth the guiding policies for the Town, and is intended to provide direction for making Town decisions and reaching conclusions regarding compliance with this Plan.

The format of this chapter is correlated to the previous chapter, with specific goals, objectives and implementation strategies designed to address specific elements. Goals describe the desired condition or outcome the Town should achieve. They provide long term direction for decision making. Objectives are designed as specific steps toward achieving the goals. They should provide a means of keeping track of the Town's success in implementing the Plan. Finally, Implementation strategies are just that: specific strategies, or actions, which should be undertaken over the next five years. Only through the implementation of these strategies will the long term vision of the Town be realized.

151. Section 1 of Chapter IV is entitled "Physical Features and Natural & Cultural Resources." Goals 1.1 through 1.3 state as follows:

Goal 1.1 The maintenance, preservation and enhancement of Waitsfield's natural features and environmental quality for the benefit of future generations.

Goal 1.2 The careful stewardship and responsible use of Waitsfield's natural resources in a manner which maintains the traditional use of those resources.

Goal 1.3 The preservation of the Town's rural character, cultural heritage and historic working landscape.

152. Objective 2 of Goals 1.1 through 1.3 states, in part:

Objective 2. To protect Waitsfield's fragile resources and sensitive natural areas and reduce environmental hazards and prevent the loss of life and property from flooding.

a. Prevent the creation of parcels which will result in development on steep slopes, critical wetlands and floodplain; and consider amending the Waitsfield Zoning Bylaws to create standards to prevent such development.

153. Objective 3 of Goals 1.1 through 1.3 states, in part:

Objective 3. To protect and enhance Waitsfield's wildlife populations.

a. Protect habitat to ensure a sustainable deer population, with emphasis on protecting those wintering areas identified in this plan as important resources.

154. Objective 5 of Goals 1.1 through 1.3 states, in part:

Objective 5. To maintain an adequate land base to support present and future forestry and agricultural activities. . . .

g. Discourage further fragmentation of parcels in those areas identified as important forest resources.

h. Explore opportunities for expanding Scrag Municipal Forest, especially through the acquisition of lands along the Northfield Range,

155. Objective 7 of Goals 1.1 through 1.3 states, in part:

Objective 7. To protect and enhance Waitsfield's visual character and aesthetic resources.

a. Encourage clustering and/or siteing [sic] of development off of scenic resources, including open fields, ridgelines and hillsides. . . .

c. Maintain a high quality of site design throughout Town through the enforcement of landscaping and site design standards.

d. Prevent adverse visual impacts of development on scenic resources by

requiring adequate screening, buffer areas and/or landscaping.

156. Section 5 of Chapter IV is entitled "Transportation." Goals 5.1 and 5.2 state:

Goal 5.1 The maintenance and provision of a safe, efficient and convenient highway network.

Goal 5.2 The improvement and expansion of alternative, non-automobile transportation modes.

157. Objective 4 of Goals 5.1 and 5.2 states, in part:

Objective 4. To provide alternatives to the heavy reliance on individual automobiles.

...

g. Maintain the current status of all class four Town Highways to promote their use for walking, bicycling and horseback riding.

h. Require, through the subdivision review process, the dedication of easements to permanently protect those traditional pathways identified in this plan.

158. Section 9 of Chapter IV is entitled "Land Use." Goals 9.1 through 9.3 state:

Goal 9.1 The preservation of the Town's historic settlement pattern, defined by compact villages surrounded by rural countryside.

Goal 9.2 The regulation of land development in a manner which preserves important community resources while **encouraging** a range of land uses in appropriate locations.

Goal 9.3 Maintain a reasonable balance between community imposed limitations on land use and the rights of individual land owners.

159. Objective 1 of the Goals 9.1 through 9.3 states, in part:

Objective 1. To administer and enforce land use regulations which recognize distinct districts and regulate land use activities to ensure compatibility with the purpose of the respective district.

a. Maintain the Forest Reserve District for the purpose of protecting



significant forest resources and headwater streams and to limit development in areas with steep slopes, shallow soils, wildlife habitat, fragile features, scenic resources and poor access to Town roads, facilities and services.

160. Chapter III, Section 9.1 of the Waitsfield Town Plan states:

The Forest Reserve District is defined as all land with an elevation in excess of 1,700 feet msl, most of which is located in the Northfield Range. The defining characteristics of this district are steep slopes, scenic ridge-lines, large tracts of productive forest land and extensive wildlife habitat. While portions of the district were once used for agriculture, as evidenced by stone walls and patchwork forest patterns, it is almost entirely wooded today. Development in the forest reserve district has been limited, with scattered camps and very few single family homes.

161. Read together, Resource Map #7 and Resource Map #2 of the Waitsfield Town Plan indicate that the Forest Reserve District is defined as all land with an elevation in excess of 1,500 feet, msl.

162. Article II, Section 1.D. of the Waitsfield Zoning Ordinance states:

D. FOREST RESERVE DISTRICT: All lands situated at an elevation of 1500 feet above sea level or more and the Camel's Hump State Forest.

163. The 1993 Central Vermont Regional Plan and Addendum ("Regional Plan") are applicable to the Project. The "Land Use Element" section of the Regional Plan contains general policies regarding forest land, resource protection, natural and fragile areas, critical wildlife habitat, ground water recharge areas, surface waters, wetlands, scenic areas, and development. It does not contain any specific provisions which prohibit the Project.

V. CONCLUSIONS OF LAW

10 V.S.A. § 6081(a) provides that no person shall commence construction on a development or commence development without a permit. 10 V.S.A. § 608 1 (a).

A. Burden of Proof

The term "burden of proof" refers to two separate burdens: the burden of going forward and producing evidence, and the burden of persuasion. See 10 V.S.A. § 6088; In re Denio, 158 Vt. 230,236 (1992); Re: Pratt's Propane, #3R0486-EB, Findings of Fact,

Conclusions of Law, and Order at 4-5 (Jan. 27, 1987). 10 V.S.A. § 6088 operates in conjunction with the requirement that before a permit can be issued, the Board (or district commissions) must make the affirmative findings required under the 10 criteria. See 10 V.S.A. §6086(a).

