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Permit number: 7C0555

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#####\_Decision

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#####\_District\_Commission\_Documents

#####\_Post-Decision\_Documents

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Exempt in this batch:

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# State of Vermont

## LAND USE PERMIT

CASE No. 7C0555

APPLICANT Town of Hardwick  
ADDRESS Hardwick, Vermont

LAWS/REGULATIONS INVOLVED

10 V.S.A., Chapter 151 (Act 250)

District Environmental Commission VII hereby issues a Land Use Permit pursuant to the authority vested in it in 10 V.S.A., Chapter 151. This permit applies to the lands identified in Hardwick, Vermont as subject to easements granted by private individuals and the Village of Hardwick to the Town of Hardwick, the permittee, as grantee. This permit specifically authorizes the permittee to construct five ice retaining structures in the Lamoille River in the Town and Village of Hardwick, to open a flood water diversion ditch on the south side of the Lamoille River in the Village of Hardwick, and to clear cut and grade about eight acres of land north of the Lamoille River also in the Village of Hardwick.

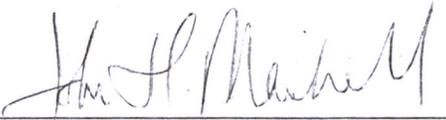
The permittee and its assigns and successors in interest are obligated by this permit to complete and maintain the project only as approved by the District Environmental Commission in accordance with the following conditions:

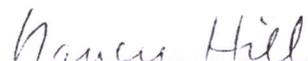
1. The project shall be completed as set forth in Findings of Fact and Conclusions of Law #7C0555 in accordance with the plans and exhibits stamped "Approved" and on file with the District Environmental Commission.
2. By acceptance of the issuance of this permit without appeal, the permittee confirms and agrees for itself and all assigns and successors in interest that the conditions of this permit shall be binding upon and enforceable against the permittee, and all assigns and successors in interest. Except as approved, the granting of less than an undivided whole interest in this project is prohibited without prior approval of the District Environmental Commission.
3. The District Environmental Commission reserves the right to evaluate the progress of the project and to impose additional conditions with respect to erosion control and transportation safety. The Commission reserves this right for a period of two years commencing with the issuance of this permit and expiring October 1, 1985.
4. The permittee shall consult with Sterling College, The Lamoille River Association and the Vermont Agency of Environmental Conservation about the type and location of all warning signs to be placed on the Lamoille River.

5. This permit hereby incorporates all of the conditions of Stream Alteration Permit #SA-7-0048, (attached hereto), issued on September 29, 1983 by Barry Cahoon, P.E., Civil Engineer, for the Vermont Agency of Environmental Conservation Department of Water Resources and Environmental Engineering in compliance with 10 V.S.A., Chapter 41, Subchapter 2, Alteration of Streams.
6. The permittee shall notify the Vermont Atlas and the Appalachian Mountain Club Guide to New England Whitewater Rivers of location of the rail structures in the Lamoille River.
7. The District Environmental Commission maintains continuing jurisdiction during the lifetime of the permit and may periodically require certification that the project is being completed and maintained in accordance with the terms of the permit.
8. The two rail structures are permitted only until July 31, 1984 with their continued use dependent upon demonstration of their effectiveness to this Commission in a public hearing no later than June 30, 1984, and appropriate amendment of this permit.
9. The permit for the entire project shall expire on October 1, 1985 unless extended by the District Environmental Commission following a review of the effectiveness of this project.

Dated at St. Johnsbury, Vermont this 6th day of October 1983.

BY THE DISTRICT VII ENVIRONMENTAL COMMISSION

  
John Marshall, Chairman

  
Nancy Hill, Member

  
Benjamin Butterfield, member

STATE OF VERMONT  
DISTRICT ENVIRONMENTAL COMMISSION VII

RE: Town of Hardwick  
Hardwick, Vermont

Application #7C0555  
Findings of Fact,  
Conclusions of law and Order  
10 V.S.A., Chapter 151  
(Act 250)

I

INTRODUCTION

On September 6, 1983, an application for an Act 250 permit was filed by the Town of Hardwick, Vermont for a project generally described as the construction of five ice retaining structures in the Lamoille River, clearcutting about eight acres on the river shoreline and opening of a floodwater diversion channel, all for flood control purposes. The tracts of land involved by this project total about 12 acres in the project area. The applicant's legal interest is limited to easements granted to the Town of Hardwick by the Village of Hardwick and by private individuals.

