

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

Re: Town of Stowe  
Application #100035-9-EB

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER

TABLE OF CONTENTS

I.	SUMMARY OF DECISION. ....	3
II.	SUMMARY OF PROCEEDINGS .....	4
III.	ISSUES ON APPEAL. ....	6
IV.	FINDINGS OF FACT.....	6
V.	CONCLUSIONS OF LAW.. . . . .	38
A.	Burden of Proof .....	38
B.	Town of Stowe's Motion to Supplement. . . . .	38
C.	Assessment of Secondary Impacts .....	39
D.	Criterion 1 (B) (waste disposal) .....	41
	1. Existing Uses .....	43
	2. Increased risk to public health within the zone .....	45
	3. Subsection 2.b of VWQS §1-03C ....., .....	45
	4. VWQS § 1-04A .....	46
	5. Summary .....	47
E.	Criterion 1 (E) (streams). . . . .	48
F.	Criterion 5 (traffic safety and congestion) . . . . .	50
G.	Criterion 7 (local governmental services) .....	51

H.	Criterion 9(A) (impact of growth)	52
I.	Criterion 9(H) (costs of scattered development)	55
J.	Criterion 9(K) (public investments and facilities)	56
K.	Criterion 10 (local plan and regional plan)	57
1.	Town Plan	5X
i.	Criterion 10 analysis.	58
ii.	<u>Mirkwood</u> test.	59
iii.	Full conformance	59
iv.	Partial conformance	59
v.	Not in conformity	61
a.	identification of failing on-site septic systems	61
b.	inflow-infiltration	61
c.	phasing	62
d.	maximum permitted size	62
vi.	Summary	63
2.	Lamoille County Plan	63
VI.	RECONSIDERATION UNDER 10 V.S.A. § 6087(c) and EBR 31(B).	64
VII.	ORDER	65

I. SUMMARY OF DECISION

This decision pertains to the appeal of Land Use Permit #100035-9 issued by the District #5 Environmental Commission on June 17, 1997 to the Town of Stowe for a sewer expansion project pursuant to 10 V.S.A. Chapter 15 1 ("Act 250").

As explained below, the Environmental Board ("Board") concludes that the sewer expansion project complies with 10 V.S.A. § 6086(a)(5) (traffic safety and congestion), (7) (local governmental services), (9)(K) (public investments and facilities) and (I 0) (regional plan), but does not comply with 10 V.S.A. § 6086(a)(1)(B) (waste disposal), (1)(E) (streams), (9)(A) (impact of growth), (9)(H) (costs of scattered development), and (10) (local plan).

Accordingly, application #100035-9-EB is denied and Land Use Permit #100035-9 is hereby declared void. However, the Board also states that the Town of Stowe may take specific measures to correct the problems noted by this decision and, under a provision of Act 250, may continue to seek a permit.

Key findings of the Board include:

A. Criterion 1(B). There are several types of existing uses in the proposed project's expanded waste management zone of which the Agency of Natural Resources was not aware when it issued the Town of Stowe's discharge permit. There is insufficient evidence from which to determine that appropriate waste management alternatives are available for a shortened waste management zone which excludes the heretofore undiscovered existing uses.

B. Criterion 1(E). The proposed project will enable future growth which will cause non-point source pollution to the West Branch of the Little River. The West Branch is already impaired by non-point source pollution. The Town of Stowe has not considered all reasonable alternatives which would allow the West Branch to remain in its natural condition.

C. Criterion 9(A). The expansion of the sewer line will result in growth that would not have otherwise occurred. Despite this, the Town of Stowe has not provided the evidence required by Criterion 9(A) involving an evaluation of the impacts from this growth. This includes evidence related to population growth; the total growth and rate of growth which is otherwise expected and which will result from the proposed project; and the anticipated costs for additional municipal services.

Town of Stowe

Application #100035-9-EB

Findings of Fact, Conclusions of Law, and Order

Page 4

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D. Criterion 9(H). The proposed project meets the definition of scattered development. The Town of Stowe has not demonstrated that the proposed project's additional direct and indirect public costs do not outweigh the public benefits.

F. Criterion 10 (local plan). The proposed project does not comply with the local plan's requirement that a study of failing on-site septic systems needs to be conducted; that phasing of sewer services be coordinated with the allocation of other facilities such as water, electricity, roads and public services; and that there needs to be a resolution between the Town of Stowe and the Agency of Natural Resources regarding the maximum permitted size of an expanded plant now that existing uses have been identified in the proposed project's expanded waste management zone.

As noted below, a procedure is available in which the Town of Stowe can correct the deficiencies found by the Board.

## II. SUMMARY OF PROCEEDINGS

On June 17, 1997, the District #5 Environmental Commission issued Land Use Permit #100035-9 ("Permit") and supporting Findings of Fact, Conclusions of Law, and Order ("Decision") to the Town of Stowe ("Stowe"). The Permit authorizes the expansion of the Town of Stowe municipal sewerage system including an increase in the existing treatment plant's capacity, and a seven mile sewer line extension ("Project").

On July 16, 1997, T.N. Associates, d/b/a Topnotch at Stowe ("Topnotch") filed a Motion to Alter with the Commission pursuant to Environmental Board Rule ("EBR") 31(B).

On July 17, 1997, Regional Impact Pure Water Protective League, Inc. ("RIPPLE") filed an appeal with the Board. RIPPLE contends that the Commission erred with respect to 10 V.S.A. § 6086 (a)(1)(B) (waste disposal), (9)(A) (impact of growth), (9)(H) (scattered development), (9)(K) (public investments and facilities) and (10) (town and regional plans). RIPPLE also appeals the Commission's denial of RIPPLE's party status request under 10 V.S.A. § 6086(a)(1)(E) (streams), (5) (traffic), and (7) (municipal services).

On July 22, 1997, a memorandum was issued providing that jurisdiction remained with the Commission for further proceedings under EBR 31 relative to the Motion to Alter.

On July 25, 1997, the Commission issued Re: Town of Stowe, #100035-9.

Memorandum of Decision (July 25, 1997) relative to the Motion to Alter ("Commission Motion Decision").

On August 20, 1997, Topnotch filed a Notice of Appeal and Cross-Appeal from the Permit and Decision, and, on September 2, 1997, a Party Status Petition.

On September 3, 1997, RIPPLE filed a Party Status Petition.

On September 3, 1997, then Board Chair John T. Ewing convened a prehearing conference and, on September 8, 1997, issued a Prehearing Conference Report and Order ("Prehearing Order").

On October 22, 1997, pursuant to the Prehearing Order, the Board convened a deliberation regarding the preliminary issues of party status and the scope of the issues on appeal.

On October 29, 1997, the Board issued an order ("Order") regarding the preliminary issues of party status and the scope of the issues on appeal.

During December, 1997, and January and February, 1998, the parties filed prefiled evidence and objections, and proposed findings of fact and conclusions of law.

On January 1, 1998, Marcy Harding became Chair of the Board.

On February 9, 1998, Chair Harding convened a second prehearing conference in this appeal.

On February 10 and 11, 1998, the Board convened a hearing in this appeal in Stowe, Vermont with the following parties participating:

Town of Stowe by Stephen Stitzel, Esq., and Gregory T.  
Federspiel  
Agency of Natural Resources by Andrew Raubvogel, Esq.  
Regional Impact Pure Water Protective League, Inc., by  
Stephanie J. Kaplan, Esq., and Larry Lackey  
T.N. Associates, d/b/a Topnotch by Peter Van Oot, Esq.

At the hearing's conclusion, the Board recessed this proceeding pending receipt of the parties' supplemental proposed findings of fact, conclusions of law, and order, deliberation, and the issuance of this decision.

On February 18, 1998, the Town of Stowe filed a Motion to Supplement the Record ("Motion to Supplement").

On March 5, 1998, RIPPLE filed an objection to Stowe's Motion to Supplement.

On March 6, 1998, the parties all filed supplemental proposed findings of fact, conclusions of law, and order.

On February 25, March 18, April 29, and May 13, 1998, the Board deliberated regarding this appeal. On May 18, 1998, the Board declared the record complete and adjourned the hearing. This matter is now ready for decision. To the extent any proposed findings of fact and conclusions of law are included below, they are granted; otherwise, they have been considered and are denied. See Petition of Village of Hardwick Electric Department, 143 Vt. 437, 445 (1983).

### III. ISSUES ON APPEAL

The issues on appeal are whether the Project complies with the following criteria set forth at 10 V.S.A. § 6086(a): 1(B)(waste disposal), 1(E)(streams), 5 (traffic safety and congestion), 7 (local governmental services), 9(A) (impact of growth), 9(H) (costs of scattered development), 9(K) (public investments and facilities), and 10 (local and regional plans).

### IV. FINDINGS OF FACT

For the convenience of the reader, the findings of fact below are organized into a general section followed by sections related to the specific criteria on appeal. By organizing the findings under headings, the Board in no way implies that, with respect to any single criterion or criteria, only the findings under that heading are relevant. The findings are to be read as cumulative. Where findings from the general section or another specific criterion or criteria are relevant, they are assumed and are not repeated.

#### General Findings

1. Stowe owns and operates a wastewater treatment facility ("Facility"). The Facility is located off of River Road in Stowe, and was completed in 1980. As of August, 1988, the Facility was and is authorized to process and discharge up to an average of 250,000 gallons per day ("gpd") of treated effluent into the Little River ("Existing Discharge").

2. The Project consists of (a) expansion of the Facility's discharge capacity from an average of 250,000 gpd to an average of 1 million gpd of treated effluent into the Little River ("Proposed Discharge"); (b) the installation of a sequencing batch reactor system coupled with low head traveling bridge filters and ultra violet disinfection ("Upgrade"); and (c) the construction of a seven mile sewer line extension on the Mountain Road ("Extension"). The Project will cost between 11 and 12 million dollars.
3. The Town filed its application for Land Use Permit #100035-9 with the District #5 Environmental Commission on July 9, 1996.
4. Within Stowe there are three areas which are commonly referred to as "Stowe Village," "Lower Village," and "Moscow Village." The Lower Village is adjacent to, and south of, Stowe Village. Moscow Village is south and westerly of Stowe Village.
5. The Facility's existing collection system consists of approximately 35,000 linear feet of gravity sewer line serving Stowe Village and immediate adjacent areas of Stowe.
6. Wastewater flows by gravity to a single pump station located in the Lower Village between the Little River and Stoware Mill on south Main Street. Wastewater is then pumped across the Little River to the Facility. Treated effluent is discharged into the Little River at a point just upstream of the Stowe Canoe Dam. This point is the "outfall" point for both the Existing Discharge and the Proposed Discharge.
7. As a result of the Project, the Facility's service area would be substantially expanded. The expanded service area ("Expanded Service Area") is delineated by existing zoning and property boundaries, and has been divided into five "sub-areas" as follows:

Area I	-	Mt. Mansfield Company Ski PUD
Area II	-	Upper Mountain Road
Area III	-	Lower Mountain Road
Area IV	-	Trapp, Inc. Ski PUD
Area V	-	Stowe Village
8. The five sub-areas correspond with the approximate location of a pumping station for each area within the Expanded Service Area. The Facility's existing service area is generally encompassed by most of Area V ("Existing Service Area").

Town of Stowe

Application #100035-9-EB

Findings of Fact, Conclusions of Law, and Order

Page 8

9. The Expanded Service Area contains 7,635 acres. The Existing Service Area contains 450 acres. The Existing Service Area would comprise 5.9% of the Expanded Service Area. Stowe's entire land area is 47,808 acres.
10. Areas I-IV will be served by the Extension which will be constructed up the Mountain Road beginning at the intersection of the Mountain Road and Weeks Hill Road, which is where the Existing Service Area's sewer main ends. The Extension's construction and related improvements will cost approximately \$3,200,000.
11. The Mountain Road is officially Vermont Route 108.

Criterion 1(B)(waste disposal)

12. The Existing Discharge and the Proposed Discharge constitute the placing, depositing or emission of wastes directly into the waters of the state. The Existing Discharge and the Proposed Discharge are subject to 10 V.S.A. §§ 1250-1284, which is subchapter 1 of Chapter 47, Water Pollution Control ("WPC Act").
13. Presently, the Existing Discharge and the Proposed Discharge are authorized by Discharge Permit 3-1232 ("DP 3-1232") issued on April 25, 1996 by the Agency of Natural Resources ("ANR"), Department of Environmental Conservation ("DEC"), Wastewater Management Division ("WWMD").
14. Under DP 3-1232, Stowe is authorized to operate the Facility at the Existing Discharge capacity. Under DP 3-1232, Stowe must, in part, install the Upgrade before it can begin the Proposed Discharge and the resulting 300% increase in the Facility's discharge volume. The 1 million gpd is a monthly average; on some days the discharge of treated effluent could be as high as 2 million gpd. DP 3-1232 does not require that the Facility's discharge be increased to the Proposed Discharge level.
15. Because the Existing Discharge into the Little River was authorized pursuant to the WPC Act prior to July 1, 1992, that portion of the Little River authorized to receive the Existing Discharge became the designated waste management zone ("WMZ") for the Existing Discharge.
16. A WMZ is a specific reach of Class B waters designated by a permit to accept the



discharge of properly treated wastes that prior to treatment contained organisms pathogenic to human beings.

17. The Existing and Proposed Discharges include wastes which prior to treatment contain organisms pathogenic to human beings.
18. The Existing Discharge's WMZ extends 1.4 miles downstream in the Little River as measured from the Existing Discharge's point of outfall.
19. DEC developed the Waste Management Zone Designation Procedure ("WMZ Procedure") to specify the methods used to establish a WMZ. DEC has applied the WMZ Procedure to all wastewater treatment facility ("WWTF") discharge permits since 1994. The Facility falls under the definition of a WWTF. The Project is subject to the WMZ Procedure.
20. The WMZ Procedure is based upon several fundamental assumptions regarding the design and operation of typical secondary-level WWTFs and the use of *E. coli* as an indicator organism of possible pathogenic contamination.
21. Principal among the assumptions is the concept that while the presence of an indicator organism means that pathogens are likely to be present as well, the absence of such indicators in the vicinity downstream of a disinfected WWTF outfall does not, in and of itself, guarantee that pathogens are not present. This is so because these indicator organisms such as *E. coli* are relatively fragile, and are more easily killed by the disinfection process in comparison to other pathogens.
22. The possible number of pathogens present at any given time is highly variable due to many external factors such as the overall health of the user population, the effectiveness of the treatment and disinfection process at the WWTF, and ambient environmental conditions in the receiving water.
23. Given the possible existence of pathogens in unknown quantities, it is necessary to attempt to achieve maximum separation between contact recreational uses, such as swimming, and a WWTF discharge where the swimming water is also to be used as the receiving water for a WWTF discharge.
24. An attempt at maximum separation is required because any pathogens which may be discharged into the receiving water eventually are reduced through dilution and die-off to background levels. This reduction process occurs as a function of time, which in a moving receiving water can be related to downstream distance.