The Applicants have the burden of production with respect to all criteria on appeal. The Applicants also bear the burden of persuasion with respect to Criteria 1, 1 (A), 1 (E), 1(G), 4,9(A), 9(C), 9(H), 9(K), and 10.

The Town bears the burden of persuasion with respect to Criteria 8 and 8(A).

A. Criterion 1 (Water Pollution)

Before granting a permit, the Board must find that the Project will not result in “undue water ... pollution.” 10 V.S.A. § 6086(a)(1). The burden of proof is on the Applicants under Criterion 1. Id. § 6088(a).

There is no clear definition of what constitutes “undue water pollution.” Re: Herbert and Patricia Clark, #1R0785-EB, Findings of Fact, Conclusions of Law, and Order at 3 1 (Apr. 3, 1997) [EB #652]; Re: Upper Valley Regional Landfill, #3R0609-EB, Findings of Fact, Conclusions of Law, and Order at 32 (Nov. 12, 1991) [EB #453R].

A review of decisions addressing the term “undue water pollution” in the context of Act 250 indicates that it has been interpreted in the context of the specific facts of each case under consideration; the decisions are more instructive about what is not undue rather than what is.

Upper Valley Regional Landfill, supra, at 33.

The Board is not limited to an analysis of the Criterion 1 subcriteria when determining whether or not a project complies with Criterion 1. In re Hawk Mountain Corp., 149 Vt. 179,184 (1988).

In making its determination under Criterion 1, the Board shall at least consider:

the elevation of the land above sea level; in relation to the flood plains, the nature of soils and subsoils and their ability to adequately support waste disposal; the slope of the land and its effect on effluents; the availability of streams for disposal of effluents; and the applicable health and environmental conservation department regulations.

10 V.S.A. § 6086(a)(1). The construction portion of the Project is located at an elevation between 1,500 and 1,700 feet above sea level on soils classified as having severe erosion problems. Waste disposal for three of the five lots is a shared septic system located off the Project Tract. The Project Tract contains steep slopes with gradients up to 25%. The streams on the Project Tract are sensitive because they are part of the headwaters of the Mad River. At the prehearing conference, the parties identified the VWQS as the applicable health and environmental conservation department regulations. This identification was incorporated in the Prehearing Order to which no party objected.

Section I-02 of the VWQS states, in part, that “It is the policy of the State of Vermont to . . . protect from risk and preserve in their natural state certain high quality waters including fragile high-altitude water, and the ecosystems they sustain.”

The Project will not preserve the Project Tract streams in their natural state. Rather, the Project poses a risk to the streams. Although the streams on the Project Tract are not truly “pristine” due to the impact of past logging activity, they are very high quality upland watercourses that are in the process of recovery. The erosion caused by the Project will put this fragile headwaters area at increased risk by increasing discharges into the streams, thereby increasing turbidity. Particularly, the Project will change vegetation and slope patterns, creating runoff which will have a tangible effect on the headwater streams.

Additionally, section 4-08 of the VWQS provides that waters in the Project area (within the Winooski Basin) are designated as Class B, cold water fish habitat. Under 3-03 (B)(1) of the VWQS, the turbidity levels for cold water fish habitat shall not exceed 10 NTU. The Applicants have not evaluated the conditions of the streams on the Project Tract to determine whether an increase in sediment will violate the VWQS.

The Board must take into consideration the existing conditions of the streams on the Project Tract since the standards for Class B waters require an analysis of the effect of discharges on the particular water’s environment. See In re Hawk Mountain, Corn., 149 Vt. at 183 (stating that the Board must of necessity take into consideration the existing conditions of the river since the standards for Class B waters require an analysis of the effect of pollutants on the particular water’s environment). The burden of proof is on the Applicants under Criterion 1. 10 V.S.A. § 6088(a). Because the Applicants did not provide the Board with information regarding the existing water quality of the streams on the Project Tract, the Board has no background data against which to measure the impact of any discharge caused by the Project. Therefore, the Board concludes that the Applicants have failed to meet their burden of proof under Criterion 1. Accordingly, the Project is denied under Criterion 1.

B. Criterion 1 (A) (Headwaters)

Criterion 1(A) provides that before granting a permit, the Board shall find that the Project will meet any applicable health and environmental conservation department regulations regarding reduction to quality of ground or surface waters flowing through or upon lands which are not devoted to intensive development, and which lands are:

- (i) headwaters of watersheds characterized by steep slopes and shallow soils; or
- (ii) drainage areas of 20 square miles or less; or
- (iii) above 1,500 feet elevation; or
- (iv) watersheds of public water supplies designated by the Vermont department of health; or
- (v) areas supplying significant amounts of recharge waters to aquifers.

10 V.S.A. § 6086(a)(1)(A). The burden of proof is on the Applicants under Criterion 1 (A). Id. § 6088(a).

The Project is located above 1,500 feet elevation in a fragile headwaters area characterized by steep slopes and shallow soils. At the prehearing conference, the parties identified the VWQS as the applicable regulations regarding reduction to quality of ground or surface waters. The relevant sections of the VWQS are discussed above in the Board's analysis of Criterion 1.

For the reasons stated above in its analysis of Criterion 1, the Board concludes that the erosion caused by the Project will put this fragile headwaters area at increased risk by increasing discharges into the streams, thereby increasing turbidity. The burden of proof is on the Applicants under Criterion 1(A). Id. §6088(a). Because the Applicants did not provide the Board with information regarding the existing water quality of the headwater streams on the Project Tract, the Board has no background data against which to measure the impact of any discharge caused by the Project. Therefore, the Board concludes that the Applicants have failed to meet their burden of proof under Criterion 1(A). Accordingly, the Project is denied under Criterion 1(A).