The ice-retaining structures are proposed to be of three types: three rows of railroad rails staggered 6 feet on center across the river (with a woven wire mesh strung between the rails in each row) and driven vertically into the river bed, truck tires strung face-to-face on a pair of one-inch steel cables and stretched from shore to shore across the river, and two-inch by four-inch wooden slats six feet long strung on a one-inch steel cable at three and one-half inch intervals and stretched from shore to shore across the river.

The locations of these structures in the Lamoille River from upstream to downstream are as follows: The first set of rails will be placed east of the Village of Hardwick just downstream of the Lamoille Valley Railroad bridge behind the former Highway Department garage. The second set of rails will be placed in the river behind Barcomb Motors. The first tire boom will be placed at the village limits. The second tire boom will be placed in the bend of the river upstream of the Village Motel. The wooden-slat boom will be located in the Village of Hardwick just downstream of the Village Restaurant.

Introduction continued

The non-riverbed portions of the project are located in the Village of Hardwick adjacent to Wolcott Street (Vermont Route 15) and consist of two different types of site work. The first part involves the clearing, destumping, grading and seeding of about eight acres of village-owned land north of the river and extending downstream from Church Street to the Lamoille Valley Railroad bridge. The grassed field created will then be kept free of snow throughout the winter to allow water and ice to overflow into the area for storage when the normal river channel becomes clogged with ice. The second part requires opening a portion of the riverbank to an existing swale, and clearing and excavation of portions of this ditch extending from opposite Woodbury Street to the Lamoille Valley Railroad bridge on the south side of the river. This diversion ditch, again, is proposed as an outlet for water from the river when the main channel becomes clogged with ice.

Under Act 250, projects are reviewed based on the 10 criteria of 10 V.S.A. Section 6086(a) 1-10. Before granting a permit, the Board or District Commission must find that the project complies with these criteria and is not detrimental to the public health, safety or general welfare.

Decisions must be stated in the form of findings of fact and conclusions of law. The facts we have relied upon are contained in the documents on file identified as Exhibits 1 through 11 and the evidence received at a hearing held in Hardwick, Vermont on Thursday, September 22, 1982.

Parties to this application are:

- (A) The Applicant, The Town of Hardwick, by Donald R. Stubbs
- (B) The Village of Hardwick, by Milton Rogers, Trustee
- (C) The Hardwick Planning Commission
- (D) The Northeastern Vermont Development Association, by Joel Swartz
- (E) The State of Vermont, Agency of Environmental Conservation, by Dana Cole-Levesque, Esq. and Richard Czaplinski

Introduction continued

- (G) Adjoining property owners (admitted without objection) and the criteria they were allowed to participate on:

Symonds and Sons, by Bradley Symonds, on criteria 1D, 1E, 1F and 4 with respect to the effects of the proposed flood diversion ditch on their sawmill yard through which it will run.

- (H) Persons admitted (without objection) under Rule 14(B) and the criteria they were allowed to participate on:

Sterling College, by Edward R. Houston, on criteria 5 and 8 with respect to the effects of the project booms and rail structures on the college's recreational program, which uses the river for whitewater canoeing.

The Lamoille River Association, by Steven Wright, on Criteria 1E, 1F, 4, 5 and 8 with respect to the future aesthetic, recreational and biological impacts resulting from the placement of ice-retaining structures in the Lamoille River.

Albert Brochu on criterion 5 with respect to traffic safety on Wolcott Street, which borders the Lamoille River.

## II

## FINDINGS OF FACT

In making the following findings, we have summarized the statutory language of the 10 environmental criteria of 10 V.S.A. Section 6086(a)

### SECTION 6086(a) 1, Water Pollution

There will be no undue water pollution:

a. Subcriteria A Headwaters, B Waste Disposal and C Water Conservation are judged not to be applicable to this project.