25. The mathematical model in the WMZ Procedure is a tool to calculate a river reach length downstream of a proposed WWTF within which contact recreation uses such as swimming should be evaluated.
26. Swimming is both an existing use and a designated use under the Vermont Water Quality Standards ("VWQS"). The Project is subject to compliance with the VWQS as part of the issuance of a discharge permit under the WPC Act.
27. Given the wide-ranging spectrum of both types and numbers of pathogens which vary on an unknown basis, the typical length of a WMZ calculated with the model implies no guarantee of a specific level of risk either within or downstream of the WMZ. A WMZ is an objective and equitable method of identifying a reasonable recommendation for the separation distance between the competing uses of waste management discharge and swimming.
28. Based on the increase from 250,000 gpd to 1 million gpd, and the application of the WMZ Procedure mathematical model, the Proposed Discharge's WMZ is the Existing Discharge's 1.4 mile WMZ plus an additional 1.7 mile extension resulting in a 3.1 mile total WMZ for the Proposed Discharge. The 3.1 mile WMZ is required by DP 3-1232.
29. The end of the 3.1 mile WMZ is approximately 0.6 miles upstream from the confluence of the Little River and Millers Brook. The 3.1 mile WMZ extends through the Moscow Village portion of Stowe.
30. The Little River is a Class B river that flows into the Waterbury Reservoir. The West Branch River, which flows into the Little River, is also a Class B river. Both the West Branch and the Little River are high quality waters. Swimming is a designated use in Class B waters.
31. Stowe retained the services of a professional engineering firm with respect to its application for DP 3-1232 and Land Use Permit #100035-9. During 1995, the firm evaluated the Little River with respect to activities involving human contact.
32. The testimony by Stowe's professional engineer is that there is no "significant use" of the Proposed Discharge's 3.1 mile WMZ for recreational or other activities involving human contact with the water, especially swimming. The VWQS do not contain a "significant use" standard.
33. Stowe's consultant conducted a survey of existing uses in the Little River. The

majority of the survey was conducted on the West Branch, upstream from the Facility and the Facility's outfall into the Little River.

34. Where a WWTF discharge results in a WMZ that extends to an area where contact recreation such as swimming, bathing, or wading is determined to be an existing use as defined by VWQS § 1-01(B)(16), then such a proposed discharge is deemed to cause a significant degradation of the existing use.
35. A significant degradation occurs since those who are recreating in the water would be exposed to an increased level of health risks due to the discharge of effluent containing human pathogens. If the potential impact or degradation is significant, then the proposed discharge would be inconsistent with the protection afforded by the Anti-Degradation Policy of VWQS § 1-03, and the WMZ cannot be extended through the area of the existing use.
36. As with any existing use, swimming, bathing, or wading uses are determined on a case-by-case basis under VWQS § 1-03(B)(1). The determination of an existing use is a qualitative rather than quantitative decision.
37. Swimming, bathing or wading are not existing uses solely on the basis of their presence or absence in a given river or stream. Swimming, bathing, or wading rise to the level of an existing use when a segment of stream or river is frequented by numerous swimmers, bathers, or waders on a regular basis.
38. The Gold Brook Campground is located on the Nichols Lodge property between Route 100 and the Little River below Lower Stowe Village immediately downstream from the Existing Discharge's WMZ.
39. The Gold Brook Campground has been operating in its present location on the banks of the Little River and the Gold Brook for 34 or 35 years. There are 79 campsites, many of which are located right along the Little River and the Gold Brook. Many guests camp there because the campground is on the river. The most popular sites are those along the river.
40. The campers at Gold Brook Campground swim in the Little River. On hot days, people are in the river all day. While the Gold Brook Campground has a pool, there are guests who prefer the Little River over the pool, especially on hot days when it is much cooler by and in the river.
41. In addition to swimming in the river, campers and others float down the river in

inner tubes, starting at or above the Gold Brook Campground, and floating or tubing all the way down to the bridge at Moscow Village.

42. Numerous swimmers, bathers, and waders regularly use the Little River just below the Gold Brook confluence adjacent to the Gold Brook Campground, as well as at the ledge just above the Moscow bridge.
43. The Gold Brook Campground and the Moscow bridge are both located in the 1.7 mile extension portion of the Proposed Discharge's 3.1 mile WMZ.
44. People have been swimming regularly at the swimming hole at the Moscow bridge for at least 15 years. In addition to local people, tourists stop by to swim, and campers from the Gold Brook Campground swim there regularly. There is a pull-off area in the road right-of-way for access to the Moscow bridge swimming hole that has been there for some years.
45. The Moscow bridge swimming hole is attractive and good for swimming because there is a ledge to sit on and several deep pools. It is a good place to engage in "stroke" swimming. People dive, jump, or paddle around in this area. It is also a popular place for little children because there are areas that are not too deep or cold, and it is safer for children than a lot of other swimming holes in Stowe. The local Rotary Club sponsored an inner tube race from the Lower Village down to the Moscow bridge.
46. Often there are groups of campers at the Gold Brook Campground. During the summer of 1997, a tour group of 56 children stayed there for three days. Most of them swam in the Little River. A group of 250 bicyclists have stayed at the Gold Brook Campground every summer for the last five years. Many of the cyclists swim in the Little River.
47. Campers swim both upstream and downstream from the convergence of the Little River and Gold Brook. Below the convergence, the depth of the water ranges from one to four feet and is deep enough to swim in.
48. When John Nichols was growing up at the Gold Brook Campground, he swam in the Little River, and his sons swam in the river too as they were growing up. There have been people swimming at the Moscow bridge swimming hole for many years.
49. Jon Hanson, a resident of Stowe since 1957, has regularly observed people

swimming at the Moscow bridge swimming hole over a number of years. Since 1994 there have been up to 100 people there over the course of a summer. In 1995, there was an increase in the number of people swimming at the Moscow bridge.

50. Becky McGovern and her children have been swimming at the Moscow bridge swimming hole since 1991. She has observed up to five people there at one time. She and her children began going there to swim because they saw other people swimming there, including children. She has frequently observed kayakers in the Little River at the Moscow bridge. Children from the softball team recreate in a portion of the Little River which would be located in the 1.7 mile extension portion of the Proposed Discharge's 3.1 mile WMZ.
51. Patricia Sullivan has lived in Stowe for 23 years, and has lived in Moscow Village for 18 years. She, her three children, and her husband have swum in the Little River at the Moscow bridge frequently since they moved there. She swims there at least several times a week during the summer months, and has been doing that for years. She enjoys swimming all the way upstream to the bend of the Little River. Although it is shallower there, you can still swim in it. Below the rock ledge at the bridge, the water is quite deep, and people dive in it there. As the water flows over the rock, it forms an eddy that people can swim against to get a good work-out.
52. Patricia Sullivan has observed many other people swimming at the Moscow bridge swimming hole over the years. She has seen up to fifteen people there at once. She has frequently seen children swimming at the Moscow bridge swimming hole.
53. In May or June of 1996 Stowe undertook some work at the swimming hole at the Moscow bridge. Stowe added rip rap and cut away some brush. As a result, the Moscow bridge swimming hole became more visible from the road.
54. The recreational uses of swimming, wading, and bathing at the Moscow bridge swimming hole and the Gold Brook Campground have all occurred prior to the issuance of DP 3-1232, and prior to when Stowe undertook the work at the Moscow bridge.
55. When ANR issued DP 3-1232, it had incomplete and inaccurate information regarding the nature and extent of the existing uses in the extended portion of the Proposed Discharge's WMZ. ANR was not aware of the existing contact

recreational uses which were and are present at the Gold Brook Campground and Moscow bridge swimming hole.

56. If ANR had known of the existing uses at the Gold Brook Campground and Moscow bridge when it reviewed Stowe's application for DP 3-1232, then ANR could have reviewed the application pursuant to Step 3 of the WMZ Designation Procedure.
57. Step 3 of the WMZ Procedure addresses situations where, based on the WMZ length prediction mathematical model, an adequate separation distance cannot be established between a WWTF outfall and an existing use such as contact recreation. To provide an alternative means to achieve an acceptable level of risk, that is, no increased risk to swimmers, Step 3 provides that other appropriate risk management measures can be used at a WWTF.
58. The typical WMZ length is calculated by using the default WMZ mathematical model which is based upon a typical secondary level of treatment at a WWTF. In situations where downstream uses preclude the adoption of the WMZ derived from the mathematical model, appropriate risk management measures can be prescribed for the WWTF to allow for a shortened WMZ. These measures can be grouped under three general design concepts.
59. The first design concept is a measurable increase in disinfection efficiency as expressed by a proportionately reduced concentration of the indicator organism, *E. coli*, in the WWTF's discharged effluent. Although *E. coli* is reduced more easily by disinfection processes as compared to some pathogenic organisms, it is also true that the more *E. coli* that are killed, the more pathogens are removed through the same process.
60. The second design concept involves increasing the reliability and redundancy of processes within the WWTF. A WWTF design which incorporates these measures will not only be less likely to experience a major process upset, it will also achieve a more consistent day-to-day operation through the inherent fail-safes against minor upsets which are provided by the redundant systems.
61. The third design concept involves the use of enhanced WWTF technology specifically targeted to achieve a higher level of removal of pathogenic organisms within the treatment process. An extreme example of such technology would be a drinking water type filtration system which is designed to provide a physical barrier to the passage of many microscopic organisms. The third component is

not universally accepted as a technique for pathogen removal.

62. ANR has not authorized a reduction in the Proposed Discharge's WMZ from 3.1 miles to the Existing Discharge's 1.4 mile WMZ. Before the Proposed Discharge could use the Existing Discharge's WMZ, ANR would have to issue an amendment to DP 3-1232.
63. Since ANR filed its rebuttal testimony on or about February 2, 1998, Stowe has provided documentation to ANR regarding the reduction of the Proposed Discharge's WMZ from 3.1 miles to 1.4 miles while still maintaining an annual discharge of 1 million gpd. This documentation has not been provided to this Board as evidence in this proceeding.
64. There is insufficient evidence from which to determine that appropriate waste management alternatives are available to allow the Proposed Discharge's WMZ to not include the portions of the Little River where swimming and other contact recreation take place as existing uses. This includes the Gold Brook Campground and the Moscow bridge swimming hole.
65. ANR has never shortened a WMZ pursuant to step 3 of the WMZ Designation Procedure. ANR cannot change the length of a WMZ at the final design review stage when it approves the as-built design of a waste treatment plant.
66. DP 3-1232 expires in December, 1998. Stowe must apply for a renewal of its permit by June of 1998, 180 days prior to the expiration of DP 3-1232.
67. Swimming is not recommended in a WMZ. A WMZ cannot be located where there is an existing swimming use.
68. There is no disclosure or alarm system in place for the Facility in the event of a serious failure at the Facility.
69. If, after expansion, the Facility is not operating within the limits set forth in DP 3-1232, there could be an illness impact on persons coming in contact with the water within the WMZ and downstream therefrom.
70. Swimmers and other persons engaging in contact recreational activities such as kayaking, tubing and wading inadvertently ingest water which could include viruses not indicated by E-coli tests. Viruses not indicated by the E-coli test include aseptic meningitis and myocarditis.

71. Stowe has not tested the Facility's existing influent or effluent for viruses not indicated by E-coli. There is no testing planned for the Facility after the Project goes into operation.
72. In considering alternatives to the Project, Stowe relied on three criteria. First, Stowe identified the geographical area it wanted to serve, that is, the Expanded Service Area. Second, based in large part on requirements of the Expanded Service Area, Stowe, through its engineering consultant, determined that a treatment capacity of 1 million gpd was required. Third, Stowe determined that the Facility would be municipally owned and operated.
73. The alternatives reviewed by Stowe's engineering consultant were subject to Stowe's pre-set criteria. Stowe identified the Expanded Service Area based on its conclusion that there were chronic failures of existing, commercial in-ground septic systems along the Mountain Road that could adversely affect the West Branch's water quality.
74. Chronic failure means repeat failures. Chronic failure can be caused by the lack of capacity in the land to accommodate the wastewater discharge or the system's design.
75. The extent of septic systems failures in Stowe is not well-documented. Stowe's engineering consultant has no personal knowledge of on-going contamination problems in the Expanded Service Area or evidence that the West Branch is being contaminated by septic system failures.
76. Along the Mountain Road in the Expanded Service Area, only the Top-notch Resort and the Shed restaurant have been specifically identified as having had failing septic systems, both of which have been corrected.
77. Stowe is not aware of other on-site septic systems that have failed and have not been fixed. The lands along the Mountain Road are and are suitable for on-site disposal of wastewater.
78. Stowe has not conducted a sanitary survey of the Expanded Service Area. Stowe has no direct evidence that the West Branch is being contaminated by in-ground septic system failures.
79. A 10-50% failure rate of in-ground septic systems is considered to be a "high" failure rate for such systems. ANR would generally be aware of septic system



failures in the Expanded Service Area. If there was a high rate of septic system failures, ANR would conduct a sanitary survey of the Expanded Service Area.

80. There is no evidence of wide-spread, chronic system failures in the Expanded Service Area. Documented incidents of sub-service disposal system failures have been identified in the Lower Village area known as Sylvan Park. Sylvan Park is served by the Existing Service Area. Capacity within the Facility's current allocated flow has been reserved for the future development of Sylvan Park or to accommodate existing homes with in-ground septic systems.
81. In addition to the Sylvan Park area, approximately 13 septic systems along the Mountain Road corridor and in the Lower Village area failed in the six-year period between 1989 and 1995, or approximately two system failures per year.
82. Although it could have done so, Stowe has not provided any evidence of a list of additional septic failures within the town's boundaries. There is no evidence of any notices of violation having been issued to existing landowners in Stowe for failed septic systems.
83. State-wide septic system failures average 3 to 4% at most. There is no evidence that Stowe's septic system failure rate is greater than the state-wide average.
84. Because of the number of commercial operations and the bike path that runs through much of the Expanded Service Area, it would be likely that failures would be easily detected. The failure of the Shed restaurant's septic system was reported by a user of the public bike path.
85. The generally accepted solution where there is an in-ground septic system failure is to relocate the septic field or fix the septic system on-site. Under existing state and local regulations, all new in-ground septic systems are required to have an adequate replacement area.
86. Large commercial systems with indirect discharges greater than or equal to 6,500 gpd are required to obtain an Indirect Discharge Permit under the Vermont Indirect Discharge Rules. New indirect discharges under the Vermont Indirect Discharge Rules must have adequate alarm systems, redundancy features and monitoring requirements.
87. Stowe seeks to build the Project, in part, based on information that the Mount Mansfield Company and the Trapp Family Lodge were considering individual

treatment plants.