C. Criterion 1 (E) (Streams)

Criterion 1(E) provides that before granting a permit, the Board shall find that "the development or subdivision of lands on or adjacent to the banks of a stream will, whenever

feasible, maintain the natural condition of the stream, and will not endanger the health, safety, or welfare of the public or of adjoining landowners.” 10 V.S.A. § 6086(a)(1)(E). “Stream” is defined as “a current of water which is above an elevation of 1,500 feet above sea level or which flows at any time at a rate of less than 1.5 cubic feet per second.” *Id.* § 6001(18). The burden of proof is on the Applicants under Criterion 1(E). *Id.* § 6088(a).

There are two primary streams located on the Project Tract above 1,500 feet in elevation: Folsom Brook and Central Brook. In addition, there is an unnamed stream (characterized by the Applicants as a “swale”) located east of Lot 3, between the proposed driveway and a stone wall. Further, there are a number of unnamed streams, swales, seeps, and intermittent watercourses on the Project Tract which have not been identified by the Applicants.

The Project will not maintain the natural conditions of the streams on the Project Tract during construction or after completion. During construction, soil erosion will occur, increasing sediment in the streams on the Project Tract. Soil erosion is generally defined as the movement of soil particles in surface water. It typically occurs when precipitation or discharge (ie. excess runoff from precipitation) impacts on steep and/or exposed soils. Steepness of slope, above all else, is the critical factor influencing erodability. Other factors, including precipitation levels, the exposure of shallow soils, and the removal of forest canopy and other vegetation, and the channelization of overland flows increase the potential for unreasonable soil erosion.

The Project Tract contains steep slopes; construction will take place on slopes with gradients up to 25%. The Project house sites are located on slopes with gradients ranging from 5% to 20%. Additionally, the predominant soil types in the Project area, Dixfield Series (Stony) and Rawsonville Hogback Complex (Stony), have “moderate to severe” erodability and “severe” erodability for site development for dwellings without basements and “severe” erodability for, site development for dwellings with basements. Rawsonville-Hogback Complex is particularly problematic for building site development due to its characteristic shallowness to bedrock and susceptibility to erosion. The erosion severity of Rawsonville series soils for development of dwellings without basements increases with slope. For dwellings with basements, the Rawsonville series soils are uniformly characterized as “severe.” Because construction will take place on steep slopes in an area with shallow soils, erosion will occur during construction, thereby increasing sediment in the streams on the Project Tract, The increase in sediment to the streams will increase the turbidity in the streams on the Project Tract.

In addition to increased sedimentation during construction of the Project, runoff from impervious surface areas will cause sedimentation after completion of the Project. The Project Road and driveways are in close proximity to and cross numerous streams and

watercourses on the Project Tract. For example, the Project Road will cross Central Brook between Lots 3 and 4. The Applicants will install a five foot diameter culvert at the crossing. Further, the Lot 3 house site is located upstream from the confluence of a stream and Central Brook. The Lot 3 driveway crosses the stream in two locations, creating a greater potential for sediment transport into the stream and Central Brook. Additionally, the Lot 3 driveway is approximately 30 feet from another intermittent stream which flows into **Central Brook**. The proximity of the impervious Project Road and driveways to the streams on the Project Tract will cause sedimentation of the streams on the Project Tract.

The sedimentation of streams on the Project Tract will not maintain the natural conditions of the streams. A good indicia of stream health is the presence of various forms of aquatic biota, including stone fly, may fly and caddis fly, as well as viable fish populations. There are species of may fly, stone fly, and other macro invertebrates in the streams on the Project Tract. Aquatic biota are critical to sustain fish populations which depend on them for food. There are brook trout in Folsom Brook; Central Brook also contains viable fish habitat.

Sedimentation severely affects stream biota because it specifically results in the destruction of macro invertebrate habitat through the process of "embeddedness" (the filling of interstitial space between rocks and stones with sediment). Embeddedness reduces levels of dissolved oxygen in the stream. Both macro invertebrates and fish depend on oxygen to survive. The destruction of macro invertebrate habitat through embeddedness and the reduction of dissolved oxygen in streams will not maintain the natural conditions of the streams.

Finally, sedimentation caused by the Project will affect the Mad River over time. There is an integral relationship between the lower reaches of the Mad River and its upland streams and headwaters such that changes in sedimentation in the headwaters will adversely impact downstream areas. Over time, environmental impacts such as erosion in a headwaters area has an escalating impact downstream, resulting in increased turbidity, streambank erosion, increased water temperature, and overall losses in water quality.

Based on the foregoing, the Board concludes that the Project will not maintain the natural condition of the streams on the Project Tract. However, the Board is required to find that the Project "will, whenever feasible, maintain the natural condition of the stream[s]." 10 V.S.A. § 6086(a)(1)(E) (emphasis added). The Applicants have the burden of proof to demonstrate that they have considered "all reasonable alternatives" which would allow the streams to remain in their natural condition. Re: Okemo Mountain, Inc., #2S0351-12A-EB, Findings of Fact, Conclusions of Law, and Order (Revised) at 14 (July 23, 1992) [EB #471R]. The Board is not persuaded that the Applicants have met their burden of proof.

First, the Applicants could implement more specific erosion controls than they have proposed in this case. Because the Project involves disturbance of areas with slopes in excess of 10%, with shallow depth to bedrock conditions, on soils classified as having severe erosion problems, near streams and wetlands which are part of the headwaters of the Mad River, very specific erosion control methods are necessary. The Applicants have proposed erosion control methods applicable to standard sites with standard conditions which do not address the extreme conditions of the Project Tract. Second, the Applicants could design the Project in a way that has less impact on streams by minimizing construction of roads, driveways, and houses in close proximity to the streams. The Board is not persuaded that the Applicants have considered these alternatives or other reasonable alternatives which would allow the streams to remain in their natural condition.

Based on the foregoing, the Board concludes that the Applicants have not met their burden of proof under Criterion 1(E). Accordingly, the Project is denied under Criterion 1(E).