Criterion 1, Water Pollution continued

b. D Floodways

- i. The entire flood-control project is within the floodway of the Lamoille River.
- ii. The ice-retention structures are anticipated to result in the formation of controlled ice-dam formations upstream of a part of the Lamoille River subject to random formation of natural ice jams during some winter months. The man-made dams will cause about a two-foot rise in river level in the upstream vicinity of the dams due to ice back-up. The sites chosen for these back-ups will not result in undue damage to riparian property.
- iii. The clearcutting in the floodplain and opening of the diversion ditch are anticipated to prevent diversion of flood waters onto Wolcott Street, a residential area in the Village of Hardwick, by allowing alternative paths for ice and water to take.
- iv. The normal melting of ice retained upstream of the Village of Hardwick will not increase the peak or total flows of the Lamoille River.

c. E Streams

- i. The cleared shoreline and diversion channel will not alter the natural path or flow of the Lamoille River which already flows onto the north shoreline and into the ditch south of the river.
- ii. The project is anticipated to reduce hazards to the health, safety and welfare of the public and riparian owners by directing the flows of ice and water in the river.
- iii. It is not feasible to reduce flooding in the Wolcott Street area without, in effect, relocating the ice jams that occur in this area to the upstream sites of the ice-retaining structures.
- iv. A Stream Alteration Permit (#SA-7-0048) has been issued for this project by the Vermont Agency of Environmental Conservation, Department of Water Resources and Environmental Engineering pursuant to requirements of 10 V.S.A., Chapter 41, Subchapter 2, Alteration of Streams.

Criterion 1, Water Pollution continued

d. F Shorelines

- i. The portions of the shoreline of the Lamoille River affected by this project will be the access points for equipment to place the rail structures in the river, the entry points for stringing and anchoring the booms, the entry to the diversion ditch, and the edge of the cleared floodplain in the Village of Hardwick. Because the project is designed to redirect flood waters in winter, it is necessary that the applicant use these areas of the shoreline.
- ii. The shorelines will remain in their natural condition because the ice-boom anchors are set back from the shoreline, the clearcut area will also be set back from the shoreline and the ditch will be opened to a level level higher than the normal shoreline.
- iii. The entry points to the booms and rails involve limited amounts of shoreline and will not reduce public access to any affected portion of the river.
- iv. The ice-retaining structures are screened by an existing shoreline vegetation which will remain largely intact. The clearing, grading and grassing of the floodplain next to the river in the village will result in some stabilization and reclamation of presently unmanaged shoreline.

SECTION 6086(a) 1, Air Pollution

There will be no undue air pollution:

- a. This section is determined to be not applicable because the project will not produce any air emissions.

SECTION 6086(a) 2 and 3, Water Supply

There is sufficient water available and no existing water supply will be unreasonably burdened:

a. The project involves no uses of water and no water uses are proposed during its construction.

SECTION 6086(a) 4, Soil Erosion

There will be no unreasonable soil erosion or effects on the capacity of the land to hold water:

a. The cleared, graded and grassed shoreline areas proposed for overflow ice storage consist primarily of sands and coarse gravels that will be stabilized by the addition of a grass cover.

b. The river banks in the vicinity of the proposed booms and rail structures will be potentially subject to erosion due to rechanneling of river flows from retention of ice by these structures. However, the magnitude and exact probability of the erosion has not been determined due to the experimental nature of the project.

c. The applicant intends to repair and/or rip-rap any areas eroded by this project.

SECTION 6086(a) 5, Transportation Facilities

This project will not cause unreasonable safety or congestion conditions with respect to highways or other means of transportation:

a. Wolcott Street (Vermont Route 15) in the Village of Hardwick is subject to blockage during the winter months from flooding caused by ice jams on the Lamoille River, which form on the river between the Village Restaurant and Hardwick Lake. Any reduction in the potential for ice jam formation in the adjacent Lamoille River will impact favorably on public use of this highway.

Criterion 5, Transportation Safety continued

b. The Lamoille River upstream of the Village of Hardwick to Greensboro Bend is routinely used by white-water canoeists during periods of high water.

c. Placement of the proposed two sets of rail structures across all but about eight to ten feet of the normal low water riverbed will create an obstruction to the passage of boats of any size and in periods of high water will create a threat for entrapment of boats or persons in the water.

d. The applicant intends to place warning signs upstream of the structures advising of their presence. Since the type and location of these signs has not been specified, the Commission shall condition its permit accordingly.