88. Stowe failed to generally consider other possible alternatives to the Project. Stowe failed to consider the construction of the Mount Mansfield Company or Trapp Family Lodge waste treatment plants as possible alternatives to the Project.
89. Stowe did not perform a sanitary survey or evaluate the capacity of the lands in the Expanded Service Area to accommodate on-site septic systems. No assessment has been done by Stowe of properties in the Expanded Service Area regarding the capacity of the soil to accommodate on-site septic systems.

Criterion 1(E)(streams)

90. Improvements to the Facility as part of the Project are to occur adjacent to an unnamed, intermittent stream. This stream will not be altered by the improvements. Staked haybale dikes will be installed prior to any excavation, and then will be maintained until vegetation is re-established.
91. Nonpoint source ("NPS") pollution originates from a source other than the end of a pipe and affects the quality or use of surface water, ground water, and wetlands. Pollution from nonpoint sources is predominantly, although not exclusively, from land runoff.
92. How land is used or managed effects the quality, quantity and timing of water that runs off it. Although the type and magnitude of NPS pollution in Vermont is variable, such pollution is found in each of Vermont's seventeen river basins. NPS pollution includes changes in characteristics of runoff water such as quicker delivery, increased peak, and less base flow following the conversion of land from being undeveloped to developed.
93. There are no known direct, permitted discharges to the West Branch of the Little River. The West Branch's water quality is directly affected by the land use activities that are occurring in the West Branch watershed. Adverse water quality conditions within the West Branch are the result of NPS pollution.
94. In December, 1995, the water quality conditions for the West Branch of the Little River and the Little River were as follows:

West Branch: Ten miles (from mouth upstream) -- partial support to aesthetics, biota and non-contact recreation due to extensive gravel mining and stream course disturbance created by recreational vehicles driving in stream and flooding, land and ski area development and urbanization, increased storm water discharge and soil erosion from construction sites, some failing leach fields, some agricultural runoff, and disturbed stream bank vegetation. Resulting conditions include sedimentation, unnaturally wide stream banks with increased summer temperatures and little shading, habitat and spawning area deterioration, increased storm flows, nutrient enrichment and low dissolved oxygen.

Little River: Five miles (beginning at mouth of Moss Glen Brook downstream to Waterbury Reservoir) -- partial support to biota, fishing, aesthetics and drinking water supply due to siltation, turbidity, habitat alterations, increased stream temperatures due to rapid land development, urban and storm water runoff, construction site runoff, and graveling.

95. Further investigation in November, 1997, demonstrated that the water quality and aquatic life in the West Branch were being impaired by physical changes to the stream channel, and changes to the stream's hydrology. Although some of these changes can be attributable to natural events, the principal causes are watershed development, land disturbances and the generation of storm water.
96. Development, whether it be residential or commercial, requires wastewater disposal services. If wastewater is not to be disposed of on-site, then it must be disposed of through a wastewater treatment system.
97. All other factors being equal, development activity results when there is available, reasonably priced, wastewater treatment disposal service. Land adjoining or along a road with a sewer line is more likely to have development occur at a faster rate than would otherwise occur if that land lacked sewer service.
98. If the Project is built, then the installation of the Extension in the Expanded Service Area will remove a major limitation on development within the Expanded Service Area. Development within the Expanded Service Area will not be constrained by the technical and regulatory limits which are imposed on on-site disposal.
99. The West Branch of the Little River flows through the Expanded Service Area along the Mountain Road.

100. The construction of structures and establishment of impervious surfaces such as parking areas on lands adjoining surface waters such as the West Branch can contribute storm water run-off to the surface waters which can adversely impact the quality of the surface waters. Control measures that minimize storm water run-off into surface waters can mitigate and/or prevent adverse impacts to the surface waters.
101. The Project will allow for future growth which will cause NPS discharges to the West Branch River. The West Branch River is already impaired by NPS pollution. Any increased NPS run-off to the West Branch will exacerbate the existing impairment.
102. Approximately 33% of the 1 million gpd has been reserved for sewage flows from new development. Stowe has not performed a complete build-out analysis for potential growth in the Expanded Service Area based upon its current zoning regulation.
103. Future growth within the Expanded Service Area will be comparable to the type of development that presently exists and that which is typically found with a tourist-based, destination resort. This would include a mix of commercial, recreational, and residential uses.
104. Even after the Project's completion, the Facility will not capture or treat storm water runoff which is generated from existing or future development within the Expanded Service Area. The West Branch's already impaired water quality will be made worse following the Facility's operation at 1 million gpd due to increased development within the Expanded Service Area.
105. Based on observations from other parts of Vermont that are developed or are undergoing development in similar headwater watershed conditions (steep slopes, shallow soil, higher elevation), chemical/physical/biological water quality impairment arises from the cumulative effect of development rather than as a consequence of any one project.
106. As development occurs, the ability of the land to absorb precipitation is modified and in most cases reduced. Natural drainage patterns are disrupted and more impervious areas such as building roofs, streets, and parking lots are created.
107. Impervious areas cause increased storm water volume to be delivered at a faster rate causing erosion of soils, downstream sedimentation, scouring of headwater

streams, enlargement of stream channel cross-sections, and worsening of aquatic habitat.

108. The increased storm water volume is also contaminated by materials associated with human and vehicular traffic such as nutrients, bacteria, organic matter, debris, and hydrocarbons. These materials become components of the storm water and are delivered to watercourses in dissolved or suspended form.
109. Sophisticated computer-assisted storm water simulation modeling can predict incremental pollutant loadings and storm water runoff. It is difficult and somewhat imprecise to estimate cumulative increases or decreases since the size, type and position of development can all influence predicted outcomes. This type of watershed analysis for the West Branch has not been undertaken.
110. On December 9, 1975, Stowe adopted its original zoning bylaw and has had a zoning bylaw in effect ever since. The zoning bylaw was most recently amended on February 9, 1998 ("1998 Bylaw"). Prior to the February 9, 1998 amendments, the most recent amendments occurred on July 3, 1995 ("1995 Bylaw").
111. The 1998 Bylaw allows for nonconforming structures located within a buffer zone adjacent to a stream or river to be expanded upon approval by the Board of Adjustment. Expansion of a nonconforming structure within a buffer zone can have an adverse effect on surface water quality.
112. The following standards and development restrictions, which are already required by the 1998 Bylaw, will reduce the potential for NPS pollution stemming from secondary growth in the Expanded Service Area, provided such standards are included in all approvals given under the 1998 Bylaw:
  - a. The development will not cause unreasonable soil erosion or reduction in the capacity of the land to hold water.
  - b. The development will not result in undue water pollution.
  - c. No development, excavation, landfill or grading within a minimum distance of fifty (50) feet from the mean water mark of any watercourse. Vegetation shall be left in an undisturbed, naturalized state with the exception of minimal clearing necessary to accommodate recreation and transportation paths, driveway and road crossings and streambank stabilization and restoration projects.

- d. No development, excavation, landfill, or grading within a minimum distance of sixty (60) feet from the West Branch of the Little River, although landscaping, approved driveways and bicycle and pedestrian paths are permitted within the setback.
  - e. Preparation and implementation of a site development plan (for development other than one or two family dwellings and their accessory uses) that includes a storm water drainage plan and a site grading plan showing natural and proposed contour intervals.
  - f. Any development must provide for an adequate storm water drainage system to ensure that no additional storm water runoff is generated beyond the boundaries of the project and that existing drainage patterns are not altered in a manner to cause an undue adverse impact on neighboring properties, town highways or surface waters. Plans for handling storm water runoff shall utilize the best available technology.
  - g. For projects that come within the Town of Stowe's subdivision regulations, the preparation and implementation of a sedimentation and erosion control plan to ensure that site improvements, including excavation, road and driveway construction and site clearing and grading, will not unduly impact neighboring properties or surface waters.
  - h. In the Ridgeline and Hillside Overlay District (RHOD), an adequate storm water drainage and erosion control plan shall be required when the average slope of the site is steep/very steep or there are headwater streams and/or major drainage areas and waterways on the site.
  - i. In the RHOD, all development, including grading, clearing and construction of driveways, shall provide for the retention of native top soil, stabilization of steep hillsides and the prevention of erosion and consequent sedimentation of streams and watercourses. Peak storm water discharge from the site after development shall not exceed pre-development levels for a 2 year/24 hour storm event and existing drainage patterns will not be altered in a manner to cause an adverse impact on neighboring properties, town highways or surface waters.
113. The standards and restrictions identified in finding of fact #112, if modified as follows, would further minimize the potential for increased NPS pollution in the Expanded Service Area:

- a. All setbacks and buffer widths from rivers and streams should be measured from the top of the bank, rather than the mean water mark. Exceptions which allow disturbance of the natural vegetation in setbacks for recreation and transportation paths, driveways, and road crossings should be more limited to maintain the integrity of the buffer.
  - b. An additional setback of 20 to 25 feet greater than the applicable stream buffer should be required to ensure the integrity of the buffer during development activity.
  - c. Preparation and implementation of an erosion control plan governing construction-related activities that: minimizes the area of exposed soil (including phased construction); stabilizes soils not actively being worked; diverts storm water during construction; and restricts soil disturbance to the period April 1st to October 15th should be required.
  - d. The standards and restrictions identified in finding of fact #112 should apply to all types of development, including new single and two family residences, in order to ensure that any project which disturbs the land is designed to retain all soil and water on-site.
114. Stowe witness Federspiel testified that the requirements in finding of fact #113 would provide a disincentive for existing businesses to switch to the Project due to the additional costs that would be imposed as a result of the requirements in finding of fact #113.

Criterion 5 (traffic safety and congestion)

115. The Project does not require the construction of any additional driveways or road intersections. Vehicles will use the existing access off of River Road during both the period of the Project's construction and the Facility's subsequent operation. The number of vehicles accessing the Facility will increase only slightly as the Facility attains full capacity at 1 million gpd.
116. The Extension's construction up the Mountain Road will result in limited, temporary traffic delays. To address these, control of work specifications, including traffic control measures to be implemented during construction, have been formulated and will be complied with during the Extension's construction.

117. Under the traffic control measures, the Project's construction shall be scheduled and excavated material shall be placed so that vehicular and pedestrian traffic may be maintained at all times. Traffic shall be protected by barricades, and warning signs. There will be access for emergency vehicles and equipment at all times. Traffic flag persons and uniformed traffic officers will be used to ensure public safety.
118. Through the local zoning process, Stowe identifies potential adverse traffic impacts associated with new development, and acts to mitigate such impacts or deny approval for such new development.
119. The Project does not include any improvements to the junction of Route 100 and Route 108 in Stowe Village. This junction routinely experiences traffic tie-ups and congestion.
120. RIPPLE and Topnotch have not provided evidence regarding the present traffic Level of Service ratings at locations along the Mountain Road, nor have they provided projected Level of Service ratings on a post-Project basis. RIPPLE and Topnotch have not provided data regarding the number of accidents along the Mountain Road, nor have they provided data projections regarding the number of accidents on a post-Project basis.

Criterion 7 (local governmental services)

121. The Project will result in the creation of approximately 320,000 gallons of capacity that will be available to accommodate new development. This capacity will be available to support new development throughout the Expanded Service Area.
122. Based on historic rates of growth in Stowe, new development will occur during the Facility's planned life at the 1 million gpd capacity.
123. The Town has available three sources of funds to pay for the Project. They are:

Revolving Loan Fund:	\$9.6 Million No-Interest Loan repaid over 20 years
EDA Grant:	\$1.5 Million
Sewer Reserve Fund	\$0.4 Million



124. Since Stowe does not have to repay the EDA Grant or Sewer Reserve Fund, its only repayment obligation involves funds received from the Revolving Loan Fund. This \$9.6 Million must be repaid, on a no interest basis, over 20 years.
125. Stowe's annual debt service will be \$480,000. The two main sources of income which will be used to retire the debt are connection fees and user fees.
126. Each hook-up onto the Extension must pay a connection fee based on the number of gallons per day the user expects to generate for the Facility to process. The "flow rating" for each new connection is calculated based on the unit flow quantities established by the State. The per gallon cost is based on the capital costs of the new capacity less any grant money and revenues that can be generated from user fees.
127. A customer is assessed a charge for each gallon of wastewater the customer sends to the Facility. The per gallon charge is based on the Facility's operating costs plus a portion of the Facility's capital costs. User fees also are assessed for the processing of septage received from pumped out septic systems. The current user fee is \$0.0325 per cubic foot. No increase is anticipated, but an increase could occur.
128. Of the \$480,000 annual debt service, \$200,000 is annually projected to be raised through user fees for capital costs (both septage and influent). The remaining \$280,000 will be raised through connection fees.
129. Over 20 years, a total of 510,560 gallons of flow must be sold at an average of \$10.94/gallon. The current per gallon charge is \$13.00. As an incentive to connect to the Facility, existing development will be offered a lower price in the first few years of the Project's operation.
130. Of the 510,560 gallons needed to be sold, expressions of interest from property owners already total over 400,000 gallons. Assuming these connections are made within the first couple years of completion of the Project, the Town will have available a fund totaling approximately \$5,600,000 from which to make the annual debt service payment.
131. If a sufficient number of persons with existing, on-site systems voluntarily connect to the Extension once it is constructed, then Stowe will be able to meet its financial obligations to pay for the Project. If this occurs, then a general tax to raise funds is not necessary.