D. Criterion 1 (G) (Wetlands)

Criterion 1(G) provides that before granting a permit, the Board shall find that the Project “will not violate the rules of the water resources board, as adopted under [10 V.S.A. § 905(9)], relating to significant wetlands.” 10 V.S.A. § 6086(a)(1)(G). The VWR classify wetlands as Class One, Class Two, and Class Three. VWR 4.1. Classes One and Two are considered “significant” and are protected under the rules. Id. Therefore, Criterion 1 (G) protects only Class One and Two wetlands.

Because the Project Tract contains only Class Three wetlands, the Project complies with Criterion 1(G).

E. Criterion 4 (Erosion)

Before granting a permit, the Board must find that the Project “[w]ill not cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result.” 10 V.S.A. § 6086(4). The burden of proof is on the Applicants under Criterion 4. Id. § 6088(a).

Based on its conclusions under Criteria 1, 1 (A), and 1 (E), the Board concludes that the Project will cause unreasonable soil erosion so that an unhealthy condition may result. Accordingly, the Board concludes that the Project does not comply with Criterion 4. The

Project is denied under Criterion 4.²

F. Criterion 8 (Aesthetics)

Before granting a permit, the Board must find that the Project will not have an undue adverse effect on the scenic or natural beauty and aesthetics of the area. 10 V.S.A. § 6086(a)(8) (aesthetics). The burden of proof is on the opponents under Criterion 8, id. § 6088(b), but the Applicants must provide sufficient information for the Board, to make affirmative findings. See, e.g., Re: Black River Valley Rod & Gun Club, Inc., #2S 10 19-EB, Findings of Fact, Conclusions of Law, and Order (**Altered**) at 19 (June 12, 1997) [EB #65 1 R] and cases cited therein.

The Board uses a two-part test to determine whether a project satisfies Criterion 8. First, it determines whether the project will have an adverse effect. Re: James E. Hand and John R. Hand, d/b/a Hand Motors and East Dorset Partnership, #8B0444-6-EB (Revised), Findings of Fact, Conclusions of Law, and Order at 24 (Aug. 19, 1996) [EB #629R]; Re: Quechee Lakes Corn., #3 W0411-EB and #3 W0439-EB, Findings of Fact, Conclusions of Law, and Order at 17-20 (Nov. 4, 1985) [EB #254]. Second, it determines whether the adverse effect, if any, is undue. Hand, supra. at 24; Quechee Lakes, supra. at 17-20.

The Board concludes that the Project will not have an adverse effect. In determining whether a project will have an adverse effect,

[t]he Board looks to whether a proposed project will be in harmony with its surroundings or, in other words, whether it will “fit” the context within which it will be located. In making this evaluation, the Board examines a number of specific factors including the nature of the project’s surroundings, the compatibility of the project’s design with those surroundings, the suitability for the project’s context of the colors and materials selected for the project, the locations from which the project can be viewed, and the potential impact of the project on open space.

Hand, supra. at 25.

Although the Project Tract is visible from several Town roads, the Project’s house sites “fit” the context within which they will be located. The house sites are located to **maximize** the screening **benefit** gained from existing trees. Additionally, the Covenants restrict the clearing and cutting of trees for house sites and prohibit the clearing of trees to

²Board Member William Martinez dissents from the Board’s conclusions under Criterion 4.

create an uninterrupted view of an entire building facade. The Covenants also require the finished construction to include landscaping and the planting of trees, if necessary, to avoid an uninterrupted view of the facade of any building. Through these controls, the Applicants will ensure that no more than 10% of the facade of any building will be visible from any Class 1, 2, or 3 road. Further, tree-cutting in all forested areas will be limited to uneven aged forestry management practices in order to maintain a continuous wooded canopy over the Project Tract. All outdoor lighting will be installed and shielded to conceal light sources from view beyond the perimeter of the area to be illuminated and all service lines for utilities will be installed underground. Finally, although Bowen Road will be upgraded, the stone walls along Bowen Road will be protected from damage during the construction. The final slopes between the wall and Bowen Road will be stable to avoid undermining the road. Based on the above, the Board concludes that the Project will not have an adverse effect.³

Based on the above, the Board concludes that Project will not have an undue adverse effect on the scenic or natural beauty and aesthetics of the area. 10 V.S.A. § 6086(a)(8) (aesthetics).

G. Criterion 8(A) (Necessary Wildlife Habitat)

Criterion 8(A) provides that:

[a] permit will not be granted if it is demonstrated by any party opposing the applicant that a development or subdivision will destroy or significantly imperil necessary wildlife habitat or any endangered species, and

(i) the economic, social, cultural, recreational, or other benefit to the public from the development or subdivision will not outweigh the economic, environmental, or recreational loss to the public from the destruction or imperilment of the habitat or species, or

(ii) all feasible and reasonable means of preventing or lessening the destruction, diminution, or imperilment of the habitat or species have not been or will not continue to be applied, or

(iii) a reasonable acceptable alternative site is owned or controlled by the applicant which would allow the development or subdivision to fulfill its intended purpose.

³Because the Board concludes that the Project will not have an adverse effect, it does not consider whether the adverse effect is undue.

10 V.S.A. § 6086(a)(8)(A)(i)-(iii). The burden of proof is on the opponents under Criterion 8(A). Id. § 6088(b).

“Necessary wildlife habitat” means concentrated habitat which is identifiable and is demonstrated as being decisive to the survival of a species of wildlife at any period in its life including breeding and migratory periods.

10 V.S.A. § 6001(12).

Criterion 8(A) involves a three stage inquiry: (a) whether the alleged habitat constitutes “necessary wildlife habitat;” (b) if so, whether the Project will destroy or significantly imperil such habitat; and (c) if so, whether one or more of subcriteria (i) through (iii) is satisfied.