SECTIONS 6086 (a) 6 and 7, Burdens on Local Educational and Governmental Services:

There will be no unreasonable burdens on educational or other municipal services:

a. Impacts on local school services are not applicable to the implementation of this flood control project.

b. The Town of Hardwick has spent \$56,000 over the past three years in ice-control work on the river to prevent flooding or to clean up after it.

c. Three-fourths of the projected \$40,000 cost for construction of this project will be paid by the State of Vermont.

d. Plowing of the floodplain and maintenance of the ice retention structures will be done by town personnel without the requirement for additional manpower or equipment.

e. If successful, the project will enhance the ability of the town to provide municipal services because of lowered costs for ice control by the town and less flooding in the Village of Hardwick (particularly in the vicinity of the town fire station).

SECTION 6086 (a) 8, Aesthetics

There will be no adverse effects on aesthetics, scenic beauty, historic sites, natural areas or necessary wildlife habitats:

a. There are no historic sites, natural areas or necessary wildlife habitats identified in the project area.

b. The cleared shoreline in the village will become a grassed field suitable for park and recreation purposes.

c. The ice booms will be placed in the river from November to ice-out each year so that during much of their time in the river they will be covered by snow and ice.

d. The rail structures will be permanently placed in the river but, along with their warning sign, will not be unduly visible since they will be seen primarily from the river.

SECTION 6096 (a) 9, Capability and Development Plan

This project is in conformance with the Capability and Development Plan:

a. Subcriteria A, B, C, D, E, F, G, H, J, and L were agreed by all parties to be not applicable to this project.

b. K Developments Affecting Public Investments

i. The project itself is a public investment designed to enhance flood protection for the Village of Hardwick.

ii. The placement of the rail structures across most of the river channel will interfere with the passage of canoeists in a popular white water canoeing portion of the Lamoille River.

SECTION 6086 (a) 10, Local and Regional Plans

The project is in conformance with the local and regional plans:

- a. The Hardwick Town Plan has expired without renewal.
- b. The Land Use Element of the Northeastern Vermont Development Association Regional Plan does not address the type of project proposed by the Town of Hardwick.

DISCUSSION

From its deliberations on this project the District VII Environmental Commission sees the fundamental decision to be made as a choice between the potential loss of a recreational resource (white water canoeing in the Lamoille River east of the Village of Hardwick) and the potential benefits to public health and safety (reduction of the threat of flooding in the Village of Hardwick resulting from ice jams on the Lamoille River). However, this choice is not a clear one because, as all parties agree, the procedures to be tried are experimental and no one knows for certain if they will produce the desired results. In particular, the applicant cannot now say that the ice-rail structures will work (although their engineers advise them it will) or that they will not cause erosion (in fact, the witness for the Agency of Environmental Conservation stated that there is "serious potential" for erosion).

Consequently, while finding in favor of the applicant, it is the intention of this commission to closely monitor the progress of this experiment through the issuance of an appropriately conditioned short-term permit and by requiring another public review of the project in the spring of 1984. During that review the commission expect to receive information from the various parties to this proceeding concerning the effectiveness of the structures, their effects on the Lamoille River and their impacts on white-water canoeing.

III

CONCLUSION OF LAW

Based on the foregoing Findings of Fact, it is the conclusion of this District Environmental Commission that the project described in the application referred to above, if completed and maintained in conformance with all of the terms and conditions of that application, and of Land Use Permit #7C0555 will not cause or result in a detriment to public health, safety or general welfare under the criteria described in 10 V.S.A. Section 6086 (a).

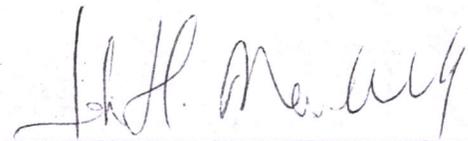
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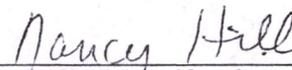
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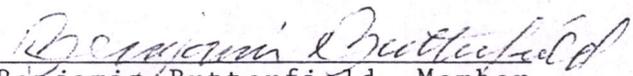
Land Use Permit #7C0555 authorizing construction of a flood control project is hereby issued to The Town of Hardwick subject to nine conditions.

Dated at St. Johnsbury, Vermont this 6th day of October 1983.

BY THE DISTRICT VII ENVIRONMENTAL COMMISSION

  
\_\_\_\_\_  
John Marshall, Chairman

  
\_\_\_\_\_  
Nancy Hill, Member

  
\_\_\_\_\_  
Benjamin Butterfield, Member