132. If a sufficient number of persons with existing systems do not connect voluntarily, the Town has two options available to raise necessary funds without resort to a general tax.
133. First, the Selectboard can amend the sewer ordinance to require property owners with existing on-site systems to connect immediately to the Facility and pay the connection charge. If the Select board does not adopt such an amendment, the voters of the Town, on their own initiative, may enact such an amendment pursuant to Section 204(E) of the Town of Stowe Charter.
134. Second, a special assessment district can be established for the Expanded Service Area pursuant to 24 V.S.A. Chapter 87.
135. Operation of the Facility after the Project's completion will cost, on a per gallon basis, approximately the same as, or less than, it presently costs.
136. Over the past 15 years, Stowe was able to accommodate the need for additional municipal services associated with new development without exceeding its ability to pay for such services.
137. RIPPLE and Topnotch have not provided evidence regarding the present cost of specific municipal services such as fire, police, and schools, nor is there evidence of what these costs are projected to be on a post-Project basis. There is no evidence that this Project, or the secondary growth that will occur in the Expanded Service Area, will require tax increases of such magnitude that residents and businesses will be forced to leave Stowe. There is no evidence that this Project, or the secondary growth that will occur in the Expanded Service Area, will cause Stowe to not provide, or significantly reduce, those municipal services which it is legally obligated to provide.

Criteria 9(A) (impact of growth) and 9(H) (costs of scattered development)

138. Stowe does not have a duly adopted capital improvement program.
139. The Extension's construction will allow for growth that would not have otherwise occurred. The Extension will remove a major impediment to growth in the Expanded Service Area.

140. The four factors of market demand, zoning limitations, availability of municipal sewer and water services, and on-site limitations such as the capacity of the soil for septic disposal have an effect on a property's development potential. These four factors can be empirically evaluated. Stowe did not conduct a study of the Expanded Service Area analyzing each of these four factors.
141. The Extension will cause growth in the Expanded Service Area. It is more likely than not that a property within the Expanded Service Area which can be connected to the Extension will be developed for residential or commercial purposes as compared to that property being limited to on-site wastewater disposal, especially if there are soil limitations on the property.
142. Land that is within the Expanded Service Area will increase in value since the availability of sewer service after the Project's completion makes such land more desirable for commercial and residential development.
143. Land in the Expanded Service Area presently devoted to on-site septic disposal and replacement areas will be available for development once the Project is constructed. Some of that land will be developed in a manner which would not have been possible but for the Project.
144. In Stowe, hotel occupancy rates have fluctuated between 48% and 53% between 1992 and 1996 based on a voluntary survey of approximately 15 to 20 of the 60 total hotel accommodations in Stowe that are members of the Stowe Area Association. The responses to the survey were generally by the larger Association member facilities.
145. While there is an information base available to do a survey of hotel accommodations solely located in the Expanded Service Area, such a survey was not done.
146. Resorts such as the Trapp Family Lodge, Stoweflake, Mount Mansfield and Topnotch Resort tend to have higher occupancy rates than other accommodations in Stowe.
147. Stoweflake resort is expanding its operation at its lands along Mountain Road, and Mount Mansfield, the Trapp Family Lodge and the Topnotch Resort are also planning to expand in the near future. These expansion plans are evidence that there are demands for new accommodations in Stowe that are not presently being met.

148. Where sewage disposal is not permitted because of soil limitations, the Extension will make development more likely in the Expanded Service Area.
149. Stowe has not evaluated the need for new municipal services resulting from the growth that will occur due to the Extension and the provision of sewer service in the Expanded Service Area.
150. Stowe has not evaluated to what extent growth will be caused by the Extension within the Expanded Service Area, and has provided no evidence regarding how Stowe will accommodate growth resulting from the provision of sewer service within the Expanded Service Area.
151. Stowe has not analyzed the potential tax revenues that may result directly or indirectly from the growth that will occur due to the provision of sewer service in the Expanded Service Area.
152. An accepted planning principle is that the problems caused by cumulative growth should be addressed before they occur. Stowe has not done this with respect to the future growth resulting from the Extension.
153. Stowe proposes to address growth in two ways. First, growth impacts would be addressed on a case-by-case basis using the Town's existing development regulations, as well as Act 250. Second, the Town proposes to control future development through the ongoing update and administration of its planning and regulatory tools, and through the thoughtful upgrade of its public facilities.
154. As part of municipal planning, it is possible to conduct an analysis of the growth impact attributable to infrastructure improvement projects. There are numerous studies that analyze the impact of sewage treatment infrastructure on growth and development activities.
155. Other towns have provided build-out analyses showing the growth impact of infrastructure improvements. Stowe has not provided any such analyses. There are no improvements in road or public utilities planned as part of the Project.
156. At a minimum, Stowe needs to sell 500,000 gpd to fund the Project. Of the 500,000 gpd required, the Town assumes that 330,000 gpd will come from existing development, 70,000 gpd will come from both existing development and expanded development by the Mount Mansfield Company, and 100,000 gpd will come from new development. At a minimum, 20% of the assumed flow will

come from new development (100,000 gpd/500,000 gpd), and at a maximum, 34% of the assumed flow will come from new development (100,000 gpd + 70,000 gpd/500,000 gpd). The assumed flows can vary, but the Project's financial viability depends upon the sale of 500,000 gpd.

157. To the extent the Project will be "phased" it will consist of the following four steps:
  1. Installation of utilization tank at the Facility (1996);
  2. Extension installed up to the new Mountain Road Village Growth Center;
  3. Construction of the Facility Upgrade to 1 million gpd capacity; and
  4. Extension installed up the remaining way of Mountain Road to Mount Mansfield lands with a spur to Trapp Family Lodge lands.
158. Step 1 (installation of utilization tank) is not part of the Project as it has already been built.
159. For financial reasons, Stowe cannot stop at step 2. Once Stowe commences with step 2 it will likely need to go through step 3.
160. If step 4 (extension of sewer line to Mount Mansfield Company lands and Trapp Family Lodge lands) is not completed, then there will be substantial unused capacity at the 1 million gpd Facility.
161. Step 4 will only be built if there are binding commitments from sufficient users along the Extension, including the Mount Mansfield Company. Stowe has no *binding commitments from any future users of the Extension at this time*, including the Mount Mansfield Company.
162. Stowe's planned growth areas identified in the 1998 Bylaw cannot be developed unless the Extension is constructed.
163. The Extension will not be contiguous to an "existing settlement." The only existing settlement in Stowe is the Stowe Village and Lower Village area. The Extension will extend into areas where there is development, but no existing settlements.
164. The Mountain Road is at the heart of Stowe's resort industry. The eastern terminus of the Mountain Road is in Stowe Village at the junction of the Mountain Road and Vermont Route 100. The western terminus of the Mountain

Road is at the entrance to Smuggler's Notch.

165. The route between Stowe Village and the entrance to Smuggler's Notch contains a varied landscape that can be divided into four distinct segments defined by terrain, vegetation, buildings, land use, and traffic flows. People traveling the road have a sense of these very different segments, as they pass through open fields, shopping centers and wooded hillsides, past parking lots and mountain vistas.
166. The first segment commences at the junction of Route 100 and the Mountain Road and extends to the intersection of the Mountain Road and Weeks Hill Road. This first segment is within sight and walking distance of Stowe Village but is separated from it by the Little River and West Branch floodplain. This wetland area and several steep slopes have limited development to a narrow band along the road, creating a settlement pattern that is much more linear than the compact settlement pattern found in the heart of the Stowe Village. Recent growth has been dominated by large scale buildings and expansive parking areas that are inconsistent with historical patterns.
167. The second segment commences at Weeks Hill Road and extends to the Mountain Road bridge adjacent to the Gables Inn. This second segment has developed in a manner similar to the first segment. However, the narrow terrain and dense conifer forest distinguishes it from its neighboring segments, creating the impression of a connector between the first and third segments. It has a linear development pattern of moderate density, and a distinct automobile oriented landscape.
168. The third segment is comprised of the broad, level fields adjacent to the old Gale Farm, and extends to Cottage Club Road. In this third segment the flat land is more suited to development than any other area along the Mountain Road. The broad fields and existing development pattern are well suited to the type of in-fill development that would transform the existing low density sprawl into more of a traditional village settlement.
169. The fourth segment runs from between Cottage Club Road up to the entrance to Smuggler's Notch. This segment is known as the "Upper Mountain Road." It is physically more constricted and less developed than lower portions of the road.
170. The Upper Mountain Road still has much of the rural character that has been lost elsewhere. Most commercial development has been limited to older lodges serving skiers at Mt. Mansfield. This section of road has avoided the patterns of

development that have altered the landscape below Cottage Club Road. Views of Mt. Mansfield dominate this section of road. In many places, tight groups of farm buildings set before a Mountain backdrop create a classic Stowe scene, which together with the open feeling of the road, offer visitors a quiet alternative to more heavily congested parts of town. Unlike the lower Mountain Road, which has lost many adjacent meadows to development, the landscape in this area still has open fields and scenic views.

171. The 1998 Bylaw at Section 2, Definitions, defines "Strip Development" as follows:

Strip Development: A linear development pattern along well-traveled roads and highways lacking depth, as measured from the highway; uses characterized by a high dependence on the automobile resulting in a succession of parking lots and curb cuts; a predominance of commercial land uses (rather than residences, especially single family homes); a preponderance of single story structures and limited pedestrian accessibility or over-all integration with neighboring properties.

172. The development pattern within the first, second, and third segments of the Mountain Road constitutes strip development as that term is commonly understood and as defined by the 1998 Bylaw.
173. The 1998 Bylaw's definition of strip development describes the existing land use patterns along the Lower Mountain Road that extends from the Stowe Village area to the turn-off to the Trapp Family Lodge. There is a linear development pattern with a predominance of commercial uses with many separate parking lots and curb cuts, limited pedestrian access, and little over-all integration with neighboring properties.
174. Stowe has not analyzed the cost of public service and facilities caused directly or indirectly by the Project.
175. Stowe has not analyzed the tax revenue and the public benefits of the Project or the provision of needed and balanced housing accessible to existing or planned employment centers.
176. Stowe asserts that the 1998 Bylaw will eliminate strip development along the Mountain Road because it designates growth centers where dense development can take place, and allows for the transfer of development rights from other areas

of the Mountain Road to the growth centers.

177. To achieve the purpose of preserving "important resource lands and the rural character of specific zoning districts, and to encourage concentrated development in specific growth nodes along the Mountain Road," the 1998 Bylaw includes a section on transferable development rights ("TDR"). This would allow development rights to be transferred from certain areas along the Mountain Road where Stowe would like to discourage dense development to designated receiving areas where Stowe would like to encourage dense development.
178. Under the 1998 Bylaw, the Mountain Road is zoned by district, moving from Stowe Village westerly out on the Mountain Road, as follows: Highway Tourist, Mountain Road Village, Upper Mountain Road, Mountain Road Crossroads, and then again Upper Mountain Road. The 1998 Bylaw designates the Highway Tourist, Mountain Road Village, and Mountain Road Crossroads districts as receiving zones for development rights.
179. The Highway Tourist District includes the Lower Mountain Road, which extends from the Gables Inn to Weeks Hill Road. This district designation has the potential to result in increased strip development for about one mile along the Mountain Road. It also has the potential to reduce the amount of dense development that would locate in the proposed growth centers.
180. The Mountain Road Village District is between the Highway Tourist District and the first segment of the Upper Mountain Road District. The Mountain Road Village District is intended to serve as a commercial village area. The Mountain Road Crossroads District is between the first and second segments of the Upper Mountain Road District. The Mountain Road Crossroads District is intended to serve as a smaller settlement area in comparison to the Mountain Road Village District with concentrated mixed-uses.
181. The 1998 Bylaw does not reduce the amount of development that can take place on the Upper Mountain Road, it only restricts the type of development. The potential for strip development along the Upper Mountain Road still exists.
182. Many types of development are still allowed as conditional uses along the Upper Mountain Road in the Mountain Road Village, Mountain Road Crossroads, and Upper Mountain Road districts. These include hotels, tourist lodges, motels, private clubs, commercial riding stables, schools, churches, multiple family dwellings, and retail sales and restaurants that are ancillary to other conditional



uses.

183. The 1998 Bylaw, at § 9.3, Conditional Land Uses Permitted in Mountain Road Village and Mountain Road Crossroads, provides at subsection (15):

Any use which the Board of Adjustment finds to be similar to a use permitted under this Section in its effect upon the character of the vicinity, traffic patterns and flows and in its effect on the value of neighboring properties.

184. Section 9.3(15) vests a great deal of discretion in the Board of Adjustment as to what is a conditional use in the Mountain Road Village and Mountain Road Crossroads districts.
185. The 1998 Bylaw's success in promoting a village style development pattern depends, in large part, upon the success of the 1998 Bylaw's TDR provisions. The TDR provisions were adopted on February 9, 1998. There is no evidence that TDRs have or will occur to promote a village style development pattern.
186. Property owners and developers may be reluctant to use TDRs because of the additional cost, complication and regulatory burden which their use involves.
187. In Stowe, the use of the TDR program will be limited by the fact that the program is voluntary and nearly all of the uses allowed today in the Highway Tourist District will continue to be allowed in the new Upper Mountain Road District at comparable densities. The only significant change in the Upper Mountain Road District is the prohibition of tourist oriented and neighborhood stores. Hotels, motels, restaurants, and retail sales ancillary to another use are still allowed as conditional uses. Property owners may have little incentive to sell development rights if these development options are still available to them.

Criterion 9(K) (public investments)

188. The Upgrade will occur at the site of the Facility. The Extension is to be built along or adjacent to the Mountain Road, or portions of the Stowe owned recreation path that is located along Mountain Road and the West Branch of the Little River. The Facility does not discharge into the West Branch.

189. Stowe has retained the services of professional engineers for the Project's design. The Project will not cause any interruptions in the Facility's operation. The Extension will be buried underground.

Criterion 10 (Local Plan)

190. On June 19, 1990, Stowe adopted a municipal plan for the Town of Stowe ("1990 Plan"). On March 7, 1995, the Town of Stowe re-adopted the 1990 Plan, subject to an addendum to the 1990 Plan ("1995 Addendum"). Collectively, the 1990 Plan and the 1995 Addendum constitute the Town of Stowe Town Plan ("Town Plan").
191. Town Plan Chapter Four, Community Facilities and Services, provides as follows:

Community facilities are all those facilities that are publicly owned and maintained structures, land and equipment as well as any services related to them and any facilities that are operated by private enterprise for the benefit of the whole community.

Goal:

To provide adequate community facilities and services to the citizens and visitors of Stowe.