With respect to the first stage, at the prehearing conference the parties agreed and stipulated that the Project Tract contains approximately 34.5 acres of deer wintering areas and that such areas are necessary wildlife habitat as defined by 10 V.S.A. § 6001(12). See In re Southview Associates, 153 Vt. 171, 175-76 (1989) (Supreme Court upheld the Board’s conclusion that deer wintering areas constitute necessary wildlife habitat under 10 V.S.A. § 6001(12)). However, the Town submitted evidence regarding the number of acres of deer wintering area which differs from the parties’ stipulation. Because the Applicants did not object to the Town’s evidence regarding the amount of deer wintering area, the Board determined that it would decide the amount of deer wintering area based on the testimony of the parties.⁴

With respect to the second stage, the Board concludes that the Project will destroy or significantly imperil deer wintering areas on the Project Tract. The Project Tract contains approximately 17.3-19.3 acres of deer wintering area (calculation based on the 70% softwood crown closure plus available browse standard). The deer wintering area impacted by the Project is between 6.1 and 8.1 acres. The amount of deer wintering area not impacted by the Project is 11.2 acres. The Department of Fish and Wildlife requires a 2: 1 habitat compensation ratio for projects that will impact deer wintering habitat (i.e. for every acre of habitat impacted, 2 acres of the same habitat must be protected). The Project’s habitat compensation ratio is between 1.4: 1 and 1.8: 1. These ratios do not meet the Department of Fish and Wildlife’s standard. Further the Project’s impact on the narrow deer wintering area between the house sites on Lots 3 and 4 will have particularly negative effects on deer travel

⁴This determination is set forth in paragraph 37 of the Chair’s Preliminary Rulings on Evidentiary Objections. The Applicants did not object to any of the Chair’s Preliminary Rulings on Evidentiary Objections.

routes because it is used by deer for access to the riparian zone of Central Brook. Finally, the house site on Lot 1 impacts deer wintering area to the south of the Project Tract which is not part of the Project Tract. Based upon the Project's effects on established deer wintering areas, the Board concludes the Project will destroy or significantly imperil deer wintering areas.

In addition to established deer wintering areas, the Project Tract contains approximately 6.8 acres of developing softwood area which constitutes a developing deer wintering area. The house sites on Lots 1, 2, and 3 are all within the developing deer wintering area. The Board concludes that the Project will destroy or significantly imperil developing deer wintering areas on the Project Tract.

With respect to the third stage, the Board must conclude whether one or more of subcriteria (i) through (iii) is satisfied. Subcriterion (i) requires the Board to determine that the economic, social, cultural, recreational, or other benefit to the public from the Project will not outweigh the economic, environmental, or recreational loss to the public from the destruction or imperilment of the habitat or species. The Project will have economic benefit to the public in that it will generate approximately \$9,500 per year in municipal tax revenue and it grants a logging easement to the Town which provides access to Scrag Municipal Forest. Additionally, the Project will have recreational benefits because it grants an easement to the Town for a public access Trail across the Project Tract to Scrag Municipal Forest for biking, hiking, and horseback riding. The Applicants also will construct a parking area for 6 vehicles at the end of Bowen Road for users of the Trail. However, the Project will cause economic and recreational loss to the public from the destruction or imperilment of deer wintering habitat. The Board concludes that the economic and recreational benefits to the public from the Project will outweigh the environmental and recreational losses to the public from the destruction or imperilment of deer wintering habitat. Therefore, subcriterion (i) is not met.

Subcriterion (ii) requires the Board to determine that all feasible and reasonable means of preventing or lessening the destruction, diminution, or imperilment of the habitat or species have not been or will not continue to be applied. The Board concludes that there are feasible and reasonable means of lessening the destruction, diminution, or imperilment of the deer wintering habitat on the Project Tract. For example, the house sites on Lots 1, 2, and 3 could be located in areas on the Project Tract which do not contain established or developing deer wintering areas. Additionally, the Applicants could design the Project in a way that has less impact on deer wintering areas by clustering the house sites in areas on the Project Tract which do not contain established or developing deer wintering areas. The Applicants have not applied; all feasible and reasonable means of preventing or lessening the destruction, diminution, or imperilment of the deer wintering habitat on the Project Tract. Therefore, subcriterion (ii) is met.

Subcriterion (iii) requires the Board to determine that a reasonable, acceptable alternative site is owned or controlled by the Applicants which would allow the Project to fulfill its intended purpose. The parties did not present any evidence on alternative sites owned or controlled by the Applicants. Therefore, subcriterion (iii) is not met.

Because the Project will destroy or significantly imperil developing deer wintering areas on the Project Tract and because subcriterion (ii) of Criterion 8(A) is met, the Board concludes that the Project does not comply with Criterion 8(A). Accordingly, the Project is denied under Criterion 8(A).

H. Criterion 9(A) (Impact of Growth)

Criterion 9(A) require-s the Board to review the impact that the proposed project will have on the ability of the town and region to accommodate two separate items: (a) growth that will occur generally regardless of the proposed project; and (b) growth that will occur specifically because of the proposed project.

Criterion 9(A) provides:

Impact of growth. In considering an application, the district commission or the board shall take into consideration the growth in population experienced by the town and region in question and whether or not the proposed development would significantly affect their existing and potential capacity to reasonably accommodate both the total growth and the rate of growth otherwise expected for the town and region and the total growth and rate of growth which would result from the development if approved. After considering anticipated costs for education, highway access and maintenance, sewage disposal, water supply, police and fire services and other factors relating to the public health, safety and welfare, the district commission or board shall impose conditions which prevent undue burden upon the town and region in accommodating growth caused by the proposed development or subdivision. Notwithstanding section 6088 of this title the burden of proof that proposed development will significantly affect existing or potential financial capacity of the town and region to accommodate such growth is upon any party opposing an application, excepting however, where the town has a duly adopted capital improvement program the burden shall be on the applicant.

10 V.S.A. § 6086(a)(9)(A).

The burden of proof is on the Applicants under Criterion 9(A) because the Town has

a duly adopted capital improvement program. 10 V.S.A. §§ 6088(b), 6086(a)(9)(A). The party with the burden of proof must prove all of the following:

1. The growth in population experienced by the town and region in question.
2. The *total* growth and *rate* of growth which is otherwise *expected* for the town and region.
3. The *total* growth and *rate* of growth for the town and region which will result from the proposed project if approved.
4. The anticipated costs for education, highway access and maintenance, sewage disposal, water supply, police and fire services and other factors relating to the public health, safety and welfare.
5. Based on (1) through (4), that the proposed project will not cause an undue burden on the existing and potential financial capacity of the town and region in accommodating growth caused by the proposed project.

10 V.S.A. § 6086(a)(9)(A); Re: St. Albans Group and Wal*Mart Stores, Inc., #6F0471-EB, Findings of Fact, Conclusions of Law, and Order (Altered) at 30 (June 27, 1995), aff d. In re Wal*Mart Stores, Inc., No. '95-398 (Vt. Aug. 29, 1997) [EB #598R2].

The Town's population was 1,422 in 1990. The Town anticipates that its population will grow to between 1,532 and 1,659 by the year 2000. This represents a maximum average annual rate of growth of 1.7% (approximately 24 people per year). The Project's five residences will add approximately 20 people to the Town's population over a three year period. At a 1.7% annual growth rate, the Town's population is expected to be 1,496 people at the end of the Project's three year build out period (total growth of 5.2% over the three year period). The Project will contribute approximately 1.3% of total growth over the three year period.

The Applicants did not provide any evidence on the anticipated costs for education, sewage disposal, water supply, police and fire services and other factors relating to the public health, safety and welfare. Although the Board believes that a reasonable person probably would conclude that a five lot subdivision would not cause an undue burden on the Town in accommodating growth, the Board is unable to make such a determination without evidence on the anticipated costs of the Project. Accordingly, the Board concludes that the Applicants have not met their burden of proof under Criterion 9(A). The Project is denied

under Criterion 9(A).

I. Criterion 9(C) (Forest and Secondary Agricultural Soils)

Before issuing a permit for the development or subdivision of forest or secondary agricultural soils, the Board must find that the Project will not significantly reduce the potential of those soils for commercial forestry or commercial agriculture or that

(i) the Applicants can realize a reasonable return on the fair market value of their land only by devoting the forest or secondary agricultural soils to uses which will significantly reduce their forestry or agricultural potential; and

(ii) there are no nonforest or secondary agricultural soils owned or controlled by the applicant which are reasonably suited to the purpose; and

(iii) the Project has been planned to minimize the reduction of forestry and agricultural potential by providing for reasonable population densities, reasonable rates of growth, and the use of cluster planning and new community planning designed to economize on the cost of roads, utilities and land usage.

10 V.S.A. § 6086(a)(9)(C) (emphasis added). The burden of proof is on the Applicants under Criterion 9(C). *Id.* § 6088(a).

Forest and secondary agricultural soils means:

[S]oils which are not primary agricultural soils but which have reasonable potential for commercial forestry or commercial agriculture, and which have not yet been developed. In order to qualify as forest or secondary agricultural soils the land containing such soils shall be characterized by location, natural conditions and ownership patterns capable of supporting or contributing to the present or potential commercial forestry or commercial agriculture. If a tract of land includes other than forest or secondary soils only the forest or secondary soils shall be affected by criteria relating specifically to such soils.

Id. § 6001(8). At the prehearing conference, the parties agreed and stipulated that the Project Tract contains forest soils. The stipulation was incorporated in the Prehearing Order; no party objected to the Preheating Order.

The Board concludes that the Project will not significantly reduce the potential of the forest soils on the Project Tract for commercial forestry. When analyzing projects under the parallel provision in Criterion 9(B) (primary agricultural soils), the Board has concluded that

the agricultural potential of soils is significantly reduced where substantially all of a tract's agricultural soils are used by proposed residential lots and related roads and driveways. Re: George. Marv and Rene Boissoneault, #6F0499-EB, Findings of Fact, Conclusions of Law, and Order at 22 (Jan. 29, 1998) [EB #678] (addressing secondary agricultural soils); Re: Thomas W. Bryant and John P. Skinner, #4CO795-EB, Findings of Fact, Conclusions of Law, and Order at 26 and 28 (June 26, 1991) [EB #466] (addressing primary and secondary agricultural soils). Cf., e.g., Re: Marvin R. Gurman, #3W0424-EB at 19 (June 10, 1985) [EB #229] (potential of primary agricultural soils significantly reduced where 45% of the site is covered by the proposed project and access to the rear portion of the site is impeded by vegetation and utility lines).

In this case, the Project does not use substantially all of the Project Tract's forestry soils. The Project is located within the 20 acre Limited Clearing Area. Paragraph 13 of the Covenants provides that the remainder of the Project Tract (approximately 138 acres) shall be maintained as forest land. Paragraph 13 further states that "No structures shall be constructed or maintained, nor shall any other use be made which is inconsistent with its maintenance as forest land." Paragraph 8 of the Covenants limits tree cutting in all forested areas to uneven aged forestry management practices in order to maintain a continuous wooded canopy over the area. Additionally, paragraph 9 of the Covenants prohibits further subdivision of the Project except Lot 1 which may be further subdivided to create either (a) common land for the benefit of all homeowners or (b) a parcel of land to add to the Waitsfield Town Forest. Based on the foregoing, the Board concludes that the Project will not significantly reduce the potential of the forest soils on the Project Tract for commercial forestry. Accordingly, the Project complies with Criterion 9(C).⁵

J. Criterion 9(H) (Costs of Scattered Development)

Before issuing a permit, the Board must determine whether a proposed project is or is not physically contiguous to an existing settlement. If the project is not physically contiguous to such a settlement, then the Board cannot issue a permit unless the public costs of the project do not outweigh its public benefits.

Criterion 9(H) provides:

The district commission or board will grant a permit for a development or

⁵In its testimony and its proposed findings of fact and conclusions of law, the Town argues that "existing features" such as trails, stone walls, and foundations are protected under Criterion 9(C). The Board notes that Criterion 9(C) does not apply to such considerations.

subdivision which is not physically contiguous to an existing settlement whenever it is demonstrated that, in addition to all other applicable criteria, the additional costs of public services and facilities caused directly or indirectly by the proposed development or subdivision do not outweigh the tax revenue and other public benefits of the development or 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). The burden of proof under Criterion 9(H) is on the Applicants.
10 V.S.A. § 6088(a).