Objectives:

1. Growth and Development should not exceed the capacities of local facilities and services.
2. Any expansion in infrastructure shall be made so as to support development in the Village and other designated growth areas and to discourage strip development or sprawl.
3. Infrastructure expansion should take place with a minimum impact on the aesthetic quality of the community. Utility service lines should be buried wherever feasible.

Recommendations:

\* \* \*

4. Sewer System:
  - a. A study of failing on-site septic systems needs to be conducted to identify their locations, the on-site ability to correct the problem

and their off-site disposal needs.

- b. Identifying future areas of concentrated development is necessary for long range planning regarding plant expansion.
- c. Efforts should continue to minimize infiltration and inflow.
- d. Future options for land application of sludge should be pursued.
- e. Expansion plans for the municipal sewer system should be developed.
- f. Identify and map all old lines and all remaining combined systems.
- g. Phasing of sewer services should be coordinated with the allocation of other facilities such as water, electricity, roads and public services.
- i.(sic) New sewage treatment technologies should be investigated.

\* \* \*

#### 4. SEWAGE TREATMENT PLANT

\* \* \*

##### Municipal Sewer Expansion Issues

There are many planning issues related to the potential future expansion of the [Facility]. Many of these issues, particularly those related to the Land Use and Growth Management Policies, apply to all facility expansion considerations. Projected population for the [Stowe] Village was determined by the Vermont Population Projections 1985-2000, Department of Health (see Population Appendix). This study assumes that a major amount of the growth occurring in Stowe will continue to be outside the [Stowe] Village area. By the year 2005, there would be a 27.9% increase in equivalent users (635) and a projected water demand of 156,083 gpd. The study notes that in addition to population growth, major new developments would create additional water demands that would require additional analysis of the impact on the water/sewer system.

Provided that additional and adequate water service and supply is provided to existing users, the study identifies two areas that could be considered for expanded service: a) along the existing line on Rte. 108 and b) an extension of distribution lines south of the [Stowe] Village along Rte 100 into Lower Village. This includes the possibility of the Lower Village Water system being incorporated into the [Stowe] Village Water and Light System.

A study of the assimilative capacity of the Little River (1985) concluded that a 1 million gpd plant could operate without adversely affecting the Little River. There needs to be a resolution between the town and the State regarding the maximum permitted size of an expanded plant. Such an expansion must weigh available alternatives and determine sewer expansion policies as well as establishing land use and growth management controls.

The expansion of off-site sewer service can also spur growth that is not

consistent with the long range planning goals of the community. It is necessary to delineate a facility service area before planning an expansion to the sewer treatment facility. Consideration should be given to identifying growth areas that could be targeted for sewer service and other support facilities (water, electricity and roads). Coupled with other land use practices, available off-site sewage could assist in containing "sprawl" development and promoting "infill"--the building on vacant land between buildings--in existing or proposed growth centers. Sewer allocation could also promote specific land use activity in a given area and assist with meeting stated community planning goals, such as promoting affordable housing and economic diversification.

Phasing of sewer service, when allocation is available, enables the community to monitor the rate of development in a given area. It should be coordinated with the allocation of other facilities such as water, electricity, roads and public services.

192. Town Plan Chapter Nine, Transportation, provides as follows:

Goal:

To improve the quality of Stowe's transportation and road systems in order to promote safety, alleviate congestion and to maintain the scenic quality of roads wherever possible.

Objectives:

1. Reduce the amount of congestion in the [Stowe] Village.
2. Alleviate the Rte. 108/Rte. 100 tie-up.

193. The Town Plan does not require or call for the Project's construction.
194. The Project is not being built in phases. What has been characterized as "phases" is really just a construction schedule: construct the Extension from the Village into Area 3 and use existing Facility capacity; construct the Upgrade; and then construct the Extension all the way up the Mountain Road.
195. Phasing as the term is used in the Town Plan and as it is normally used means to construct sections of infrastructure as needed and as other facilities are made available to serve the infrastructure. As stated in the Town Plan, this "enables the community to monitor the rate of development in a given area," and then to evaluate whether additional infrastructure is needed or can be accommodated.
196. Stowe has not coordinated the Project's construction with the allocation of other

facilities such as water, electricity, roads and public services. Stowe is not planning any improvements to its infrastructure to accommodate the additional growth that will result from the Project.

197. The 1998 Bylaw identifies areas it designates as "growth centers," and claims that the Project is necessary to accommodate the growth it hopes will occur in these areas. However, Stowe has made no provisions for handling the growth that it hopes for.
198. Stowe has not identified how the additional traffic will be accommodated on the roads in the areas that are already overly congested.
199. Stowe has also not demonstrated that the Extension is necessary to accommodate the density it hopes will occur in the growth centers. A detailed evaluation of the soils in the area of the growth centers has not been performed. It is possible that sufficient sewage capacity could be achieved through inground systems, especially if combined with pretreatment.
200. Inflow-infiltration is the water that leaks into sewer pipes that is not effluent. It can be ground water, surface water, or other non-effluent sources of water. It is unanticipated water which must be treated, reducing the ability of a WWTF to handle the design sanitary waste flow. The Facility is presently experiencing inflow-infiltration, and no reduction of inflow-infiltration has been considered which would increase the Facility's current capacity for effluent.

#### Criterion 10 (Regional Plan)

201. *Stowe is a member of the Lamoille Planning Commission. The Lamoille County Planning Commission has adopted a regional plan for Lamoille County, Vermont, dated December 17, 1991 ("1991 Plan").*
202. The Project is subject to the 1991 Plan. The 1991 Plan sets forth policies regarding water, economic development, housing, regional utilities and facilities, regional recreation and tourism, and land use and development.
203. The 1991 Plan (i) encourages municipalities to better consider water quality issues in local decision making; (ii) encourages community investments such as municipal services that will aid in attracting economic development opportunities;

(iii) encourages residential uses in village centers; (iv) encourages planning efforts for community facilities and services that address the needs of the community's current and future residents; (v) encourages the development of a viable and sustainable travel industry in the region; and (vi) encourages the traditional settlement patterns of Lamoille County characterized by villages interspersed within working agricultural and forest lands in a way that supports the natural resource based economy of the region while accommodating continued growth. The 1991 Plan does not prohibit the Project.

## V. CONCLUSIONS OF LAW

### 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).

Stowe has the burden of production with respect to all criteria on appeal. Stowe also bears the burden of persuasion with respect to Criteria 1(B), 1(E), 9(H), 9(K), and 10.

The appellants to this appeal, RIPPLE and Topnotch, bear the burden of persuasion with respect to Criteria 5, 7, and 9(A).

### B. Town of Stowe's Motion to Supplement

Stowe's February 18, 1998 Motion to Supplement seeks permission for the admission into the record of Stowe Exhibits 82, 83, and 84. Ripple objects to the Motion to Supplement with respect to Exhibits 82 and 83.

On February 11, 1998, after two lengthy hearing days during which parties were allowed to present live surrebuttal testimony, the Board recessed this proceeding pending receipt of the parties' supplemental proposed findings of fact, conclusions of law, and order.

In addition, the Board requested that what has now been filed as Exhibit 84 be

filed with the Board. See EBR 20(A). No party objected to the Board's request. However, the Board did not request additional testimony from Mr. Binkerd or Mr. McDonald.

Under 10 V.S.A. § 6085(f), a hearing shall not be closed until the Board provides an opportunity to all parties to respond to the last evidence submitted. If the Board granted the Motion to Supplement, then it would be obligated to reconvene the hearing and allow for further cross examination and testimony.

Under EBR 31(B), an applicant for a permit which has been denied by the Board may, within six months of the date of that decision, apply to the appropriate district commission for reconsideration of the application. As part of this process, the applicant may present new evidence.

Since the Board's decision is to deny application #100035-9-EB and void Land Use Permit #100035-9, the more expedient measure is for Stowe to present the evidence set forth in exhibits 82 and 83 to the Commission as part of the reconsideration process allowed for under EBR 31(B).

Accordingly, the Board admits exhibit 84, and denies the Motion to Supplement with respect to Exhibits 82 and 83.<sup>1</sup>

#### C. Assessment of Secondary Impacts

On October 29, 1997, the Board issued the Order in which it declined to rule with respect to whether the cumulative impacts from secondary development should be reviewed in the context of this application concerning the effect on the West Branch of the Little River, the Little River, and the Waterbury Reservoir under Criteria 1(B) and 1(E), and on municipal services, impact of growth, scattered development, public investments, and the town and regional plans under Criteria 5, 7, 9(A), 9(H), 9(K), and 10.

Instead, the Order advised (a) that parties could provide evidence with respect to all of the Project's impacts, including potential or actual cumulative impacts from secondary development, under the appealed criteria as each party deemed appropriate; (b) that if a party could not provide evidence with respect to potential or actual cumulative

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<sup>1</sup>The Board will add Exhibits 82, 83, and 84 to the Stowe Exhibit List filed on January 14, 1998. Exhibit 84 only will be marked as admitted.

impacts from secondary development, then the party could provide evidence as to why not; (c) that, in ruling on the appealed criteria, the Board would consider the evidence before it subject to the burden of proof allocations made by 10 V.S.A. § 6088, and consistent with the Board's decision in Re: Pratt's Propane, #3R0486-EB, Findings of Fact, Conclusions of Law and Order at 4-6 (Jan. 27, 1987); and (d) that, in issuing its decision on this appeal, the Board would consider the Project's impacts based on the evidence before it subject to evidentiary objections. Order at ¶ 3.

The Order ensured that the parties were given an adequate opportunity to prepare and respond to the issues to be adjudicated without foreclosing review of potential or actual cumulative impacts from secondary development. See In re Vermont Health Service Corporation, 155 Vt. 457, 461 (1990).

The Order's rationale is two-fold. First, the Board should not rule as a matter of law regarding the relevancy of evidence under a criterion prior to receipt of the evidence. Second, the Board should not rule that its authority to adjudicate issues under a criterion is limited, as a matter of law, by the criterion's statutory language before the Board has had the opportunity to even consider the issues based on the relevant evidence.

Under 10 V.S.A. § 6086(a), the Board, before granting a permit, must make affirmative findings with respect to the ten Act 250 criteria based on the evidence. Under 10 V.S.A. § 6089, the Board must hold a de novo hearing on all findings requested by any party. The Board's findings, if supported by substantial evidence on the record, shall be conclusive. 10 V.S.A. § 6089(c). However, the Board is required to follow the procedures set out in 3 V.S.A. § 809 before ruling on a matter. 10 V.S.A. § 6089; 3 V.S.A. § 814(a). This statute gives the parties the right to present evidence and argument on all the issues involved subject to objection under 3 V.S.A. § 810. In re Greg Gallagher, 150 Vt. 50, 52 (1988).

A ruling that, as a matter of law, evidence that has not yet been offered is not relevant to a given criterion could impermissibly interfere with a party's right to offer what it deems to be relevant evidence. Such a ruling could also impermissibly interfere with the Board's prerogative to exercise its authority under EBR 21(B) regarding a project's effect under the criterion in question. Therefore, absent a compelling reason to do so, the Board will not limit what evidence may be offered, or what issues may be decided under a criterion, relative to a project on appeal prior to the convening of an evidentiary hearing.



D. Criterion 1(B) (waste disposal)

Stowe has not relied on DP 3-1232 to establish a rebuttable presumption under Criterion 1(B) pursuant to EBR 19. Therefore, Stowe bears both the burden of production and persuasion with respect to Criterion 1(B). See 10 V.S.A. §§ 6086(d) and 6088(a); EBR 19(F); and Re: Herbert and Patricia Clark, #1R0785-EB, Findings of Fact, Conclusions of Law, and Order at 22 (April 3, 1997).

Under 10 V.S.A. § 6086(a)(1)(B), a permit will be granted whenever it is demonstrated by the applicant that, in addition to all other applicable criteria, the development or subdivision will meet any applicable health and environmental conservation department regulations regarding the disposal of wastes, and will not involve the injection of waste materials or any harmful or toxic substances into ground water or wells.

The Board is required by Criterion 1(B) to determine which regulations are pertinent with respect to a project and "to evaluate conformance with the requirements of health and water resources [now environmental conservation] department regulations, even though those agencies may have previously concluded that a project conforms with said regulations. . . . This legislative scheme contemplates an independent analysis and application of other agencies' regulations by this Board . . . ." Re: Hawk Mountain Corporation and Our World Sewer Association, Inc., #3W0347-EB, Findings of Fact, Conclusions of Law, and Order at 16 (Aug. 21, 1985), aff'd, In re Hawk Mountain, 149 Vt. 179 (1988).

The WPC Act and the VWQS are applicable to the Project. Id; Re: C.V. I andfill, Inc. and John F. Chapple, Application #5W1150-WFP (Unlined Landfill Facility), Findings of Fact, Conclusions of Law, and Order (Oct. 15, 1996); Re: Upper Valley Regional Landfill, Application #3R0609-EB, Findings of Fact, Conclusions of Law, and Order (Revised) (Nov. 12, 1991).

The VWQS consist of three primary components, all of which are required by federal law.<sup>2</sup> These include: designated uses, criteria established to support those uses,

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<sup>2</sup>Vermont's regulation of water pollution is delegated from the federal government by the Clean Water Act. The Clean Water Act identifies what states need to do in order to be granted such delegation. Section 303 requires each state to institute comprehensive water quality standards establishing water quality goals for all intrastate waters. Section 303 states that a state water quality standard "shall consist of the designated uses of the

and an anti-degradation policy. The anti-degradation policy ensures, among other things, that any limited reduction in the quality of waters which are determined to be "high quality waters" be allowed only when it is shown that: (a) the adverse economic or social impacts on the people of the state specifically resulting from the maintenance of the higher quality of the waters are substantial and widespread; and (b) such adverse impacts are not warranted by the economic, social and other benefits to the people of the state resulting from the maintenance of such a higher level of water quality. In no case, however, may the reduction of the quality of high quality waters be allowed if such reduction would fail to protect all existing uses or to comply with applicable water quality criteria. VWQS §1-03(C).

Although criteria are specifically established to support the designated uses, it is settled law that the requirement under the VWQS is to meet both the applicable criteria, as well as the designated uses. PUD No. 1 of Jefferson County and City of Tacoma v. Washington Department of Ecology, 114 S. Ct. 1900, 128 L.Ed. 716 (1994).

Prior to the expansion of an existing WMZ, in order to accommodate an increased discharge, the secretary of ANR and, in this case, the Board, is required to determine that such expansion will not: (i) interfere with those uses which have actually occurred on or after November 28, 1975, in or on a water body, whether or not the uses are included in the standard for classification of the particular body; or (ii) be inconsistent with the anti-degradation policy in the VWQS. 10 V.S.A. § 1252(d)(7)(C)&(D).

Under the VWQS, the Secretary of ANR and, in this case, the Board, shall insure that, in addition to complying with all other applicable provisions of the WPC Act and the VWQS, any WMZ meets the following criteria:

1. It shall be the minimum length necessary to accommodate the authorized discharge.
2. It shall be consistent with the Anti-Degradation Policy (Section 1-03) of VWQS, including but not limited to the provisions of that policy

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navigable waters involved and the water quality criteria for such waters based upon such uses." 33 U.S.C. § 1313(c)(2)(A). In setting standards, the State must comply with the following broad requirements: "Such standards shall be such as to protect the public health or welfare, enhance the quality of water and serve the purpose of this chapter. Such standards shall be established taking into consideration their use and value for public water supplies, . . . recreational [and other] purposes." Id.

pertaining to the maintenance and protection of all existing and beneficial values and uses.

3. It shall not create a significantly increased risk to public health within the zone.
4. It will be located and managed so as to not result in more than a negligible increased risk to public health adjacent to or downstream of the waste management zone.
5. It will not constitute a barrier to the passage or migration of fish or result in an undue adverse effect on fish, aquatic biota or wildlife.

VWQS § 2-06B.

Based on the findings of fact, the Board is not persuaded that the Proposed Discharge complies with subsections 2 and 3 of VWQS § 2-06B.

1. Existing Uses.

Under 10 V.S.A. § 1252 and VWQS § 1-03(b), before a new discharge into a Class B river is allowed, an applicant must demonstrate that the proposed discharge will not interfere with existing recreational uses in the receiving water.

Under VWQS § 1-01(B)(16), "existing use" is defined as "those uses which have actually occurred on or after November 28, 1975, in or on a water body whether or not the uses are included in the standard for classification of the particular water body."

Under VWQS § 1-03(B)(1), existing uses shall be protected and maintained. If there are existing uses that may be impacted or degraded from a direct discharge, VWQS § 1-03(B)(2) requires a determination that the proposed activity will not impair the viability of the existing population of aquatic biota, fish or wildlife, and would not result in a significant degradation of the existing use of the water body for recreation, fishing, water supply, or commercial enterprises that depend on the preservation of the higher level of water quality.

Based on the findings of fact, there are several types of existing recreational uses in the 1.7 mile extended portion of the Proposed Discharge's 3.1 mile WMZ. The Proposed Discharge will interfere with these existing uses.

When ANR issued DP 3-1232, it was not aware of these existing contact recreational uses which were and are present at the Gold Brook Campground and Moscow bridge swimming hole. The testimony by Stowe's professional engineer to this Board is that it applied a "no significant use" standard when evaluating the Proposed Discharge's effect on existing uses notwithstanding that the VWQS do not contain such a standard. While Stowe's consultant did conduct a survey of existing uses in the Little River, the majority of the survey was conducted on the West Branch, upstream from the Facility's outfall. The uses of the West Branch are not relevant to an investigation of whether the Proposed Discharge would interfere with existing uses of the Little River downstream from the Facility's outfall into the Little River. The Board is persuaded by this evidence alone that subsection 2 of VWQS § 2-06B has not been complied with.

In addition, the Board is also persuaded that subsection 2 of VWQS § 2-06B has not been complied with due to the following concerns relating to the potential for increased risk to contact recreational uses: there is no disclosure or alarm system in place for the Facility in the event of a serious failure at the Facility; Stowe has not tested the Facility's existing influent or effluent for viruses not indicated by E-coli; and there is no virus testing planned for the Facility after the Project goes into operation.

The evidence is that swimmers and other persons engaging in non-swimming activities such as kayaking, tubing and wading inadvertently ingest water which could include viruses not indicated by an E-coli test. Viruses not indicated by an E-coli test include aseptic meningitis and myocarditis. Persons coming in contact with the water within the WMZ and downstream therefrom would be subjected to a significantly increased risk to public health within the zone. VWQS § 2-06B.4. Thus, the Project would result in a significant degradation of the existing recreational uses.

Finally, for two independent reasons the Board cannot shorten the Proposed Discharge's 3.1 mile WMZ back down to the Existing Discharge's 1.4 mile WMZ.

First, the Board cannot even consider the Project under Criterion 1(B) with respect to a 1.4 mile WMZ since the Project as reviewed and authorized by the Commission used a 3.1 mile WMZ. In the context of a permit appeal brought pursuant to 10 V.S.A. § 6089 and EBR 40, the Board's appellate de novo authority is limited to "the scope of the proceedings below. It has no jurisdiction to decide issues regarding criteria that were not before the district commission and not ruled upon by it." In re Taft Corners Associates, 160 Vt. 583, 591 (1993)(citing to In re Vermont Gas Systems, 150 Vt. 34, 40 (1998)). Initial review of all projects is a task specifically assigned to the district commissions. In re Juster Associates, 136 Vt. 577, 581 (1978). Thus, even if the

evidence in this appeal justified the use of a shortened WMZ, the Board would have to remand this appeal to the Commission.

Second, the Board concludes that a shortened WMZ cannot be authorized under Criterion 1(B) since there is insufficient evidence from which to determine that appropriate waste management alternatives are available to allow for a shortened WMZ which does not include the portions of the Little River where swimming and contact recreation take place as an existing use. This includes the Gold Brook Campground and the Moscow bridge swimming hole. Even if the first and second design concepts for shortening a WMZ are effective in this case, the third design concept is not universally accepted as a technique for pathogen removal. This Board will not shorten the Project's WMZ while authorizing a 300% increase in the annual discharge volume unless it is persuaded that all three design concepts will effectively protect the public. It may very well be that Stowe will be able to demonstrate that a shortened WMZ is technically feasible. However, Stowe has provided such documentation only to ANR and not this Board, and the evidence that is before this Board does not warrant a shortened WMZ.

Accordingly, the Board is further persuaded that the Project does not comply with subsection 2 of VWQS § 2-06B.

2. Increased risk to public health within the zone.

For the reasons stated with respect to existing uses, the Board is not persuaded that the Proposed Discharge complies with subsection 3 of VWQS § 2-06B.

3. Subsection 2.b of VWQS § 1-03C.

VWQS § 1-03C.2.b states:

Any decision to allow a limited reduction in high quality waters shall be consistent with the requirement:

- b. That degree of water quality necessary to maintain and protect all existing uses as well as all applicable water quality criteria of the receiving waters shall be maintained.

The Little River is a Class B river that flows into the Waterbury Reservoir. The West Branch, which flows into the Little River, is also a Class B river. Both the West Branch and the Little River are high quality waters. Swimming is a designated use in Class B waters.

Stowe has not shown that the degree of water quality necessary to maintain and protect all existing uses as well as all water quality criteria of the receiving waters will be maintained if the Project goes into operation.

The Project violates subsection 2.b of VWQS § 1.03C because it will not maintain the water quality necessary to maintain existing uses such as swimming, even if the Proposed Discharge meets the numerical criteria.

4. VWQS § 1-04A

Under subsection 2 of VWQS § 1-04A, a new discharge of waste may be allowed only when there is no alternative method of, or location for, waste disposal that would have a lesser impact on water quality including the quality of groundwater, or if there is such an alternative method or location, it would be clearly unreasonable to require its use. The Board is not persuaded that Stowe has demonstrated that there is no alternative method for waste disposal.

Fundamental to Stowe's choice of a 1 million gpd Facility was its determination that there were chronic failures of existing, commercial in-ground septic systems along Mountain Road that could adversely affect the West Branch's water quality. However, the evidence does not support the conclusion that there have been or are chronic failures.

Chronic failures means repeat failures. Yet, Stowe's engineering consultant has no personal knowledge of on-going contamination problems in the Expanded Service Area, nor is there evidence that the West Branch is being contaminated by septic system failures. Stowe has not conducted a sanitary survey of the Expanded Service Area, and Stowe has no direct evidence that the West Branch is being contaminated by in-ground septic system failures. Moreover, if there was a high rate of septic system failures in the Expanded Service Area, ANR would know this and would then conduct a sanitary survey of the Expanded Service Area. Yet, there is no evidence that Stowe's septic system failure rate is greater than the state-wide average of 3-4% of all systems. The Board is not persuaded that there are wide-spread, chronic system failures in the Expanded Service Area.

Stowe failed to generally consider other possible alternatives to the Project. Principally, Stowe has not performed a sanitary survey or evaluated the capacity of the lands in the Expanded Service Area to accommodate on-site septic systems. Without such a survey, the Board is persuaded that the Proposed Discharge does not comply with subsection 2 of VWQS § 1-04A.

## 5. Summary

Based on the findings of fact, it is clear that when ANR issued DP 3-1232, it had incomplete and inaccurate information regarding the nature and extent of the existing uses in the extended portion of the Proposed Discharge's WMZ. Under 10 V.S.A. § 1267, the Secretary of ANR may revoke, modify or suspend any permit issued pursuant to the WPC Act upon finding that the permit holder submitted inaccurate information in the application for a discharge permit. The secretary of ANR has not invoked this authority notwithstanding ANR's admission that when it issued DP 3-1232 it had incomplete and inaccurate information regarding the nature and extent of the existing uses in the extended portion of the Proposed Discharge's WMZ, and the admission by Stowe's engineering consultant that his analysis in this proceeding makes use of a standard which is not contained in the VWQS.

Instead, ANR's proposed conclusion of law is that this Board should make an affirmative finding under Criterion 1(B) based on a permit condition that the Project be designed and operated such that there is no net increase in risk to the health of swimmers at the Gold Brook Campground and Moscow bridge swimming hole, and that Stowe be required to submit final plans to the Commission and ANR which demonstrate that the Project as designed will achieve this standard. This is an impermissible condition subsequent which cannot substitute for the affirmative finding required under 10 V.S.A. § 6086(a)(1)(B).

Before the Board may issue a permit, it must make affirmative findings with regard to the criteria on appeal. 10 V.S.A. § 6086(a). See Re: Hand Motors and East Dorset Partnership, #8B0444-6-EB, Findings of Fact, Conclusions of Law, and Order at 6 (Aug. 19, 1996). Evidence of compliance must be provided prior to the issuance of a permit. See Re: Berlin Associates, #5W0584-9-EB, Memorandum of Decision at 6 (April 24, 1990). ANR's proposed condition undermines the principle that the purpose of the ANR discharge and Act 250 permitting processes is to determine *before* the Project is approved that the Project will not have an adverse effect on the public's health and safety.

In addition, ANR's proposed condition could lead to further hearings and appeals with respect to the exact issue which is now before the Board. Even if the Commission and ANR determined, based on Stowe's submission of a final plan, that the Project meets a "no net increase in risk to health" standard, such determinations could be appealed to this Board. A second appeal would render this appeal meaningless and a waste of substantial administrative resources, not to mention the costs borne by all of the parties.

Moreover, the remaining serious implication with respect to ANR's proposed

condition is that it may well soon be determined that the Proposed Discharge's WMZ cannot extend beyond the Existing Discharge's 1.4 mile WMZ. DP 3-1232 expires in December, 1998, and a renewal application must be filed by June. Even if this Board issued a permit for the Project using a 3.1 mile WMZ, there exists the real possibility that the Project will need to solely use the Existing Discharge's 1.4 mile WMZ based upon ANR's knowledge of existing uses at the Gold Brook Campground and the Moscow bridge. If ANR shortens the Project's WMZ, then this change could constitute a material or substantial change under EBR 34 to an Act 250 permit that authorizes a 3.1 mile WMZ. Under EBR 34, a material or substantial change requires a permit amendment. In which case, further hearings and appeals become a possibility such that this appeal could be rendered meaningless within six to seven months after its conclusion.

In summary, the Project does not comply with § 1252(d)(7)(C) and (D) of the WPC Act, subsections 2 and 3 of VWQS § 2-06B, subsection 2.b of VWQS § 1-03C, and subsection 2 of VWQS § 1-04A. Since the WPC Act and the VWQS are applicable under Criterion 1(B), the Board cannot reach an affirmative finding with respect to Criterion 1(B). Accordingly, the Project is denied under 10 V.S.A. § 6086(a)(1)(B).

E. Criterion 1(E) (streams)

Under 10 V.S.A. § 6086(a)(1)(B), a permit will be granted whenever it is demonstrated by the applicant that, in addition to all other applicable criteria, 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. Stowe has the burden of proof with respect to Criterion 1(E).

Based on the findings of fact, the Board concludes that the Upgrade portion of the Project complies with Criterion 1(E). However, a substantial area of concern is not with the Upgrade, but rather, with the NPS pollution to the West Branch of the Little River.

The Board ruled in a prior decision that the fact that a "river has already been degraded does not justify further degradation; if anything, it justifies a greater degree of protection." Re: Okemo Mountain, Inc., Application #2S0351-12A-EB, Findings of Fact, Conclusions of Law, and Order (Revised) at 14 (July 23, 1992). Similarly, the Vermont Supreme Court, in In re Pilgrim Partnership, 153 Vt. 594, 597 (1990), upheld the Board's conclusion that a project did not comply with Criterion 5 because it would exacerbate an already existing traffic hazard.

The Project will enable future growth which will cause NPS run-off to the West



Branch. The West Branch is already impaired by NPS pollution. Any increase in the amount of NPS run-off to the West Branch will exacerbate the existing impairment. The West Branch's already impaired water quality will be made worse following the Facility's operation at 1 million gpd due to increased development within the Expanded Service Area.

The Board is persuaded that the NPS pollution from the expected development in the area where the West Branch flows through the Expanded Service Area will result in a deterioration of the natural condition of the West Branch. However, the Board must consider whether the Project will, *whenever feasible*, maintain the natural condition of the West Branch River. In this regard, Stowe has the burden of proof to demonstrate that it has considered "all reasonable alternatives" which would allow the West Branch to remain in its natural condition. Okemo at 14. The Board is not persuaded that Stowe has satisfied its burden of proof.

First, as the Board held under Criterion 1(B), there is no proof of chronic septic system failures within the Expanded Service Area. Stowe has not performed a sanitary survey or evaluated the capacity of the lands in the Expanded Service Area to accommodate on-site septic systems. To meet its burden of proof under Criterion 1(E), Stowe must perform such a survey and evaluation.