“[T]he basic intent of Criterion 9(H) is to discourage scattered development beyond the boundaries of community centers if such development will damage the ability of the communities to maintain themselves.” Re: St. Albans Group and Wal*Mart Stores, Inc., supra, at 36-50.

The first issue under Criterion 9(H) is whether the proposed project is physically contiguous to an existing settlement. *Id.* at 36. If the proposed project is not contiguous to an existing settlement, it constitutes scattered development. At the prehearing conference, the parties agreed and stipulated that the Project is not physically contiguous to an existing settlement. The stipulation was incorporated in the Prehearing Order; no party objected to the Prehearing Order.

The second issue under Criterion 9(H) is whether the additional costs of public services and facilities caused directly or indirectly by the proposed project outweigh the tax revenue and other public benefits of the proposed project. Under Criterion 9(H), the Board may issue a permit for scattered development if it concludes that the public benefits are not outweighed by the public costs. *Id.* at 44. Examples of public benefits include property tax revenues and increased state aid to education. *Id.* at 46. Examples of public costs include lost state aid to education, lost revenue to other municipalities due to changes in the Grand Lists caused by competition from the proposed project, lost revenue because of job loss in the region, cost of direct services to the proposed project, and loss of public funds invested in a city’s historic downtown if a proposed project has a negative impact on the city. *Id.* at 48.

The Applicants submitted evidence regarding the public benefits of the Project, including expected tax revenues from the Project and recreational benefits of the Trail. However, the Applicants submitted no evidence regarding the public costs, if any, of the Project. Without such information, the Board is unable to determine whether the public costs of the Project outweigh the public benefits of the Project. Therefore, the Board concludes that the Applicants have not met their burden of proof under Criterion 9(H). The

Project is denied under Criterion 9(H).

K. Criterion 9(K) (Development Affecting Public Investments)

Criterion 9(K) states that:

[a] permit will be granted for the development or subdivision of lands adjacent to governmental and public utility facilities, services, and lands, including, but not limited to, highways, airports, waste disposal facilities, office and maintenance buildings, fire and police stations, universities, schools, hospitals, prisons, jails, electric generating and transmission facilities, oil and gas pipe lines, parks, hiking trails and forest and game lands, when it is demonstrated that, in addition to all other applicable criteria, the development or subdivision will not unnecessarily or unreasonably endanger the public or quasi-public investment in the facility, service, or 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 facility, service, or lands.

10 V.S.A. § 6086(a)(9)(K). The burden of proof under Criterion 9(K) is on the Applicants. Id. § 6088(a).

The Board conducts two separate inquiries under Criterion 9(K) with respect to governmental and public facilities. First, the Board examines whether a proposed project will unnecessarily or unreasonably endanger the public investment in such facilities. Second, the Board examines whether a proposed project will materially jeopardize or interfere with (a) the function, efficiency or safety of such facilities, or (b) the public's use or enjoyment of or access to such facilities. Re: Munson Earth-Moving Corp., #4C0986-EB, Findings of Fact, Conclusions of Law, and Order at 11 (Apr. 4, 1997) [EB #660]; Re: Swain Development Corp., #3 W0445-2-EB, Findings of Fact, Conclusions of Law, and Order at 33 (Aug. 10, 1990) [EB #430].

The northern boundary of the Project Tract borders the public lands of Scrag Municipal Forest. Although members of the public currently access Scrag Municipal Forest through the Project Tract, there is no formal easement providing permanent public access to the municipal forest. As part of the Project, the Applicants will grant a public recreational trail easement to the Town. The recreational Trail will begin at the end of Bowen Road and cross Lots 2-5 of the Project Tract to permit access to Scrag Municipal Forest for biking, hiking, and horseback riding. Additionally, the Applicants will construct a parking area for 6 vehicles at the end of Bowen Road for users of the Trail. Finally, the Applicants will grant a logging easement to the Town which will provide access to the Scrag Municipal Forest for

logging purposes. The Trail and associated parking area and the logging easement will facilitate the public's use of and access to the Scrag Municipal Forest. Accordingly, the Board concludes that the Project will not unnecessarily or unreasonably endanger the public or quasi-public investment in Scrag Municipal Forest. The Board further concludes that the Project will not materially jeopardize or interfere with the function, efficiency, or safety of, or the public's use or enjoyment of or access to the Scrag Municipal Forest. Accordingly, the Board concludes that the Project complies with Criterion 9(K).

L. Criterion 10 (Conformance with Local or Regional Plan)

Before granting a permit, the Board must determine that the Project "[i]s in conformance with any duly adopted local or regional plan or capital program under [24 V.S.A. §§ 4301-4495]." 10 V.S.A. § 6086 (a)(10). The burden of proof under Criterion 10 is on the Applicants. *Id.* § 6088(a).

1. Town Plan

The Board's town plan analysis under Criterion 10 is conducted in accordance with *In re Molgano*, 163 Vt. 25 (1994); *Re: Herbert and Patricia Clark*, *supra*, at 39-40; *Re: The Mirkwood Group and Barry Randall*, #1R0780-EB, Findings of Fact, Conclusions of Law, and Order (Aug. 19, 1996) [EB #641]; *Re: Manchester Commons Associates*, #8B0500-EB, Findings of Fact, Conclusions of Law, and Order at 27 (Sept. 29, 1995) [EB #631].