Second, the evidence is that approximately 33% of the 1 million gpd capacity has been reserved for sewage flows from new development, but Stowe has not performed a complete build-out analysis for potential growth in the Expanded Service Area based upon the 1998 Bylaw. Such a build-out analysis would allow for further analysis of how much NPS pollution will be generated by the secondary growth that will result from the Extension's construction into the Expanded Service Area. To meet its burden of proof under Criterion 1(E), Stowe must perform such an analysis.

Third, even after the Project's completion, the Facility will not capture or treat storm water runoff which will be generated from future development within the Expanded Service Area. To meet its burden of proof under Criterion 1(E), Stowe must persuade the Board that the collection of such storm water runoff is not a reasonable alternative.

Fourth, while it is difficult and somewhat imprecise to estimate cumulative increases or decreases of NPS pollution since the size, type and position of development can all influence predicted outcomes, sophisticated computer-assisted storm water simulation modeling can predict incremental pollutant loadings and storm water runoff.

This type of watershed analysis for the West Branch has not been undertaken. To meet its burden of proof under Criterion 1(E), Stowe must undertake such an analysis.

Finally, Stowe has not persuaded the Board that the standards and restrictions identified in finding of fact #113 are not reasonable given the evidence that these standards would minimize the potential for increased NPS pollution in the Expanded Service Area. The evidence in opposition to the requirements in finding of fact #113 is that they would provide a "disincentive" for existing businesses to switch to the Project. However, Stowe has the authority to mandate that existing businesses hook-on to the Project, although Stowe has publicly indicated that at this time it will not exercise that authority. The Board wants to make clear that it is not requiring Stowe to adopt the standards and restriction identified in finding of fact #113. Rather, based on the evidence, Stowe has not persuaded the Board that such standards and restrictions are not a reasonable alternative to building the Project as proposed.

Based on the preceding, the Board concludes that Stowe has not met its burden of proof under Criterion 1(E). Accordingly, the Project is denied under Criterion 1(E).<sup>3</sup>

F. Criterion 5 (traffic safety and congestion)

Under 10 V.S.A. § 6086(a)(5), before granting a permit, the Board shall find that the development will not cause unreasonable congestion or unsafe conditions with respect to use of the highways. The Board may not deny a permit solely pursuant to Criterion 5. See 10 V.S.A. § 6087(b). However, reasonable conditions may be imposed under Criterion 5 to alleviate the burdens created by a project.

The Project does not require the construction of any additional driveways or road intersections. The number of vehicles accessing the Facility will increase only slightly as the Facility attains full capacity at 1 million gpd.

The Extension's construction up the Mountain Road will result in limited, temporary traffic delays. To address these, control of work specifications, including

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<sup>3</sup>In reaching this conclusion, the Board specifically rejects as unreasonable under In re Denio, 158 Vt. 230, 240 (1992), a permit condition which incorporates the 1998 Bylaw. In addition, the Board believes that ANR's proposed permit condition that Stowe submit a plan to the Commission stating how Stowe will comply with ANR's proposed performance standards constitutes a condition subsequent which cannot substitute for an affirmative finding under Criterion 1(E).

traffic control measures to be implemented during construction, have been formulated and will be complied with during the Extension's construction.

Under the traffic control measures, the Project's construction shall be scheduled and excavated material shall be placed so that vehicular and pedestrian traffic may be maintained at all times. Traffic shall be protected by barricades, and warning signs. There will be access for emergency vehicles and equipment at all times. Traffic flag persons and uniformed traffic officers will be used to ensure public safety.

Stowe will address cumulative traffic impacts through the local zoning process. As part of the local zoning process, Stowe identifies potential adverse traffic impacts associated with new development, and acts to mitigate such impacts or deny approval for such new development.

RIPPLE and Topnotch have not provided evidence regarding the present traffic Level of Service ratings at locations along the Mountain Road, nor have they provided projected Level of Service ratings on a post-Project basis. RIPPLE and Topnotch have not provided data regarding the number of accidents along the Mountain Road, nor have they provided data projections regarding the number of accidents on a post-Project basis. Without this evidence, the Board is persuaded that Stowe has met its burden of proof with respect to secondary traffic impacts.

Based on the findings of fact, the Board concludes that the Project will not cause unreasonable congestion or unsafe conditions with respect to the use of highways.

G. Criterion 7 (local governmental services)

Under 10 V.S.A. § 6086(a)(7), before granting a permit, the Board shall find that the development will not place an unreasonable burden on the ability of the local government to provide municipal or governmental services. The Board may not deny a permit solely pursuant to Criterion 7. See 10 V.S.A. § 6087(b). However, reasonable conditions may be imposed under Criterion 7 to alleviate the burdens created by a project.

Ripple and Topnotch contest the Project's financial viability. They contend that the Project will cost more than what Stowe has predicted. Nevertheless, Stowe has persuaded the Board that the \$480,000 annual debt service amount is accurate, and that this amount can be met by: (i) \$200,000 annually to be raised through user fees for capital costs, and (ii) through connection fees. With respect to connection fees, over 20 years, a total of 510,560 gallons of flow must be sold at an average of \$10.94 per gallon.

In addition, Ripple and Topnotch contend that the secondary growth from the Project will impose an unreasonable burden on Stowe's ability to provide municipal services. However, over the past 15 years, Stowe has been able to accommodate the needs for additional municipal services associated with new development without exceeding its ability to pay for such services.

RIPPLE and Topnotch have not provided evidence regarding the present cost of specific municipal services such as fire, police, and schools, nor is there evidence of what these costs are projected to be on a post-Project basis. There is no evidence that this Project, or the secondary growth that will occur in the Expanded Service Area, will require tax increases of such magnitude that residents and businesses will be forced to leave Stowe. There is no evidence that this Project, or the secondary growth that will occur in the Expanded Service Area, will cause Stowe to not provide, or significantly reduce, those municipal services which it is legally obligated to provide. Given how the burden of proof is allocated under Criterion 7, and the lack of evidence on the effect that specific, hypothetical tax increases would have on Stowe's residential and business population, the Board is persuaded that Stowe has the financial capacity to avoid the imposition of an *unreasonable* burden upon its citizens.

Based on the findings of fact, the Board is persuaded that the Project will not place an unreasonable burden on Stowe's ability to provide municipal or governmental services.

H. Criterion 9(A) (impact of growth)

Under Criterion 9(A), the Board reviews the impact that the Project will have on the ability of Stowe and the 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 Project. Re: St. Albans Group and Wal-Mart Stores, Inc., #6F0471-EB, Findings of Fact, Conclusions of Law, and Order (Altered) at 29 (June 27, 1995), aff'd., In re Wal-Mart Stores, Inc., No. 95-398 (Vt. Sup. Ct. Aug. 29, 1997). Stowe does not have a duly adopted capital improvement program. Stowe bears the burden of production while RIPPLE and Topnotch bear the burden of persuasion.

Based on the language of Criterion 9(A), Stowe, to meet its burden of production, must provide evidence of the following:

- (a) The growth in population experienced by the town and region in question.

- (b) The total growth and rate of growth which is otherwise expected for the town and region.
- (c) The total growth and rate of growth for the town and region which will result from the proposed project if approved.
- (d) 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.

10 V.S.A. § 6086(a)(9)(A); Wal-Mart, #6F0471-EB at 30.

Stowe must then prove, based upon the above information, that the 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.<sup>4</sup>

Based on the findings of fact, the Board concludes that Stowe has not met its burden of production. In determining whether Stowe has met its burden of production under Criterion 9(A), the Board has reviewed Stowe's filing of March 6, 1998 which can be summarized as follows:

- 1. There is no evidence to support the conclusion that 320,000 gallons of capacity out of the proposed 1 million gpd will be available for "growth" or "new development."
- 2. Stowe will experience additional growth in the Expanded Service Area with or without the Project. Stowe has not, by the proposed sewer expansion, created "new" development potential.
- 3. The Project does extend sewer service beyond the existing limits of such service and provide capacity for development beyond what is presently existing. However, the Project does not open previously undeveloped and undevelopable portions of Stowe for development.

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<sup>4</sup>The word "population" in Criterion 9(A) means those people who will require services as a result of the Project, "whether they be residents, commuters, visiting shoppers, or others for whom services must be provided, including the owners, operators, and users" of the new developments which the sewer line is likely to facilitate. Wal-Mart Stores, #6F0471-EB at 34.

4. The Project, in conjunction with the 1998 Bylaw, will enable a new pattern of development to take place, a pattern more in keeping with Stowe's desire for compact settlement surrounded by open countryside.

First, the Board is persuaded that the Project will allow for growth that would not have otherwise occurred. Land in the Expanded Service Area presently devoted to on-site septic disposal and replacement areas will be available for development once the Project is constructed. Some of that land will be developed in a manner which would not have been possible but for the Project.<sup>5</sup> Stowe's own projections assume that between 20% and 34% of the 500,000 gpd that must be sold will be sold to new development. However, while the Project's financial viability depends upon the sale of 500,000 gpd, the assumed flows can vary. Because there is no mandatory hook-up policy, and no binding commitments between Stowe and existing users, the assumption that at least 330,000 gpd will be sold to existing users does not prevent the sale of more than 170,000 gpd to new development. In fact, the Project will result in the creation of approximately 320,000 gallons of capacity that will be available to accommodate new development. This capacity will be available to support new development throughout the Expanded Service Area.

Second, Stowe has not provided the evidence required by Criterion 9(A). Stowe has not conducted a study of the Expanded Service Area's development potential. Stowe has not evaluated the need for new municipal services resulting from the Extension and the Expanded Service Area. Stowe has not evaluated to what extent growth will be caused by the Extension within the Expanded Service Area. Stowe has not analyzed the potential tax revenues that may result directly or indirectly from the Project. The Board believes that it is reasonable to require Stowe to perform these analyses prior to commencement of the Project. See Wal-Mart, #6F0471-EB at 33; Re: Washington Electric Cooperative, Application #5W1036-EB, Findings of Fact, Conclusions of Law, and Order at 9 (Dec. 19, 1990).<sup>6</sup>

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<sup>5</sup>In fact, the Board notes that the Town Plan itself states that the "expansion of off-site sewer service can also *spur growth* . . ." Town Plan at 4-5 (emphasis added). The Board believes that Stowe, in adopting the Town Plan, understood that the expansion of off-site sewer services is a necessary precursor to growth.

<sup>6</sup>The Board stated in Washington Electric: "In this case, the Board is dealing with a basic infrastructure item. The provision of electric power is essential to most development activities and especially residential development. It is reasonable to expect the parties to this proceeding to have addressed the question of whether this power line will cause further

Stowe has failed to meet its burden of proof under Criterion 9(A). Accordingly, the Board concludes that the Project does not comply with Criterion 9(A).

I. Criterion 9(H) (costs of scattered development)

Under 10 V.S.A. § 6086(a)(9)(H), the Board will grant a permit for a development 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.

Criterion 9(H) requires the Board first to determine whether a proposed project is physically contiguous to an existing settlement. If it is not physically contiguous to an existing settlement, the Board cannot issue a permit unless the "additional costs of public services and facilities caused directly or indirectly by the proposed development . . . do not outweigh the tax revenue and other public benefits of the development . . . ."

The burden of proving that the Project is not scattered development is on Stowe, and the burden of proving that the benefits outweigh the costs is also on Stowe.

In the Wal-Mart decision, the Board stated that the purpose 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 by ensuring that scattered development does not impose public costs which outweigh the public benefits. Id. at 43-44. The purpose is also to encourage large-scale development to locate within existing community centers. Criterion 9(H) does not prohibit scattered development, but it seeks to ensure that scattered development does not impose public costs which outweigh the public benefits. Id. at 44.

In the Wal-Mart decision the Board evaluated the word "existing" and concluded it means "something which presently is." The Board then defined "existing settlement" as:

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development along its length and the potential environmental and fiscal consequences of further development. Otherwise, the Board's review would be rendered largely meaningless." Id. at 9. The Board can discern no difference between electricity and sewer service as infrastructure items.

[A]n extant community center similar to the traditional Vermont center in that it is compact in size and contains a mix of uses, including commercial and industrial uses, and, importantly, a significant residential component. It is a place in which many people may live and work and in which the uses largely are within walking distance of each other. The term specifically excludes areas of commercial, highway-oriented uses commonly referred to as "strip development." Compatibility in terms of size and use is relevant to determining if an existing group of buildings constitutes an existing settlement in relation to a proposed project.

The Board further concludes that, to be contiguous to an existing settlement, a proposed project must be within or immediately next to such a settlement.

Id. at 40-41.

Based on the findings of fact, the Extension will not be contiguous to an "existing settlement." The only existing settlement in Stowe is the Stowe Village and Lower Village area. The Extension will extend into areas where there is strip development, but no existing settlements.

Since the Extension is not physically contiguous to an existing settlement, it is scattered development. Therefore, Stowe must demonstrate that the Project's additional direct and indirect public costs do not outweigh the public benefits.

Stowe has not analyzed the cost of public service and facilities caused directly or indirectly by the Project. Stowe has not analyzed the tax revenue and the public benefits of the Project or the provision of needed and balanced housing accessible to existing or planned employment centers.

Stowe must provide this information for the Board to weigh the costs and the benefits. Without this information, the Board cannot make a positive finding under Criterion 9(H) and, therefore, the Project does not comply with Criterion 9(H).

J. Criterion 9(K) (public investments and facilities)

Under 10 V.S.A. § 6086(a)(9)(K), 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 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.

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., #4C09886-EB, Findings of Fact, Conclusions of Law, and Order at 11 (Apr. 4, 1997); Re: Swain Development Corp., #3W0445-2-EB, Findings of Fact, Conclusions of Law, and Order at 33 (Aug. 10, 1990).

The Upgrade will occur at the site of the Facility. The Extension is to be built along or adjacent to the Mountain Road, or portions of the Stowe owned recreation path that are located along Mountain Road and the West Branch of the Little River. The Extension will be buried underground. The Facility does not discharge into the West Branch. The Project will not cause any interruptions in the Facility's operation.

RIPPLE's contention under Criterion 9(K) is that the traffic from secondary growth attributable to the Project has the potential to unreasonably endanger the public's investment in the Mountain Road and Route 100, and to materially jeopardize or interfere with the function, safety, and efficiency of these roads, as well as to impair the public's enjoyment of and access to the highways.