In *Molnano*, the Supreme Court held that zoning by-laws are germane to interpreting ambiguous provisions of a town plan. *Molnano*, 163 Vt. at 29-30. It does not stand for the proposition that zoning by-laws control or override the specific policies of a town plan in an Act 250 proceeding. *Re: Herbert and Patricia Clark*, *supra*, at 40. Thus, the Board first considers whether the town plan provisions at issue are specific policies or ambiguous. *Id.* If such provisions are specific policies, they are applied to the proposed project without any reference to the zoning by-laws. *Id.* However, if such provisions are ambiguous, the Board next examines the relevant zoning by-laws for provisions which help the Board construe the town plan provisions at issue and thereby resolve their ambiguity. *Id.* This does not mean a general review of the project for its compliance with the zoning by-laws, but rather an examination to see if there are provisions in the zoning by-laws which address the same subject matter addressed by the town plan provisions at issue. *Id.*

In order for a town plan provision to be deemed a specific policy, the applicable provision must: (a) pertain to the area or district in which the project is located; (b) intend to guide or proscribe conduct or land use within the area or district in which the project is located; and (c) be sufficiently clear to guide the conduct of an average person, using common sense and understanding. *Mirkwood*, *supra*, at 29.

In order to interpret portions of the Waitsfield Town Plan, the Board must determine whether the Project is located in the Forest Reserve District. The Waitsfield Town Plan is ambiguous with regard to the definition of the Forest Reserve District. Chapter III, Section 9.1 of the Waitsfield Town Plan states "The Forest Reserve District is defined as all land with an elevation in excess of 1,700 feet msl, most of which is located in the Northfield Range." However, read together, Resource Map #7 and Resource Map #2 of the Waitsfield Town Plan indicate that the Forest Reserve District consists of all land with an elevation in excess of 1,500 feet msl. The conflict between Chapter III, Section 9.1 and the resource maps creates an ambiguity within the town plan as to the definition of the Forest Reserve District. Therefore, the Board turns to the Waitsfield Zoning Ordinance for provisions to help the Board construe the town plan provisions at issue and thereby resolve their ambiguity. Article II, Section 1 .D. of the Waitsfield Zoning Ordinance states "D. FOREST RESERVE DISTRICT: All lands situated at an elevation of 1500 feet above sea level or more and the Camel's Hump State Forest." The foregoing section of the Waitsfield Zoning Ordinance clarifies the Town Plan provisions at issue. The Board concludes that the Forest Reserve District is defined as all lands situated at an elevation of 1,500 feet above sea level or more and the Camel's Hump State Forest. Thus, the Project Tract, which is located at an elevation between 1,500 and 2,000 feet above sea level, is located in the Forest Reserve District.

The Waitsfield Town Plan contains two specific provisions with which the Project is not in compliance. First, objective 2.a. of Goals 1.1 through 1.3 states:

Objective 2. To protect Waitsfield's fragile resources and sensitive natural areas and reduce environmental hazards and prevent the loss of life and property from flooding.

a. Prevent the creation of parcels which will result in development on steep slopes, critical wetlands and floodplain; and consider amending the Waitsfield Zoning Bylaws to create standards to prevent such development.

The Project creates five parcels which will result in development on steep slopes. Thus, the Project is not in conformance with Objective 2.a. of Goals 1.1 through 1.3.

Second, objective 4.g. of Goals 5.1 and 5.2 states:

Objective 4. To provide alternatives to the heavy reliance on individual automobiles.

...

g. Maintain the current status of all class four Town Highways to promote

their use for walking, bicycling and horseback riding.

The Project does not maintain the current status of Bowen Road, a class four Town Highway. Rather, the Project requires upgrading and widening Bowen Road. Thus, the Project is not in conformance with Objective 4.g. of Goals 5.1 and 5.2. Based on the Project's nonconformance with the above provisions, the Board concludes that the Project is not in conformance with the Waitsfield Town Plan.⁶ Accordingly, the Board concludes that the Project does not comply with Criterion 10 (local plan). The Project is denied under Criterion 10 (local plan).

2. Regional Plan

The Regional Plan is applicable to the Project. The Town specifically mentioned the Regional Plan in its notice of appeal and it submitted the Regional Plan into evidence. However, neither the Town nor the Applicants provided the Board with any guidance as to the relevant provisions of the Regional Plan. Accordingly, the Board reviewed carefully the entire Regional Plan to determine whether it contains any specific provisions applicable to the Project. The "Land Use Element" section of the Regional Plan contains general policies regarding forest land, resource protection, natural and fragile areas, critical wildlife habitat, ground water recharge areas, surface waters, wetlands, scenic areas, and development. It does not contain any specific provisions which prohibit the Project. Therefore, the Board concludes that the Project complies with Criterion 10 (regional plan).

Finally, the Board wishes to express its general concern with the impacts of development on fragile, higher elevation lands with steep slopes in Vermont. In the future, such development should be limited because of its incremental effects on water pollution, headwaters, streams, erosion, and necessary wildlife habitat as well as other resources protected by Act 250.

VII. ORDER

1. Application #5W1270-EB complies with 10 V.S.A. §§ 6086(a) (1)(G), (8), 9(C), 9(K), and 10 (regional plan).

2. Application #5W1270-EB does not comply with 10 V.S.A. §§ 6086(a)(1), (1)(A), (1)(E), (4), (8)(A), 9(A), 9(H), and (10)(local plan).

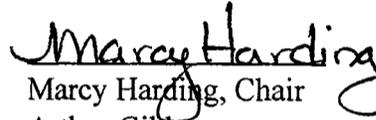
⁶The Board's conclusion that the Project is not in conformance with the above-mentioned specific policies of the Waitsfield Town Plan is further supported by the following provisions in the Town Plan: Objective 3.a. (Goals 1.1-1.3), Objective 5.g. (Goals 1.1-1.3), Objective 7.a. (Goals 1.1-1.3), and Objective 1.a. (Goals 9.1-9.3).

3. Land Use Permit #5 W 1270 issued by the District #5 Environmental Commission on November 5, 1997 is void.

4. Jurisdiction is returned to the District #5 Environmental Commission.

Dated at Montpelier, Vermont this 7th day of August, 1998.

ENVIRONMENTAL BOARD



Marcy Harding, Chair

Arthur Gibb

George Holland

William Martinez

Rebecca M. Nawrath

Rebecca Day, Alternate

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