While the inquiry and the burden of proof under Criterion 9(K) are not the same as that under Criterion 5, RIPPLE's contention under both criteria is the same. As noted under Criterion 5, the Project will not cause unreasonable congestion or unsafe conditions with respect to use of the highways. For the same reasons under Criterion 5, the Board is persuaded that the Project complies with Criterion 9(K), notwithstanding that Stowe bears both the burden of production and persuasion under Criterion 9(K).

K. Criterion 10 (local plan and regional plan)

Under Criterion 10, before granting a permit, the Board must find that the Project is in conformance with any duly adopted local or regional plan.

1. Town Plan

i. Criterion 10 analysis

The Board's town plan analysis under Criterion 10 is conducted in accordance with In re Molgano, 163 Vt. 25 (1994). The Molgano decision concerns the relationship of municipal plans and zoning by-laws under Criterion 10.

Under Molgano, zoning by-laws are germane to interpreting ambiguous provisions of a town plan. Therefore, the Board first determines whether the town plan provisions at issue are specific or ambiguous policies or prohibitions.

If the town plan provisions are specific, they are applied to the proposed project without any reference to the zoning by-laws. However, if the provisions are ambiguous, the Board next examines the relevant zoning by-laws for provisions which resolve the ambiguity. This does not mean a general review of a 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 at issue under the town plan. Re: Fair Haven Housing Limited Partnership and McDonald's Corporation, #1R0639-2-EB, Findings of Fact, Conclusions of Law, and Order at 19 (April 16, 1996), aff'd, In re Fair Haven Housing Limited Partnership and McDonald's Corporation, No. 96-228 (Vt. S. Ct. 4/23/97)(Unpublished).

Thus, even after Molgano, the issue remains whether a project is in conformance with the town plan, with the zoning by-laws available only as a tool for resolving ambiguities in the plan. Re: Manchester Commons Associates, #8B0500-EB, Findings of Fact, Conclusions of Law, and Order at 29 (Sept. 29, 1995).

A provision of a town plan evinces a specific policy if the provision: (a) pertains to the area or district in which the project is located; (b) is intended to guide or proscribe conduct or land use within the area or district in which the project is located; and (c) is sufficiently clear to guide the conduct of an average person, using common sense and understanding. Re: The Mirkwood Group and Barry Randall, #1R0780-EB, Findings of Fact, Conclusions of Law and Order at 29(August 19, 1996).

The Board has carefully reviewed the Town Plan, in particular Chapters Four and Nine. Much of Chapter Four is devoted to wastewater disposal issues. Based on our review, we conclude that there are a number specific policies relative to the Project based upon the application of the test stated in Mirkwood. As described below, the Project fully complies with certain policies, partially complies with others, and is inconsistent with

others. Based on a consideration of all of these policies, the Board concludes that the Project does not comply with the Town Plan.

ii. Mirkwood test

The Town Plan provisions satisfy the Mirkwood test. The provisions pertain to the Expanded Service Area if not all of Stowe. The provisions instruct Stowe with regard to the Facility, and specifically with regard to what factors and actions must be considered and taken before the Facility's capacity is increased. Finally, these provisions are sufficiently clear to guide the conduct of an average person, using common sense and understanding, since Stowe wrote and adopted the Town Plan, and it is Stowe's conduct which the Town Plan guides.

iii. Full conformance

The Extension will be buried underground. No party has raised Criterion 8 as an issue. The 1998 Bylaw does designate growth areas, and uses the TDR mechanism to encourage growth in certain areas and discourage it in others. Stowe has developed a plan for the Facility's expansion.

The Project is consistent with Chapter Four's specific policies that pertain to: (a) infrastructure expansion taking place with a minimum impact on the aesthetic quality of the community; (b) burying utility service lines wherever feasible; (c) identifying future areas of concentrated development as part of long range planning for the Facility's expansion; and (d) developing expansion plans for the Facility.

The Project's compliance with these policies demonstrates that Stowe has generally been evaluating its wastewater disposal needs, and that an expansion to the Facility has been an option since 1990. It would be inaccurate to say that the Project is inconsistent with all of Chapter Four. Nevertheless, these specific policies do not mandate the Project, nor are they the only specific policies contained in Chapter Four.

iv. Partial conformance

The Project is partially consistent with a number of policies contained in Chapter Four.

For example, there is the specific policy that growth and development not exceed the capacities of local facilities and services. The Project partially complies with this requirement for the reasons stated with respect to Criteria 5 and 7. However, the

evidence is also that Stowe is not planning any improvements to its infrastructure to accommodate additional growth resulting from the Project. Thus, while Stowe may be able to pay for the additional traffic and municipal services for purposes of Criteria 5 and 7, it is equally true that Stowe has not met its burden of production as discussed with respect to Criteria 9(A) and 9(H). Thus, the Project only partially complies with the specific policy that growth and development not exceed the capacities of local facilities and services.

Chapter Four also requires that any expansion in infrastructure shall be made so as to support development in the Village and other designated growth areas and to discourage strip development or sprawl. Once again, the evidence is of partial compliance with this policy.

The Expanded Service Area will serve the Stowe Village and Lower Village areas. The 1998 Bylaw does designate growth areas. However, the Board is not persuaded that the Project discourages strip development or sprawl. In this regard, the Board construes "strip development" and "sprawl" as defined in Section 2 of the 1998 Bylaw.

Stowe asserts that the 1998 Bylaw will eliminate strip development along the Mountain Road because it designates growth centers where dense development can take place, and allows for TDRs. However, the TDR provisions were just adopted on February 9, 1998, and property owners may have little incentive to sell development rights if other Mountain Road development options are still available to them. In addition, the 1998 Bylaw does not reduce the amount of development that may take place on the Upper Mountain Road; it only restricts the type of development. The potential for strip development along the Upper Mountain Road still exists.

The Board also notes that § 9.3(15) of the 1998 Bylaw vests substantial discretion in the Board of Adjustment regarding conditional uses in the Mountain Road Village and Mountain Road Crossroads district. This provision could be used to undermine Chapter Four's specific policy of discouraging strip development.

Thus, the Project only partially complies with the specific policy that an expanded Facility be combined with the discouragement of strip development.

Lastly, in considering the Project's partial compliance with Chapter Four, the Board concludes that any Facility expansion is predicated upon the investigation of new sewage treatment technologies. While the Upgrade satisfies this requirement, the Board has also found that the Project does not comply with Criterion 1(B). Until such time that

an affirmative finding can be made under Criterion 1(B), the Board concludes that the Project only partially complies with the policy that new sewage treatment technologies be investigated.

The Project's partial compliance with these policies demonstrates that it would be inaccurate to say that the Project is inconsistent with all of Chapter Four. Nevertheless, partial compliance with these provisions is insufficient to sustain an affirmative finding under Criterion 10. Under Criterion 10, the Project must be in conformance with the Town Plan.

v. Not in conformity

The Board next considers those specific policies with which the Project does not comply.

a. *identification of failing  
on-site septic systems*

The Project does not comply with Chapter Four's statement that a study of failing on-site septic systems "needs to be conducted to identify their locations, the on-site ability to correct the problem and their off-site disposal needs." As stated under Criterion 1(B), Stowe has not conducted a sanitary survey of the Expanded Service Area. The failures in Sylvan Park are not relevant to this requirement because Sylvan Park is serviced by the Facility and the Existing Discharge. The Project cannot comply with the Town Plan in the absence of an on-site septic system study. In addition, until the study is completed the Project cannot comply with the policy that future sludge land application options be pursued.

b. *inflow-infiltration*

The Project does not comply with Chapter Four's statement that "[e]fforts should continue to minimize infiltration and inflow." Because inflow-infiltration is the treatment of non-effluent sources of water, it reduces the Facility's ability to achieve its designed 250,000 gpd capacity. The Facility is presently experiencing inflow-infiltration, and no reduction of inflow-infiltration has been considered which would increase the Facility's current capacity for effluent. The Project cannot comply with the Town Plan in the absence of any consideration of whether a reduction in inflow-infiltration would delay or eliminate the need for a 1 million gpd Facility.

c. phasing

The Project does not comply with the specific policy that phasing of sewer services should be coordinated with the allocation of other facilities such as water, electricity, roads and public services. Chapter Four states:

Phasing of sewer service, when allocation is available, enables the community to monitor the rate of development in a given area. It should be coordinated with the allocation of other facilities such as water, electricity, roads and public services.

In addition, Chapter Nine, Transportation, also states:

Goal:

To improve the quality of Stowe's transportation and road systems in order to promote safety, alleviate congestion and to maintain the scenic quality of roads wherever possible.

Objectives:

1. Reduce the amount of congestion in the [Stowe] Village.
2. Alleviate the Rte. 108/Rte. 100 tie-up.

The Project is not being done in phases. Phasing means to construct sections of infrastructure as needed and as other facilities are made available to serve the infrastructure. Part of determining whether new infrastructure is needed is first determining whether existing infrastructure can be made more efficient. Phasing ensures that a town can control its own destiny. With no phasing and no planning of other infrastructure improvements Stowe is relinquishing control over its own destiny and inviting in the very sprawl which the 1998 Bylaw is intended to prevent.

The Project does not comply with the specific policy enunciated in Chapters Four and Nine that any Facility expansion be coordinated with the allocation of other facilities such as water, electricity, roads and public services.

d. maximum permitted size

Finally, Chapter Four provides:

A study of the assimilative capacity of the Little River (1985) concluded that a 1 million gpd plant could operate without adversely affecting the

Little River. **There needs to be a resolution between the town and the State regarding the maximum permitted size of an expanded plant.** Such an expansion must weigh available alternatives and determine sewer expansion policies as well as establishing land use and growth management controls. (Emphasis added.)

Based on our conclusion under Criterion 1(B), it is clear that the Project does not comply with the highlighted portion above. Stowe and ANR have not resolved the maximum permitted size of a Facility expansion since there is no compliance with the WPC Act and the VWQS. ANR has admitted that it did not have the information regarding existing uses when it issued DP 3-1232. The Project cannot comply with the above specific policy without ANR's resolution of the existing use issues under the WPC Act and the VWQS.

vi. Summary

In summary, the Board concludes that the Project does not comply with the Town Plan. The Board makes this conclusion based upon its review of the entire Town Plan and, in particular, Chapters Four and Nine. While the Town Plan clearly discusses a possible 1 million gpd Facility, it does not mandate such a facility nor does it call for or require the Project. Rather, the Town Plan evinces a number of specific policies which must be complied with prior to the Facility's expansion to 1 million gpd. Since not all of these specific policies have been complied with, the Project does not comply with the Town Plan. Accordingly, the Board is unable to make an affirmative finding under Criterion 10, town plan.

2. Lamoille County Plan

The Lamoille County Planning Commission has adopted a regional plan for Lamoille County, Vermont, dated December 17, 1991 ("1991 Plan"). The Project is subject to the 1991 Plan. The 1991 Plan contains a number of general policy statements which encourage municipalities to take certain actions in areas related to water quality, economic development, land use, and infrastructure planning. These general policies are not clear and unqualified policies which prohibit the Project. See In re MBL Associates, No. 96-110, slip op. at 2 (Vt. Sup. Ct. March 6, 1997); Cf., In re Molgano, 163 Vt. 25, 30-31 (1994). Based on our review of the 1991 Plan, the Board concludes that the Project conforms to the 1991 Plan.

VI. RECONSIDERATION UNDER 10 V.S.A. § 6087(c) and EBR 31(B)

As stated above, the Board has concluded that the Project must be denied under Criteria 1(B), 1(E), 9(A), 9(H), and 10 (local plan).

The fact that the Board is denying the Project does not mean that no permit will ever be issued for the Project. Under Act 250, a procedure exists which allows Stowe to file with the District #5 Environmental Commission, within six months, an application for reconsideration. In such an application, Stowe will have to demonstrate that it has corrected the deficiencies found above by the Board with regard to Criteria 1(B), 1(E), 9(A), 9(H), and 10 (local plan) consistent with the requirements of 10 V.S.A. § 6087(c) and EBR 31(B). See Wal-Mart, #6F0471-EB at 59.<sup>7</sup>

Because reconsideration is available, the Board has been specific above with regard to the deficiencies in this Project. Nevertheless the Board will highlight, below, certain issues that should be addressed in a reconsideration proceeding under 10 V.S.A. § 6087(c) and EBR 31(B):

A. Criterion 1(B). The issue of existing uses at Gold Brook Campground and the Moscow bridge must be resolved in a manner that is consistent with ANR's vital role as the initial reviewer of all discharge permit applications.

B. Criterion 1(E). Stowe must consider all reasonable alternatives to prevent further degradation of the West Branch consistent with the requirement of Criterion 1(E) that the West Branch be maintained in its natural condition.

C. Criteria 9(A) and 9(H). Stowe must provide the evidence required under these criteria given the fundamental finding that the Project will result in growth that will not otherwise occur.

D. Criterion 10 (local plan). Comply with the specific provisions relating to a study of failing on-site septic systems; inflow-infiltration; the phasing and coordination of sewer services with other facilities such as water, electricity, roads and public services; and, as noted under Criterion 1(B), the resolution of the existing use issue now that ANR

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<sup>7</sup>The Board notes that, where the deficiency is a failure to meet the burden of production, Stowe's satisfaction of the burden of production does not necessarily mean that the burden of *persuasion* is automatically satisfied such that an affirmative finding must be made under the given criterion.



is fully aware of such existing uses at the Gold Brook Campground and the Moscow bridge.

The Board notes that the above list is not intended to be exhaustive or exclusive, that all deficiencies enumerated in this decision must be remedied, and that the evidence in any reconsideration proceeding must demonstrate that the Project complies with Criteria 1(B), 1(E), 9(A), 9(H), and 10 (local plan).

VII. ORDER

1. Application #100035-9-EB complies with 10 V.S.A. §§ 6086(a)(5), (7), (9)(K) and (10)(regional plan).

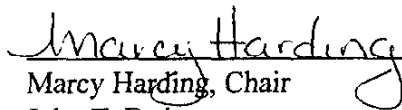
2. Application #100035-9-EB does not comply with 10 V.S.A. §§ 6086(a)(1)(B), (1)(E), (9)(A), (9)(H), and (10) (local plan).

3. Land Use Permit #100035-9 issued by the District #5 Environmental Commission on June 17, 1997 to the Town of Stowe for a sewer expansion project is hereby declared void.

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

Dated at Montpelier, Vermont this 22nd day of May, 1998.

VERMONT ENVIRONMENTAL BOARD

  
Marcy Harding, Chair  
John T. Ewing  
Art Gibb  
Sam Lloyd  
William Martinez  
Rebecca Nawrath